

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **REBUTTAL TESTIMONY**

3 **OF**

4 **KENT W. DICKERSON**

5
6
7 **Q. Please state your name, business address, employer and current position.**

8 A. My name is Kent W. Dickerson. My business address is 6450 Sprint Parkway,
9 Overland Park, KS 66251. I am employed as Director - Cost Support for
10 Sprint/United Management Company.

11
12 **Q. Are you the same Kent W. Dickerson who filed Direct Testimony in this case**
13 **for Sprint-Florida?**

14 A. Yes.

15
16 **Q. What is the purpose of your Rebuttal Testimony?**

17 A. The purpose of my Rebuttal Testimony is to respond to the Direct Testimony of
18 BellSouth witnesses James W. Stegeman, Dr. Debra J. Aron, and W. Keith
19 Milner. My Rebuttal Testimony, along with the Rebuttal Testimony of Sprint
20 Witness Dr. Brian Staihr, addresses why BellSouth's claim that CLECs are not
21 impaired without access to BellSouth's unbundled switching in 10 of 18
22 "markets" (Dr. Staihr's testimony addresses BellSouth's errant market definition)
23 using the FCC defined "potential deployment" methodology is wrong.

1 **Q. Please describe how your testimony is organized?**

2 A. My testimony is organized into three sections of analysis and discussion. The
3 first section addresses the BellSouth Analysis of Competitive Entry (BACE)
4 model and the associated testimony of BellSouth witness James W. Stegeman. In
5 this section, I explain how the BACE model as filed in this case is grossly
6 inadequate for completing a full and fair examination of the economics resulting
7 from a CLEC using a self provisioned switch to serve Mass Market customers
8 within BellSouth's Florida markets. As I discuss more fully below, the
9 inadequacy of the BACE model is exacerbated by BellSouth's failure to provide a
10 visible, functioning version of the model critical to examining, testing, validating
11 and correcting the extremely complex calculation and "optimization" routines
12 contained therein.

13
14 Second, I will discuss those areas of the BACE calculations/methodologies that
15 Sprint's external analysis to date demonstrates to be fatally flawed thus rendering
16 both the BACE model results and BellSouth's market impairment conclusions
17 invalid.

18
19 In the final section of my testimony, I present the results of nine distinct BACE
20 model runs containing necessary modifications to those limited inputs and model
21 toggles which BellSouth's unreasonably limited model access will allow. I also
22 present the cumulative results of these nine distinct modifications to BellSouth's
23 potential deployment case and, by doing so, I am able to demonstrate the
24 unworkable economics of a CLEC serving Mass Market customers using a self

1 provisioned switch from day one and thus the error in BellSouth's unimpaired
2 market conclusions.

3

4 **SPRINT'S ANALYSIS OF BELL SOUTH'S COMPETITIVE ENTRY (BACE) MODEL**

5

6 **Q. Have you reviewed the testimony of BellSouth witness James W. Stegeman**
7 **and the BACE Model, BACE Model Methodology Manual and User Guide?**

8 A. Yes, I have.

9

10 **Q. Based on this review, have you been able to validate the internal workings of**
11 **the BACE Model?**

12 A. No, I have not. As I detail below, BellSouth has chosen to unreasonably prevent
13 external users' access to numerous critical areas of the model's calculations,
14 inputs, subroutines and results, thus rendering BellSouth's potential deployment
15 case an unverifiable "Black Box".

16

17 **Q. Why has BellSouth denied the external user's access to numerous critical**
18 **areas within the BACE Model?**

19 A. BellSouth attempts to justify this unreasonable access restriction based upon the
20 need to protect intellectual property rights associated with the BACE Model.
21 While Sprint does not object to BellSouth's desire to protect intellectual property
22 rights associated with the BACE Model, their approach seeking to block all
23 external user's access to critical inputs and calculations within the model is an
24 unreasonable and unworkable restriction.

25

1 I have attached as Exhibit KWD-2 a Protective Agreement Provision used by
2 Sprint-Nevada to protect intellectual property rights associated with Sprint's
3 internally developed UNE cost model while allowing the necessary full and
4 complete external user access to all Sprint UNE model inputs, calculations,
5 routines and results. Sprint offered to sign a similar document in this case but
6 BellSouth refused this necessary solution. Thus, as I explain more fully below,
7 BellSouth's BACE model cannot be sufficiently reviewed and validated.
8 BellSouth's claims of non-impaired Mass Markets cannot be accepted for that
9 reason alone.

10
11 **Q. Please explain the BACE Model Input and Results Tables which are**
12 **restricted and unavailable for viewing and validation to external users.**

13 **A.** The BACE model uses four significant groupings of complex calculations. These
14 four groupings of calculations are the Price Process (P-Process), the Quantity
15 Process (Q-Process), the Revenues Process (R-Process) and the Operations and
16 Network Process (ON-Process). Within each process are input data tables which
17 are used in the model computations to develop the final output table. Many of the
18 referenced input data tables are not available to the user for input or viewing.
19 Numerous intermediate results tables and final results tables, which are used in
20 subsequent calculations, are also not available to the user for viewing. I will now
21 elaborate on each routine and the currently known deficiencies.

22 **Process (P-Process)**

23 The first routine in the BACE model process is the Price Process (P-Process).
24 Through the use of 5 data tables and 7 tasks, market prices are determined for the
25 5 main products offered. In addition, individual component prices are developed

1 for the bundles. Only 4 of the 5 input data tables are available to the external user
2 for input changes and viewing. The Baseline Product Price table is not available
3 for input changes or viewing. The Baseline Product Price table “defines the initial
4 prices of *à la carte* products by geographic area.”¹ This table houses the starting
5 price for all products. BellSouth witness Dr. Aron refers to the data in this table
6 as coming from “...a pre-processing program...”² Tasks 2, 3 and 4 use this table
7 as a starting point to develop discounted product prices (task 2), prices over time
8 (task 3), and the individual component prices for bundles (task 4). It is an
9 unworkable repetitive and laborious task of trial and error to determine the impact
10 of input changes for discounts and prices over time since the user is unable to
11 know the starting price point. PMaster is the output data table for this routine.³
12 The PMaster results table is not available for review and thus cannot be validated.

13 **Quantity Process (Q-Process)**

14 The second routine in the BACE model process is the Quantity Process (Q-
15 Process). Through the use of 11 tables and 10 tasks, demand quantities for *à la*
16 *carte* products and bundled products are developed. Two of the tables are not
17 available for input and viewing by the user. The Exchange Demographics table is
18 not available for input changes or viewing. The Exchange Demographics table
19 contains “the customer population of each wire center. The wire center
20 population is divided into residence and four business segments described earlier.
21 This segmentation supports granular demand, pricing, market share
22 considerations, and revenue analysis.”⁴ Based on this description, this table is

¹ The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 30.

² Direct Testimony of Debra Aron, December 4, 2003, page 23.

³ The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 32.

⁴ The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 33.

1 used to drive critical numbers surrounding demand, market share and revenue.
2 This table is the starting point for determining the year ten CLEC customer
3 counts, yet is unavailable for viewing. The Baseline Demand table is also not
4 available. This table has data regarding the expected initial demand for products
5 and services offered by the CLEC. Several intermediate results tables are created
6 and subsequently used throughout the 10 task routine of the Q-Process. None are
7 available for reviewing. These intermediate tables include BACE processing
8 table Q2 during task 1, BACE processing table Q4 during tasks 2, 3 and 6, BACE
9 processing table Q6 during task 6, BACE processing table Q3 during task 7.⁵
10 QMaster is the output data table for this routine.⁶ The QMaster results table is not
11 available for review and validation by external users.

