AUSLEY & McMULLEN

ATTORNEYS AND COUNSELORS AT LAW

227 SOUTH CALHOUN STREET

P.O. BOX 391 (ZIP 32302)

TALLAHASSEE, FLORIDA 32301

(850) 224-9115 FAX (850) 222-7560

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March 18, 2002

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Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida   32399-0850
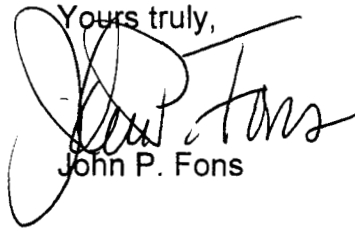
   Re: Docket No. 990649B-TP

Dear Ms. Bayo:

   Enclosed for filing on behalf of Sprint-Florida, Inc. are the original and fifteen (15) copies of the Surrebuttal Testimony of Kent W. Dickerson and Michael R. Hunsucker and the Rebuttal Testimony of Brian K. Staihr in the above matter.

   Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning the same to this writer.

   Thank you for your assistance in this matter.

Yours truly,

John P. Fons

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Dickerson   Hunsucker
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03103 MAR 18 º   03104 MAR 18 º

Staihr
DOCUMENT NUMBER-DATE
03105 MAR 18 º

FPSC-COMMISSION CLERK

1	BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2	REBUTTAL TESTIMONY
3	OF
4	BRIAN K. STAIHR
5	

6 **I. NAME, TITLE, PURPOSE**

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

8

9 A. My name is Brian K. Staihr. I am employed by Sprint as Regulatory Economist. My

10 business address is 6450 Sprint Parkway, Overland Park, Kansas 66251.

11

12 **Q.** **Are you the same Brian K. Staihr who filed direct testimony in this proceeding**

13 **on November 7, 2001?**

14

15 A. Yes.

16

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

18

19 A. In my rebuttal testimony I respond to the direct testimonies, filed January 30, 2002, of

20 Mr. David Draper on behalf of the Florida Public Service Commission Staff ("Staff")

21 and Dr. George S. Ford on behalf of Z-Tel Communications, Incorporated ("Z-Tel").

22 In the pages below I comment on the recommended costs of capital contained in the

23 testimonies of Mr. Draper and Dr. Ford, and point out the incorrect use of assumptions

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1   and specific shortcomings and inconsistencies in the methods used. Finally, I make

2   adjustments to certain parts of the methodology used by Mr. Draper, and demonstrate

3   that by correcting his methodology, and by eliminating his improper assumptions, the

4   cost of capital produced by his approach would approximate the cost of capital

5   proposed by Sprint in this proceeding.

6

7   **II. CORRESPONDING RISK**

8   Q.   **Can you identify places in the testimony of Mr. Draper or Dr. Ford where each**

9   **incorrectly bases his calculation methodology on assumption, rather than**

10   **analysis?**

11

12   A.   Yes. When Mr. Draper and Dr. Ford both advocate the use of a group of telecom

13   firms as a proxy for determining Sprint-Florida's required return, without an

14   understanding as to whether the firms they've chosen represent appropriate and

15   comparable levels of risk, they are basing their methodology on assumption, and not

16   objective analysis. The long-establish legal standard for determining a cost of capital

17   can be found in the often-cited Supreme Court decision <u>FPC v. Hope Natural Gas Co.</u>,

18   320 U.S. 591, 603 (1944) ("<u>Hope</u> decision"), which states, *"the return to the equity*

19   *owner should be commensurate with returns on investments in other enterprises*

20   *having corresponding risks."* There are two distinct ways that we can identify

21   enterprises having corresponding risks: we can measure risk, or we can make

22   assumptions about risk. Both Mr. Draper and Dr. Ford choose the second; they

23   assume that a certain group of firms have risk that corresponds to the risk of Sprint-

1   Florida. If either Mr. Draper or Dr. Ford were to actually *measure* risk, as Sprint's

2   approach does, they would see that the firms they have chosen to produce a

3   representative cost of equity (as inputs to DCF models and CAPM regressions) do *not*

4   exhibit corresponding risk.

5

6 **Q.** **Have you performed such a calculation?**

7

8 A.   Yes. In my direct testimony I described the four distinct measures of risk that Sprint

9   uses as inputs to its cluster analysis to determine firms of corresponding risk. Simply

10   stated, these four measures (common equity ratio, cash-flow-to-capital ratio, pre-tax

11   fixed charge coverage ratio, revenues-to-net-plant ratio) are converted to a single

12   composite measure for each company, and that single measure reflects how "far away"

13   the company's risk measures are from Sprint-Florida's risk measures; the smaller the

14   number, the closer that company is to being an *"enterprise having corresponding risk"*

15   to Sprint-Florida. My exhibit, BKS-1, displays the measures for each company in Mr.

16   Draper's group of firms, the measures for the group advocated by Dr. Ford, and for the

17   group Sprint defined as comparable-risk firms. The average for each group is shown

18   at the bottom of that exhibit.

19

20   As the exhibit shows, when risk is actually *measured* it is undeniable that the firms

21   used by Sprint in its comparable-risk group are closest to being "enterprises having

22   corresponding risk" as required by the Hope decision. Furthermore, it is worth noting

23   that both Mr. Draper and Dr. Ford advocate the use of telecom firms when calculating

1   the cost of capital, and there are indeed telecom firm's in Sprint comparable group.

2   But the critical difference is that those specific telecom firms are included not because

3   it is *assumed* that they have corresponding risk (as Mr. Draper and Dr. Ford assume

4   because they happen to be telecommunications-related enterprises), but because it has

5   been *demonstrated* that they have similar risk; demonstrated using observable,

6   empirical evidence.

7

8   Q.   **Is there other observable evidence that demonstrates lack of support for Mr.**

9   **Draper's and Dr. Ford's assumption?**

10

11   A.   Yes. Simply looking at 52-week highs and lows of stock prices can illustrate the lack

12   of support for the notion that firms that "do the same thing" exhibit the same risk to

13   investors. As of the date of this writing, Bell South had a 52 week high- and low-

14   stock price that ranged from 113% of its current price ($43.07/$38.26) to 95% of its

15   current stock price ($36.26/$38.26). In comparison, Qwest had a 52 week high- and

16   low-stock price that ranged from 442% of its current stock price ($41.83/$9.46) to

17   69% of its current stock price ($6.54/$9.46). As stated in my direct testimony, risk is

18   the likelihood that an actual return will differ from an expected return. It is clear that

19   each of these firms offered investors a very different likelihood that their actual return

20   would vary from any expected return. No one could suggest that each represented the

21   same risk to investors, despite the fact that they operate in the same industry.

22

23   **III. COST OF EQUITY**

1 **Q. Aside