12 **Revenue Process (R-Process)**

13 The third routine in the BACE model process is the R-Process (Revenue Process).
14 Through the use of 5 tables and 3 tasks, gross revenue is derived along with the
15 net present value of the revenue. Two of the 5 tables are not available for input
16 and viewing by external users. The PMaster results table and QMaster results
17 table, discussed earlier, are used as input tables to this routine. These tables are
18 not available for review as discussed earlier. RMaster is the output data table for
19 this routine. The RMaster results table is not available for review.

20 **Operations and Network Process (ON-Process)**

21 The fourth routine in the BACE model process is the Operations and Network
22 Process (ON-Process). Approximately 7 tables and approximately 27 tasks
23 calculate investments and operations costs associated with the CLEC network.

⁵ Direct Testimony of James W. Stegeman, December 4, 2003, pages 36-39.

⁶ The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 35.

1 The 7 referenced tables are available for input changes and viewing. However,
2 this routine uses the QMaster and RMaster tables that are developed in prior
3 routines and, as discussed earlier, are not available for review. Examples of the
4 use of the QMaster table include: "Results from the Q-Process that identify
5 demand (where appropriate) for each of the various levels of the product,
6 customer and location hierarchies provide the basis for establishing an
7 appropriately sized CLEC network architecture."⁷ "For non-capital cost records
8 that have a *Frequency* of Recurring or NonRecurring, BACE uses the demand
9 requirements in each year (from the Q-Process) based on the product, customer
10 and location hierarchies and the *UNEZone* and *RateCenter* entries in the Network
11 and Operations Cost Input tables."⁸ The RMaster results table is used in the
12 Optimization Phase of the ON-Process in determining whether an EEL or
13 Collocation is the most economic approach to the network architecture. The
14 RMaster results table is also used for any additional user flagged optimization.
15 BellSouth's decision to hide the QMaster and RMaster table results from external
16 users makes any independent verification and validation of the ON-Process
17 impossible.

18
19 **Q. Are the numerous hidden tables described above housed in a central**
20 **database within the BACE Model?**

21 A. Apparently yes. Conversation with BellSouth witness James W. Stegeman
22 reveals the existence of a central database file within the BACE Model containing
23 extensive interim and final results tables. BellSouth, however, has chosen to

⁷ The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 54.

⁸ The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 55.

1 password protect the file and has refused to allow distribution of the password
2 thus denying the external user access to over 1.0 Gigabyte of data inputs and
3 calculation results.

4
5 **Q. Can the external user review, trace, test and verify the calculations within the**
6 **BACE Model?**

7 A. No. Actual calculations within the BACE Model cannot be seen nor verified by
8 the external user. Rather, in place of viewable, functioning model calculations,
9 BellSouth has merely provided a soft copy document in the form of an Adobe
10 Acrobat (.pdf) file. The file cannot be printed and each page has 3 vertical lines
11 stating "Proprietary and Confidential" written across the code, therefore, making
12 it extremely difficult to read. There are references to variables and routines that
13 are not defined within the file. Without access to the password protected file
14 described directly above, a programmer cannot follow the field names that are
15 used in the code calculations, thus rendering the file, as is, effectively useless.

16
17 **Q. Has the BACE Model benefited from any previous public review and**
18 **scrutiny?**

19 A. No it has not. It is my understanding that this case is the first opportunity for the
20 BACE Model to undergo necessary peer review within the industry, thereby
21 making it all the more critical that complete and full access to the BACE model
22 inputs, calculations and results be afforded. BellSouth's filing falls far short of
23 what is required to complete a full and independent investigation.

24

1 **Q. Based on your experience with UNE and USF models, would you expect an**
2 **extremely complex first generation prototype model such the BACE model to**
3 **be error free?**

4 A. No, I expect quite the opposite. Sprint has been an active industry sponsor of the
5 Benchmark Cost Model (BCM) leading to the Benchmark Cost Proxy Model
6 (BCPM) since the passage of the 1996 Telecommunications Act. Sprint has also
7 been very active in the critical review and validation of numerous other industry
8 UNE/USF models including the Hatfield model (evolving eventually to the HAI
9 model) and the FCC Hybrid Cost Proxy Model (HCPM). The BCM evolved over
10 four years and eight different model versions to its current "BCPM 3.1" state.
11 The Hatfield model included some fourteen model releases since its 1995
12 introduction. Similarly the FCC HCPM has been released at least 23 different
13 times since 1997. A large part of these model releases resulted from objective
14 external critical review efforts which identified errors and shortcomings in the
15 various model releases which required correction in order to generate reliable and
16 accurate results. All of this relevant industry experience instructs that this first
17 generation prototype BACE model could not be reasonably expected to be error-
18 free given the complete lack of objective external critical review at the juncture of
19 its first public filing.

20
21 **Q. Do you have any other instructive examples of the need for, and benefits of,**
22 **full and objective industry peer review of complex cost models?**

23 A. Yes. I have attached as Exhibit KWD-3 to this testimony a letter filed by
24 BellSouth in the UNE pricing Docket No. 990649A-TP. The letter describes the
25 numerous corrections needed to BellSouth's BSTLM loop cost model including,

1 notably, several errors that surfaced as a result of external party review and
2 comment. It provides yet another validation that neither the BACE model nor the
3 non-impairment conclusions alleged by BellSouth can be relied upon, particularly
4 in light of the extreme lack of model access, disclosure and support for critical
5 inputs that I highlight in this testimony.

6
7 **BACE Model Collocation Costs are in Error**

8
9 **Q. Have you been able to perform any independent verification of the BACE**
10 **Model?**

11 A. Yes. While the unreasonably limited access to critical BACE Model tables,
12 calculations, “optimization” routines and results makes a complete independent
13 review of the BACE Model impossible at this time, I have been able to perform
14 analysis which demonstrates significant errors in the area of Collocation and
15 EELs cost. As I will explain below, I have computed CLEC initial collocation
16 build-out costs and ongoing monthly collocation power consistent with
17 BellSouth’s assumed CLEC demand and then compared these figures to the
18 internally generated BACE Model costs for the same. The comparison shows the
19 BACE Model costs to be drastically understated (554% and 198% respectively).
20 This evidence of severely understated BACE Model collocation costs completely
21 taints the model’s Collocation/EELs “optimization” routine and ultimately renders
22 the financial results and BellSouth’s associated claims of 10 un-impaired mass
23 markets unreliable and invalid.

24

1 **Q. Looking first at Exhibit KWD-4 “Summary of Collocation Build Out NPV**
2 **Differences”, please explain your analysis and conclusion.**

3 A. Column b titled “BACE Calc of ColloBuildOut NPVs” shows the CLEC
4 collocation build-out cost estimates contained in BellSouth’s filing for 6 randomly
5 selected Central Office Collocations. I would first note that the BACE Model
6 cost estimates in column b for the [REDACTED] wire center of [REDACTED] show only a
7 [REDACTED] increase over the cost estimate of \$[REDACTED] for the wire center [REDACTED].
8 This despite the fact that the [REDACTED] CLEC DSO lines served in wire center
9 [REDACTED] exceed the [REDACTED] CLEC DSO lines served in wire center [REDACTED]
10 by a factor of **51 times**. As line quantities at a specific CO collocation increase, a
11 CLEC must deploy more equipment giving rise to increases in collocation floor
12 space requirements and even greater increases in DC power quantity
13 requirements. This then results in increased monthly floor space preparation
14 charges from the ILEC and increased DC power cable installation costs. DC
15 power cable installation costs are a very material portion of overall collocation
16 build-out costs and the lack of variability in the BACE Model collocation build-
17 out costs to lines served is immediately suspect and cause for investigation.

18
19 **Q. Were you able to examine the specific BACE Model calculations used to**
20 **generate the figures in column b?**

21 A. No, once again these important calculations are not visible to the external user.
22 However, according to documentation in the BACE Model, the ColloBuildOut
23 cost center includes cable record requests, space availability reports, space prep
24 charges, applications, and security charges. The BACE Model documentation
25 makes no mention of DC power cabling costs and, based on the dramatically

1 understated values contained in BellSouth's filing coupled with the lack of proper
2 cost variability to lines served; there is good reason to suspect they have been
3 excluded entirely. On pages 2 through 7 of Exhibit KWD-4, I have estimated
4 collocation build-out costs which include the DC power cable costs consistent
5 with the DC power requirements at that central office and the DSO, DS1 and DSL
6 demand served. These DC power cable costs were estimated using the same costs
7 as Sprint filed in collocation Docket Nos. 981834 and 990321-TP. I have
8 summarized these costs in column a, page 1, of Exhibit KWD-4. Sprint's analysis
9 shows the BACE model cost estimates for ColloBuildOut to be dramatically
10 understated (554% for the 6 collocations analyzed). I conclude that the BACE
11 Model cost estimates for ColloBuildOut are utterly unreliable for both the purpose
12 of overall cost estimation and for the collocation/EELs "optimization" routine
13 BellSouth claims to incorporate into the BACE model.

14

15 **Q. Have you performed a similar analysis of the BACE Model cost estimates for**
16 **DC power consumption charges?**

17 A. Yes. I have prepared Exhibit KWD-5 which computes the annual DC power
18 consumption charges a CLEC would pay to BellSouth. Exhibit KWD-5 computes
19 the 10 year NPV of DC Power consumption charges based on DC power
20 quantities necessary to serve the DSO CLEC line demand assumed in BellSouth's
21 filing. Based on conversation with BellSouth Witness James W. Stegeman, I
22 learned the BellSouth DC power cost estimates assume a cost based on 60 amps
23 of DC power for every collocation site. Page 2 of 2 of Exhibit KWD-5 shows that
24 1,056 DSO lines can be served with 60 amps of DC Power. BellSouth's use of a
25 single 60 amp DC Power assumption for every wire center results in 82% of

1 CLEC collocation sites having inadequate DC Power and associated understated
2 costs. This is caused by the BellSouth modeled DSO line demand for 82% of all
3 CLEC collocation sites exceeding 1,056 lines (which is all that can be served with
4 BellSouth's assumed 60 amps of DC Power). Comparing Sprint's externally
5 computed NPV of DC power costs to that of the BACE model shows the dramatic
6 198% understatement of BellSouth's estimated DC power costs. I would note
7 that the actual understatement of BellSouth's cost estimate exceeds the amount on
8 this schedule as Sprint's DC power requirement reflects only the power required
9 to serve the DSO line demand in BellSouth's filing. The additional DC power
10 required to serve DS1 and DSL CLEC demand is not included in Sprint's DC
11 power requirements and would increase the amount of understatement in
12 BellSouth's cost estimate.

13
14 **BACE Model Expense Estimates**

15
16 **Q. Are there other areas of BellSouth's base case that appear unrealistic and**
17 **inconsistent with a real world startup CLEC?**

18 **A.** Yes, I find the area of G&A expenses contained in BellSouth's filing to be highly
19 suspect and unsupported in several respects. This category of operating expense
20 accounts makes up [REDACTED] or [REDACTED] of the total CLEC operating expenses
21 and yet BellSouth's filing contains not a single workpaper supporting this expense
22 input assumption. Rather at page 35 of her testimony, Dr. Aron offers a meager
23 discussion of G&A costs which she characterizes as "... relate to the overall
24 management of the firm (such as executive, legal, human resources , and the
25 like)." She goes on to mention a mapping of these costs which she fails to

1 provide with her testimony but claims to have used to "... harmonize ILEC data
2 with general CLEC accounting practices." Later at page 40 of her testimony, she
3 references the use of 1992-2002 ARMIS reporting company data to perform a "...
4 'weighted regression' to determine the linear relationship between G&A and
5 revenue", resulting in the [REDACTED] percent of revenue factor being used to predict the
6 [REDACTED] in operating expenses labeled as G&A in BellSouth's filing. As was the
7 case with her "account mapping" and "harmonizing of ILEC and CLEC account
8 structures", Dr. Aron did not provide any of her referenced analysis with her
9 testimony and thus I have been unable to examine it further.

10

11 **Q. Does BellSouth's filing contain any other discussion or evidence supporting**
12 **this [REDACTED] CLEC operating expense estimate which comprises [REDACTED] of total**
13 **operating expenses?**

14 A. No.

15

16 **Q. Is BellSouth's method of estimating CLEC G&A expenses reasonable?**

17 A. No, quite the opposite. BellSouth's approach to predicting CLEC G&A expenses
18 during all phases of startup operations assumes they are perfectly scaleable to
19 revenues. Dr. Aron in effect proposes to estimate CLEC G&A expenses as
20 though they are a direct variable cost of sales. This approach is counter intuitive
21 when dealing with this most classic of the common cost categories. Were Dr.
22 Aron's suggestion true in the real world then we should see firms with no sales
23 also have zero G&A costs. Further, G&A costs would perfectly double in lock
24 step as revenues doubled and yet we see neither of these conditions in real world
25 data. While it would be indeed wonderful if CLECs could somehow perfectly

1 manage G&A costs so to perfectly correlate to sales growths or declines, the fact
2 is they bear no direct linear relationship to sales growth or decline. In fact, the
3 G&A expenses referenced in Dr. Aron's testimony are a classic example of an
4 expense category where large firms typically enjoy considerable economies of
5 scale versus smaller firms. This would be all the more true of the CLEC startup
6 venture that the BACE model purports to depict. It would be hard to select a
7 more polar opposite to CLEC startup ventures than the largest established ILEC
8 companies in America underlying the ARMIS data Dr. Aron relies upon in her
9 referenced but unseen "weighted regression" analysis. It would also be difficult
10 to select a more defective method of G&A cost estimation than the perfectly
11 scaleable to revenues assumption used in BellSouth's BACE model results. The
12 intuitively unsound approach used by BellSouth to estimate [REDACTED] of total
13 operating expenses suggests that BellSouth's claim of CLEC non-impairment
14 fails on this single issue alone.

15

16 **Q. Can you suggest a correction to BellSouth's G&A expenses?**

17 A. No, not at this time. The essentially complete lack of detail in BellSouth's filing
18 regarding what specific expenses this [REDACTED] of total expense category is attempting
19 to predict makes any corrections, at this time, pure guesswork.

20

21 **Q. Have you been able to validate the Operations/Maintenance and/or the Cost
22 of Goods Sold expense estimates in BellSouth's filing?**

23 A. No. These expense estimates also suffer from an equally dismal quantity and
24 quality of detail, description, and support in BellSouth's filing. This coupled with
25 the hidden tables and BACE model calculations make a complete review of

1 BellSouth's expense estimates impossible until that problem is rectified.
2 Effectively little, if any, validation of BellSouth's expense assumptions,
3 calculations, inputs, or results can be completed until they are required to provide
4 reasonable access to all of the BACE model inputs and calculations.
5

6 **BACE Model Inputs**
7

8 **Q. Has Sprint completed its review of the BACE Model Inputs?**

9 A. No. BellSouth's lack of reasonable access to numerous tables integral to the
10 BACE Model results precludes a full and complete examination and validation of
11 key model inputs. Additionally, Dr. Aron's testimony offers scant factual support
12 and analysis for numerous critical model inputs, leaving BellSouth's case
13 substantially unsupported. Thus, Sprint's review of inputs reflects a best effort
14 under the circumstances of an overall unworkable lack of access to the BACE
15 model itself and near total absence of data allegedly used to develop the model's
16 inputs and assumptions. Sprint has completed nine distinct model adjustments
17 and one cumulative run which I present as Exhibit KWD – 6 to this testimony.
18

19 **Q. Please describe Exhibit KWD-6.**

20 A. Exhibit KWD-6 provides the ten year cumulative Net Present Value (NPV) of
21 cash flows for the Mass Market customer segment for 10 distinct BACE Model
22 scenarios. Scenario 1 of Exhibit KWD-6 starts with the 10 year cumulative NPV
23 of cash flows for Mass Market customers from BellSouth's BACE model filing
24 with no modifications other than to group the wire center results into the MSA
25 markets as advocated by Sprint Witness Dr. Staihr. Scenarios 2 through 6 reflect

1 Sprint's modifications to BellSouth's direct testimony BACE filing supported and
2 described in the rebuttal testimony of Dr. Staihr. My testimony below describes
3 the BACE model input adjustments reflected in Scenarios 7 through 10. Dr.
4 Staihr describes in his testimony why it is essential to first set the BACE model
5 filters correctly so as to properly allow the modeled results to be consistent with
6 serving the Mass Market customer segment. Sprint Scenarios 3 through 10 each
7 reflect the stand alone impact of their respective input modification on a stand
8 alone basis overlaid upon Scenario 2 as the base case. This is necessary to avoid
9 a constantly shifting geographic market and Mass Market customer base that the
10 BACE Model filters otherwise produce. Finally, I have reflected the cumulative
11 results of the combined Sprint Scenarios 2 through 10 in Scenario 11 titled
12 "Sprint Scenarios 2-10 Cumulative Changes".

13
14 **Q. Please describe Sprint Scenario 7 "Sprint Base Case: Adjust Purchasing**
15 **Power".**

16 A. Page 26 of the BACE Methodology Manual contains a brief description of a key
17 model input factor titled "PurchasePower", described as follows, "To the extent
18 that a CLEC has the same purchasing power as BellSouth, the *PurchasingPower*
19 factor should be set to 100 (e.g. the CLECs PurchasePower as a percentage of
20 BellSouth's Purchasing Power) ... CLECs with less purchasing power may have a
21 *PurchasePower* factor greater than 100." Scenario 7 in Exhibit KWD-6 reflects
22 the effect of changing the PurchasePower factor input from the 100 used in
23 BellSouth's base case filing to a factor of 125. The 125 in effect recommends a
24 CLEC vendor cost equal to \$1.25 for every dollar BellSouth would pay for the
25 same equipment. The effect of this single input adjustment in Scenario 7 overlaid

1 upon Sprint's base case Scenario 2 is to reduce cumulative NPV of cash flows by
2 \$42,293,051.

3

4 **Q. Why do you believe this adjustment is appropriate?**

5 A. It is a well accepted fact in our industry that telecommunication equipment vendor
6 prices are directly influenced by the volume of equipment purchased. It defies
7 logic to suggest that a startup CLEC would require the same level of equipment
8 purchases as the incumbent LEC (in this case BellSouth), and yet that is the
9 premise BellSouth's factor of 100 asks this Commission to accept. Even
10 assuming the CLEC in question is Sprint and is then able to leverage vendor
11 prices of Sprint's Local Telephone Division, the overwhelming threefold size
12 advantage of BellSouth's operations versus Sprint's operations supports the
13 conclusion that Sprint's CLEC ventures would pay higher equipment vendor
14 prices than a threefold larger competitor (i.e. BellSouth). While the extremely
15 confidential nature of company specific vendor prices makes it difficult to share
16 actual purchase data, my extensive experience reviewing and preparing cost study
17 inputs for USF, UNE, and TSLRIC purposes leaves me confident that the 25%
18 vendor cost increase for CLECs above BellSouth is a conservative best case
19 estimate for CLEC equipment costs.

20

21 **Q. Please describe Scenario 8 "Sprint Base Case: Adjust Sales Expense" of**
22 **Exhibit KWD-6.**

23 A. Scenario 8 reflects the effect of increasing the sales expenses contained in
24 BellSouth's base case to a level consistent with Sprint's actual CLEC experience.
25 The actual sales expense input corrections to BellSouth's understated values are

1 shown in Exhibit KWD-7 to this testimony. The effect of Scenario 8 on the
2 Sprint Base Case Scenario 2 is to reduce cumulative NPV of cash flows by
3 \$138,265,222.
4

5 **Q. Does the BACE model account for customer acquisition (i.e. "sales") costs?**

6 A. The BACE model accounts for CLEC customer acquisition costs on a very
7 simplistic level. The BACE model has one input for the customer sales cost for
8 each of the five customer size categories. In contrast, the COGS expense
9 category has thousands of inputs used to calculate the COGS expense. The
10 "sales" expense input category should have more than five inputs to allow greater
11 granularity in the sales expense category to input actual or forecasted sales
12 expense experience.
13

14 **Q. Do you agree with the BellSouth BACE model customer sales costs inputs?**

15 A. No. Although BellSouth's input is a known quantity, there is no way of knowing
16 what expense accounts are included in the input number. Dr. Aron states in her
17 direct testimony dated December 4, 2003, on page 35, lines 22 through 24, that
18 she created "a mapping of ILEC SG&A accounts to CLEC SG&A accounts" so
19 she can "harmonize CLEC data with general CLEC accounting practices".
20 However, this mapping was not presented. It is not known what costs are
21 included in the BellSouth sales expense inputs. Using Sprint's extensive relevant
22 experience to analyze what should be included in customer sales costs, the
23 original BellSouth inputs for customer sales costs are dramatically understated.
24 As explained below, Sprint has calculated the cost of sales for customer

1 acquisition and entered the corrected inputs in the BACE model. Separate inputs
2 have been created for residential, SOHO, small business (SME/A), medium
3 business (SME/B), and large business (SME/C) customers to match the five
4 BACE model input requirements. (See Exhibit KWD-7 for corrected customer
5 sales acquisition cost inputs used in the BACE model).

6

7 **Q. What are the major categories of customer sales acquisition costs that should**
8 **be identified and used for the correct calculated customer sales acquisition**
9 **costs?**

10 A. Customer sales acquisition costs include sales expenses that are incurred to obtain
11 a customer. Major categories include: sales and marketing, media advertising,
12 and order processing costs.

13

14 **Q. Can you describe the sales and marketing costs that are included as a major**
15 **component of the correctly calculated customer sales acquisition costs?**

16 A. Yes. Sales costs include commissions and other fees paid to acquisition channels
17 per each line added. Marketing costs include the cost of sales acquisition
18 products such as direct mail pieces and bill inserts. Sprint has extensive
19 experience selling telephony products through many channels including inbound
20 telemarketing, outbound telemarketing, PCS wireless sales channels, direct mail,
21 bill inserts and direct field sales personnel. Affinity groups (i.e. United Airlines,
22 US Air, and AOL) are acquisition channels that have an ongoing cost of
23 acquisition. New customers are typically rewarded with big upfront rewards (i.e.
24 10,000 United Mileage Plus airline miles) and then are continuously rewarded for

1 monthly usage (i.e. airline miles for monthly dollars spent). The upfront and
2 ongoing reward expenses are sales acquisition costs that actually increase per
3 customer gross add costs as the base of affinity customers grows. This extensive
4 experience had been used to calculate a sales and marketing cost per gross add for
5 each customer size segmentation utilized in the BACE model.

6

7 **Q. Please describe the media costs that should be included as a major**
8 **component of the correctly calculated customer sales acquisition costs.**

9 A. Media spending for a mass market advertising campaign is a major cost
10 component in the sales acquisition category. In the direct testimony of Dr. Aron,
11 Exhibit No. DJA-06, the source reference states that her customer acquisition
12 sales cost excludes television advertising. Sprint's actual CLEC advertising
13 experience was used to calculate an annual advertising budget needed for a CLEC
14 to sustain an advertising campaign required to sell telephony services in
15 BellSouth's Florida territory.

16

17 **Q. Please describe the order processing costs that are included as a major**
18 **component of the correctly calculated customer sales acquisition costs.**

19 A. Order processing is a customer acquisition cost. Sprint has used an input for
20 order processing based on actual cost experiences through the use of a current
21 outside vendor. The existing contractual arrangement for CLEC order processing
22 has a declining cost based on the volume of installs. The volume-sensitive

1 declining order processing costs have been used to calculate the cost of order
2 processing.

3

4 OMSC (Order Management Service Center) acquisition costs are expenses
5 incurred internally by a CLEC for the set-up of each new order. The OMSC
6 performs the labor for account set-up and data entry within the internal CLEC
7 customer database. The OMSC also performs the coordination of the long
8 distance and local PIC changes.

9

10 Third-party verification is a regulatory requirement and a customer acquisition
11 cost. Each order for a long distance or local service change requires a voice
12 recording authorizing all changes. Contractual arrangements with an outside
13 vendor perform all third-party verifications. Sprint's contracted rates have been
14 used in the acquisition costs calculations.

15

16 **Q. Please explain Scenario 9 of Exhibit KWD-6.**

17 A. Scenario 9 of Exhibit KWD-6 reflects the effect of setting the BACE model
18 "CLEC Study Properties" value of "IncludeTerminalValue" to N (for No).
19 BellSouth's base case filing reflects the "IncludeTerminalValue" set to Y (for
20 Yes) and is described at page 56 of the BACE Model Methodology Manual as
21 follows: "By setting the *CLEC Study Properties* value of *IncludeTerminalValue*
22 to 'Y' the model will include the net book value of the assets into the NPV value.
23 This NPV addition is based on a 10-year discount value (i.e., at the end of the 10th

1 year, not midyear of the 10th year).” The effect of setting the
2 “IncludeTerminalValue” to N in Sprint Scenario 9 reduces the cumulative NPV of
3 Sprint’s base case Scenario 2 by \$28,013,836.

4
5 **Q. Please explain why you believe it is appropriate to set**
6 **“IncludeTerminalValue” to N and thereby exclude the net book value (NBV)**
7 **of assets from the business case cumulative NPV of cash flows?**

8 A. Setting the “IncludeTerminalValue” to Y as BellSouth has done essentially
9 reflects the addition of positive cash flows equal to NBV of assets at the end of
10 year 10 as described in the methodology quoted above. This alleged positive cash
11 flow addition could only be realized were the CLEC to discontinue operations
12 after year 10 and sell all of its operating assets for NBV. Effectively it assumes
13 the CLEC goes out of business as it is impossible to generate the positive cash
14 flows assumed in BellSouth’s base case while retaining the necessary assets to
15 continue providing service to Mass Market customers. Thus, the cash flows
16 assumed in BellSouth’s case by virtue of setting “IncludeTerminalValue” to Y are
17 not from continuing operations but are obtained only from discontinuing
18 operations and thus it is incorrect to include them as a source of positive cash
19 flow generated from serving Mass Market customers.

20
21 **Q. Even assuming the CLEC has discontinued service in BellSouth’s territory at**
22 **the end of year 10 and seeks to sell its assets; do you believe the cash proceeds**
23 **from such sale would equal the NBV as assumed in BellSouth’s base case?**

24 A. No, I do not. BellSouth’s capital reinvestment associated with CLEC provisioned
25 switching equipment is based on an 11 year economic life. It is most probable

1 that switch technology at the end of year 10 of an 11 year economic life cannot be
2 sold at all. Rather, it is in all likelihood, a severely outdated technology which
3 real world economics suggest will likely generate a negative cost of removal and
4 no cash sales value were the CLEC to discontinue operations at the end of year
5 10.

6

7 **Q. Please describe Scenario 10 “Sprint Base Case: Adjust Bad Debt” of Exhibit**
8 **KWD-6.**

9 A. Scenario 10 “Sprint Base Case: Adjust Bad Debt” reflects the quantification of
10 replacing the Bad Debt assumption of ██████ of revenues for all years contained
11 in BellSouth’s filing with a conservative level of Bad Debt more consistent with
12 Sprint’s actual CLEC and Long Distance experience. More specifically, Sprint’s
13 Scenario 10 uses a Bad Debt expense factor of 10% for year 1 improving to 6%
14 for year 2 and 5% for years 3 through 10. These Sprint proposed values assume
15 substantial improvement in the actual bad debt expense experienced by Sprint’s
16 Mass Market CLEC ventures to date. The effect of Scenario 10 using Sprint’s
17 more realistic Bad Debt estimate is to reduce the NPV of cash flows from Sprint’s
18 base case Scenario 2 by \$54,577,350.

19

20 **Q. Please describe Scenario 11 “Sprint Scenarios 2 – 10 Cumulative Changes”.**

21 A. Sprint Scenario 11 reflects the cumulative effect of including all of Sprint’s
22 corrections to BellSouth’s base case (Scenarios 2 through 10) in a single run. The
23 cumulative NPV of cash flows resulting from these corrections is a negative
24 \$133,625,579, which is a reduction of \$453,711,979 from the BellSouth base case
25 scenario. I would emphasize this cumulative result does not and cannot

1 incorporate corrections to all of the areas of concern I discuss in this testimony. It
2 does not, for example, include necessary corrections to the erroneous approach to
3 G&A expense estimation nor collocation build-out or DC power consumption
4 costs discussed elsewhere in this testimony. Additionally, it leaves yet
5 invalidated all of the extensive calculation routines and associated inputs that
6 BellSouth has excluded from review and validation.

7
8 Despite the significant areas which I was unable to correct in BellSouth's filing,
9 Exhibit KWD-6 nonetheless supports the opposite conclusion asserted by
10 BellSouth witness Dr. Aron. Rather, Exhibit KWD-6 demonstrates the
11 unworkable economics of a CLEC serving Mass Market customers using self-
12 provisioned switches from day one of market entry. As discussed in Dr. Staihr's
13 testimony, this substantial cumulative negative NPV of cash flow values is
14 consistent with real world CLEC results evidenced over the seven, going on eight,
15 years since the passage of the 1996 Telecommunications Act.

16
17 **Q. Have you performed any other independent validation of BellSouth's BACE**
18 **model results used to support Dr. Aron's claims of non-impairment?**

19 **A.** Yes. I have prepared a Net Present Value analysis of the cash flows produced by
20 the BACE model results contained in BellSouth's filing and the results are shown
21 in Exhibit KWD-8. As shown, the net present value of each yearly net cash flow
22 was calculated using the discount rate which generated an overall net present
23 value of zero for the 10-year planning period. This discount rate of [REDACTED] is, by
24 definition, the internal rate of return (IRR) on this project. In other words, this is
25 the rate of return that a competitor entering BellSouth's territory in Florida

1 (utilizing UNE loops and self-provisioned switching) should be expected to earn
2 while providing competitive telephone service, if the assumptions in the BACE
3 model are correct. This rate of [REDACTED] far exceeds the weighted average cost of
4 capital of 13.09% for a “representative CLEC” as calculated and described in
5 BellSouth witness Dr. Billingsley’s testimony and used in the BellSouth inputs to
6 the BACE model. Given Dr. Billingsley’s comments that “many [CLECs] have
7 declared bankruptcy over the last two years and a significant number of the others
8 operate under severe financial distress”⁹ and that “CLECs as a whole continue to
9 demonstrate some degree of financial instability”,¹⁰ it seems unfathomable that
10 any local telephone competitors are currently achieving such rates of return or
11 will achieve such rates in the future. Also, while not an exact comparison, the
12 [REDACTED] IRR is well above BellSouth’s own reported return on total capital for the
13 periods of 1999-2002 (which ranged from 9.9% to 16.3% when the effect of the
14 change in accounting principle in 2002 is excluded). Since a given CLEC will not
15 have the economies of scale and scope available to BellSouth, it seems
16 unreasonable to suggest that any CLEC will be able to generate rates of return two
17 to three times higher than BellSouth’s own reported return on total capital.

18

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

20 A. Yes.

21

22

23

⁹ Direct Testimony of Randall Billingsley, December 4, 2003, p. 3.

¹⁰ Direct Testimony of Randall Billingsley, December 4, 2003, p. 10.

Protective Agreement Provision
Sprint of Nevada's UNE Cost Model

Protected Materials shall include, without being stamped "Confidential" or "Proprietary," Sprint's UNE cost model. Sprint's UNE cost model consists of, but is not limited to, the computer programming code in both Source Code (i.e., human-readable) and Object Code (i.e., machine-readable form). Allowing the parties to review and analyze Sprint's UNE cost model shall not be deemed in any manner as a grant of a license with respect to the UNE cost model and/or any components of the UNE cost model. Sprint provides its UNE cost model to the Parties subject to this Agreement, only to assist the Parties in their analysis in this proceeding. Sprint's UNE cost model may not be used by the Parties for any other purpose whatsoever.

Legal Department

Andrew D. Shore
Senior Regulatory Counsel

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(404) 335-0743

January 24, 2002

Mrs. Blanca S. Bayó
Director, Division of the Commission
Clerk and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

**Re: Investigation into Pricing of Unbundled Network Elements
(BellSouth Track), Docket No. 990649A-TP**

Dear Mrs. Bayó:

The purpose of this letter is to inform the Commission and parties to this proceeding of changes BellSouth has made to certain inputs in its cost-study filed in this proceeding and to explain the reasons for the changes.

First, the engineering factors BellSouth used in its original cost study are the same factors used in BellSouth's internal cost estimating system, OSPCM. In gathering information for a Staff-requested late-filed deposition exhibit, BellSouth learned of a discrepancy in the way the OSPCM system applies the factors and the way the BSTLM© applies the factors. The engineering factors in the OSPCM are applied to Telco labor plus contractor costs. The BSTLM©, however, was programmed to apply the factors to Telco labor, contractor costs, and material cost. Thus, application of the factors from BellSouth's OSPCM resulted in an overstatement of the engineering costs for copper and fiber cable accounts. In order to address this problem, BellSouth has developed engineering factors based on relationships between engineering costs and total non-engineering investments for each plant account. A worksheet setting forth the development of these factors is attached.

Second, BellSouth has made two of the BSTLM© logic changes addressed by Mr. Pitkin in his rebuttal testimony and by Mr. Stegman in his surrebuttal testimony. Those two changes address the cell reference problem

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FPSC-COMMISSION CLERK

Mrs. Blanca S. Bayo
January 24, 2002
Page 2

with the fiber cable, EF&I calculation and the cell reference problem with the structure sharing calculation.

Third, BellSouth is correcting an error with respect to Feeder/Distribution Interface (FDI) placing hours. BellSouth uses contractors to place FDI's with placement costs based on the weight of the cabinets. Since the BSTLM input tables for FDI placement assume Telco placement, BellSouth had to convert contractor costs to Telco placement hours by dividing contractor costs by the Telco labor rate. BellSouth made an error in that calculation, resulting in a slight overstatement of FDI cost. BellSouth's revised inputs reflect the a correction of the referenced error.

Lastly, BellSouth changed inputs regarding its underground excavation costs and manhole costs. BSTLM© calculates all conduit duct costs, underground excavation costs and manhole costs as engineering, furnished and installed (EF&I) (rather than distinguishing between material and labor), because BellSouth's contracts with outside vendors provide for these items on a furnished and installed basis that includes the material and labor associated with installing the material. Since the BSTLM© applies loadings (e.g., sales tax, exempt material, supply expense) to material only, this would result in an understatement of these miscellaneous loading costs in the BSTLM©. BellSouth developed a 4C loading factor to account for these loadings and applied that factor to the BSTLM inputs in its cost study filing in this proceeding. BellSouth later learned that this loading was not applied to Type 1 and Type 2 manholes or to the underground excavation costs per foot. BellSouth is correcting this problem by applying the loading to all manhole sizes, to duct costs per foot, and to underground excavation costs per foot. BellSouth is also revising manhole costs as set forth in the surrebutal testimony of BellSouth witness Daonne Caldwell.

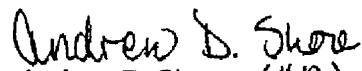
BellSouth is in the process of re-running its cost models with the revised inputs discussed above and plans to file an amended cost study as well as an amended Exhibit DDC-3 to Ms. Caldwell's testimony. However, due to the processing times associated with running the cost models and the logistics of making electronic copies and transporting them to Tallahassee, BellSouth will be unable to file its amended cost study and exhibit, which is the cost output summary, until Monday, January 28, 2002. We did, however, want to get this information to the Commission and the parties even before those cost study runs can be completed. We are providing to all parties today via e-mail an executable file, FI_Network_Version_Changes.exe, to replace a user's Invest Logic.xls file, as well as with three new .mdb data bases (1 for each BSTLM© scenario) with BellSouth's revised inputs so that parties can see these revisions and run them

Mrs. Blanca S. Bayo
January 24, 2002
Page 3

in the cost model if they wish. This file contains proprietary information and is being provided pursuant to a Notice of Intent being filed today as well as to the terms of the Protective Agreement.

I would appreciate your marking a copy of this letter as "filed" and returning it to me. If you have any questions or need any further information, please do not hesitate to contact me.

Sincerely,


Andrew D. Shore (LA)

cc: All Parties of Record (via e-mail and overnight mail)
Marshall M. Criser III
R. Douglas Lackey
Nancy B. White

Sprint - BACE Model Analysis
Summary of Collocation Build Out NPV Differences

<u>Line</u>	<u>Wire Center</u>	<u>DS0 Lines</u> <u>Year 10</u>	<u>a</u> Sprint Calc of Collo Build Out NPVs	<u>b</u> BACE Calc of ColloBuildOut NPVs	<u>c = a - b</u> Difference	<u>d = c / b</u> Percent Difference
1						
2						
3						
4						
5						
6						
7	Total					

Sprint - BACE Model Analysis
Sprint Calculation of Collocation Build Out NPV
Wire Center: DYBHLPO

Line	Source	Rates	Total NPV	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	DS0 Demand	BACE Model											
2	DS1 Demand	BACE Model											
3	DSL Demand	BACE Model											
4	DS0 Planning Demand	$Ln\ 1\ Yr\ X + ((Ln\ 1\ Yr\ (X+1) - Ln\ 1\ Yr\ X) / 2)$											
5	DS1 Planning Demand	$Ln\ 2\ Yr\ X + ((Ln\ 2\ Yr\ (X+1) - Ln\ 2\ Yr\ X) / 2)$											
6	DSL Planning Demand	$Ln\ 3\ Yr\ X + ((Ln\ 3\ Yr\ (X+1) - Ln\ 3\ Yr\ X) / 2)$											
7	Amps Required DS0 Planning Demand	$Ln\ 4 / 1,056 * 59$											
8	Amps Required DS1 Planning Demand	$Ln\ 5 / 28 * 7$											
9	Amps Required DSL Planning Demand	$Ln\ 6 / 224 * 12$											
10	Amps Required Total Planning Demand	Sum Lns 7 Thru 9											
11	Fuse Power Cabling Req	$Ln\ 10 / 80\%$											
12	Power Cabling Required	Based on Anticipated Power Demand Ln 11											
13	Application H 1.1	BST Price List											
14	Space Prep H 1.45	BST Price List											
15	Engineering Initial	Sprint Price List											
16	Engineering Augment ^(a)	Sprint Price List											
17	Power Cabling 60-Amp	Sprint Price List											
18	Total Buildout	Sum Lns 13 Thru 17											
19	Buildout NPV Factors												
20	Buildout NPV	$Ln\ 18 \times Ln\ 19$	\$ 24,946	\$ 10,828	\$ 8,137	\$ 3,135	\$ 2,846	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Note (a) Engineering Augments necessary for the addition of power cabling or cross-connect cabling.

Sprint - BACE Model Analysis
Sprint Calculation of Collocation Build Out NPV
Wire Center: HLWDFLPE

Line	Source	Rates	Total NPV	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	DS0 Demand	BACE Model											
2	DS1 Demand	BACE Model											
3	DSL Demand	BACE Model											
4	DS0 Planning Demand	$Ln\ 1\ Yr\ X + ((Ln\ 1\ Yr\ (X+1) - Ln\ 1\ Yr\ X) / 2)$											
5	DS1 Planning Demand	$Ln\ 2\ Yr\ X + ((Ln\ 2\ Yr\ (X+1) - Ln\ 2\ Yr\ X) / 2)$											
6	DSL Planning Demand	$Ln\ 3\ Yr\ X + ((Ln\ 3\ Yr\ (X+1) - Ln\ 3\ Yr\ X) / 2)$											
7	Amps Required DS0 Planning Demand	$Ln\ 4 / 1,056 * 59$											
8	Amps Required DS1 Planning Demand	$Ln\ 5 / 28 * 7$											
9	Amps Required DSL Planning Demand	$Ln\ 6 / 224 * 12$											
10	Amps Required Total Planning Demand	Sum Lns 7 Thru 9											
11	Fuse Power Cabling Req	$Ln\ 10 / 80\%$											
12	Power Cabling Required	Based on Anticipated Power Demand Ln 11											
13	Application H 1.1	BST Price List											
14	Space Prep H 1 45	BST Price List											
15	Engineering Initial	Sprint Price List											
16	Engineering Augment ^(a)	Sprint Price List											
17	Power Cabling 60-Amp	Sprint Price List											
18	Power Cabling 200-Amp	Sprint Price List											
19	Total Buildout	Sum Lns 13 Thru 18											
20	Buildout NPV Factors												
21	Buildout NPV	$Ln\ 19\ x\ Ln\ 20$											

Note (a) Engineering Augments necessary for the addition of power cabling or cross-connect cabling.

Sprint - BACE Model Analysis
Sprint Calculation of Collocation Build Out NPV
Wire Center: MIAMFLOL

Line	Source	Rates	Total NPV	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	DS0 Demand	BACE Model											
2	DS1 Demand	BACE Model											
3	DSL Demand	BACE Model											
4	DS0 Planning Demand	$Ln\ 1\ Yr\ X + ((Ln\ 1\ Yr\ (X+1) - Ln\ 1\ Yr\ X) / 2)$											
5	DS1 Planning Demand	$Ln\ 2\ Yr\ X + ((Ln\ 2\ Yr\ (X+1) - Ln\ 2\ Yr\ X) / 2)$											
6	DSL Planning Demand	$Ln\ 3\ Yr\ X + ((Ln\ 3\ Yr\ (X+1) - Ln\ 3\ Yr\ X) / 2)$											
7	Amps Required DS0 Planning Demand	$Ln\ 4 / 1,056 * 59$											
8	Amps Required DS1 Planning Demand	$Ln\ 5 / 28 * 7$											
9	Amps Required DSL Planning Demand	$Ln\ 6 / 224 * 12$											
10	Amps Required Total Planning Demand	Sum Lns 7 Thru 9											
11	Fuse Power Cabling Req	$Ln\ 10 / 80\%$											
12	Power Cabling Required	Based on Anticipated Power Demand Ln 11											
13	Application H.1.1	BST Price List											
14	Space Prep H 1 45	BST Price List											
15	Engineering Initial	Sprint Price List											
16	Engineering Augment ^(a)	Sprint Price List											
17	Power Cabling 60-Amp	Sprint Price List											
18	Total Buildout	Sum Lns 13 Thru 17											
19	Buildout NPV Factors												
20	Buildout NPV	$Ln\ 18\ x\ Ln\ 19$											

Note (a) Engineering Augments necessary for the addition of power cabling or cross-connect cabling.

Sprint - BACE Model Analysis
Sprint Calculation of Collocation Build Out NPV
Wire Center: MTRTHFLVE

Line	Source	Rates	Total NPV	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	DS0 Demand	BACE Model											
2	DS1 Demand	BACE Model											
3	DSL Demand	BACE Model											
4	DS0 Planning Demand	$Ln\ 1\ Yr\ X + ((Ln\ 1\ Yr\ (X+1) - Ln\ 1\ Yr\ X) / 2)$											
5	DS1 Planning Demand	$Ln\ 2\ Yr\ X + ((Ln\ 2\ Yr\ (X+1) - Ln\ 2\ Yr\ X) / 2)$											
6	DSL Planning Demand	$Ln\ 3\ Yr\ X + ((Ln\ 3\ Yr\ (X+1) - Ln\ 3\ Yr\ X) / 2)$											
7	Amps Required DS0 Planning Demand	$Ln\ 4 / 1,056 * 59$											
8	Amps Required DS1 Planning Demand	$Ln\ 5 / 28 * 7$											
9	Amps Required DSL Planning Demand	$Ln\ 6 / 224 * 12$											
10	Amps Required Total Planning Demand	Sum Lns 7 Thru 9											
11	Fuse Power Cabling Req	$Ln\ 10 / 80\%$											
12	Power Cabling Required	Based on Anticipated Power Demand Ln 11											
13	Application H 1.1	BST Price List											
14	Space Prep H 1 45	BST Price List											
15	Engineering Initial	Sprint Price List											
16	Engineering Augment ^(a)	Sprint Price List											
17	Power Cabling 60-Amp	Sprint Price List											
18	Total Buildout	Sum Lns 13 Thru 17											
19	Buildout NPV Factors												
20	Buildout NPV	$Ln\ 18 \times Ln\ 19$											

Note (a) Engineering Augments necessary for the addition of power cabling or cross-connect cabling.

Sprint - BACE Model Analysis
Sprint Calculation of Collocation Build Out NPV
Wire Center: PRSNFLFD

Line	Source	Rates	Total NPV	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	DS0 Demand	BACE Model											
2	DS1 Demand	BACE Model											
3	DSL Demand	BACE Model											
4	DS0 Planning Demand	$Ln\ 1\ Yr\ X + ((Ln\ 1\ Yr\ (X+1) - Ln\ 1\ Yr\ X) / 2)$											
5	DS1 Planning Demand	$Ln\ 2\ Yr\ X + ((Ln\ 2\ Yr\ (X+1) - Ln\ 2\ Yr\ X) / 2)$											
6	DSL Planning Demand	$Ln\ 3\ Yr\ X + ((Ln\ 3\ Yr\ (X+1) - Ln\ 3\ Yr\ X) / 2)$											
7	Amps Required DS0 Planning Demand	$Ln\ 4 / 1,056 * 59$											
8	Amps Required DS1 Planning Demand	$Ln\ 5 / 28 * 7$											
9	Amps Required DSL Planning Demand	$Ln\ 6 / 224 * 12$											
10	Amps Required Total Planning Demand	Sum Lns 7 Thru 9											
11	Fuse Power Cabling Req	$Ln\ 10 / 80\%$											
12	Power Cabling Required	Based on Anticipated Power Demand Ln 11											
13	Application H 1.1	BST Price List											
14	Space Prep H.1.45	BST Price List											
15	Engineering Initial	Sprint Price List											
16	Engineering Augment ^(a)	Sprint Price List											
17	Power Cabling 60-Amp	Sprint Price List											
18	Total Buildout	Sum Lns 13 Thru 17											
19	Buildout NPV Factors												
20	Buildout NPV	$Ln\ 18 \times Ln\ 19$											

Note (a) Engineering Augments necessary for the addition of power cabling or cross-connect cabling.

Sprint - BACE Model Analysis
Sprint Calculation of Collocation Build Out NPV
Wire Center: SBSTFLMA

Line	Source	Rates	Total NPV	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	DS0 Demand	BACE Model											
2	DS1 Demand	BACE Model											
3	DSL Demand	BACE Model											
4	DS0 Planning Demand	$Ln\ 1\ Yr\ X + ((Ln\ 1\ Yr\ (X+1) - Ln\ 1\ Yr\ X) / 2)$											
5	DS1 Planning Demand	$Ln\ 2\ Yr\ X + ((Ln\ 2\ Yr\ (X+1) - Ln\ 2\ Yr\ X) / 2)$											
6	DSL Planning Demand	$Ln\ 3\ Yr\ X + ((Ln\ 3\ Yr\ (X+1) - Ln\ 3\ Yr\ X) / 2)$											
7	Amps Required DS0 Planning Demand	$Ln\ 4 / 1,056 * 59$											
8	Amps Required DS1 Planning Demand	$Ln\ 5 / 28 * 7$											
9	Amps Required DSL Planning Demand	$Ln\ 6 / 224 * 12$											
10	Amps Required Total Planning Demand	Sum Lns 7 Thru 9											
11	Fuse Power Cabling Req	$Ln\ 10 / 80\%$											
12	Power Cabling Required	Based on Anticipated Power Demand Ln 11											
13	Application H 1 1	BST Price List											
14	Space Prep H 1 45	BST Price List											
15	Engineering Initial	Sprint Price List											
16	Engineering Augment ^(a)	Sprint Price List											
17	Power Cabling	Sprint Price List											
18	Total Buildout	Sum Lns 13 Thru 17											
19	Buildout NPV Factors												
20	Buildout NPV	$Ln\ 18 \times Ln\ 19$											

Note (a) Engineering Augments necessary for the addition of power cabling or cross-connect cabling.

Sprint - BACE Model Analysis

Power Requirements of NGDLC Equipment Correlated to Demand for Voice Line Service

<u>Equipment Addition Necessary</u>	NGDLC Vendor DC Power Requirement to Serve Associated Line Quantities		DS0 Lines Served
	<u>Per Shelf DC Power Requirement</u>	<u>Cumulative DC Power Requirement</u>	
Advanced Fibre Communications AccessMax Control Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			
Advanced Fibre Communications AccessMax Control Shelf			
Advanced Fibre Communications AccessMax Expansion Shelf			



BACE Model Scenario Summary
 Scenario Summary by MSA
 Mass Market NPV Values

Sprint-Florida, Inc.
 Docket No. 030851-TP
 Exhibit KWD-6
 Filed: January 7, 2004
 Page 1 of 1

	A	B	C	D	E	F	G	H	J	K	L	M	N
	Scenario:	1	2	3	4	5	6	7	8	9	10	11	
Row	MSA	Bell South as filed	Sprint Base Case: Negative NPV filters = No to all, no lowest residential quintile customers	Sprint Base Case: 10% market share in year 10	Sprint Base Case: Slow market speed penetration (p-value = .25)	Sprint Base Case: Price adjustments	Sprint Base Case: Equity/Debt Change	Sprint Base Case: Adjust Purchasing Power	Sprint Base Case: Adjust Sales Expense	Sprint Base Case: Include Terminal Value = No	Sprint Base Case: Adjust Bad Debt	Sprint Scenarios 2 - 10 Cumulative Changes	
12	Daytona Beach	7,740,998	8,872,450	4,162,857	5,995,574	1,424,520	5,779,030	7,376,173.1	4,166,409	7,989,754	7,176,071	(7,138,296)	
13	Gainesville	4,127,416	4,200,598	1,182,345	2,489,012	(2,197,732)	2,386,987	2,953,602.1	232,518	3,535,823	2,702,483	(10,654,442)	
14	Jacksonville	28,252,465	30,154,948	15,194,371	21,496,008	6,760,788	20,271,526	26,218,444.7	16,275,950	27,605,104	24,814,717	(17,010,013)	
15	Miami-Ft Lauderdale	72,620,375	73,821,234	40,992,246	54,072,858	30,765,685	51,153,084	66,497,380.2	48,123,819	68,601,771	63,724,561	(9,973,324)	
16	Orlando	29,483,066	30,153,462	16,116,040	21,905,857	10,816,706	20,624,483	26,757,325.4	17,816,433	27,747,293	25,471,989	(11,194,915)	
17	Panama City	655,055	1,176,842	165,268	414,306	(1,159,707)	562,638	606,931.6	(225,862)	896,164	653,333	(4,831,747)	
18	Pensacola	6,705,896	7,680,925	3,299,177	5,091,626	608,706	4,850,599	6,090,190.1	2,953,612	6,798,233	5,939,404	(9,113,413)	
19	West Palm Beach	60,387,529	63,481,193	34,398,172	45,813,330	21,618,162	43,104,729	55,644,693.7	36,812,475	58,326,998	53,363,356	(25,042,182)	
20	None	110,113,600	112,366,804	58,222,619	80,027,037	32,388,962	75,061,978	97,490,663.6	67,507,879	102,413,479	93,505,193	(38,667,247)	
21													
22	Total	320,086,400	331,928,456	173,733,094	237,305,609	101,026,090	223,795,054	289,635,405	193,663,234	303,914,620	277,351,106	(133,625,579)	

Sprint BACE Model Analysis
BACE Model Sales Costs Inputs
Redacted Version

Sprint-Florida, Inc.
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A	B	C	D	E	F	G	H	I	J	K	L	M
Row	Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
6	BACE Model Sales Costs Input											
7	Mass Market											
8	Residential Customers											
9	SOHO Customers											
10	SME/A Customers											
11	Enterprise Market											
12	SME/B Customers											
13	SME/C Customers											

BACE Model - BellSouth Inputs
NPV Analysis

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	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Net Revenue												
Operating Expenses												
Income Taxes												
Capital Expenditures												
Net Cashflow												
NPV of Cashflow												
Exponent for NPV Calc												
Internal Rate of Return												

Note: Internal Rate of Return (IRR) calculated via iterative process to determine the rate at which the 10-year Net Present Value equals zero.
Cashflow in Year 0 assumed at beginning of Year 1. Cashflow in Years 1-10 is assumed to be in middle of year.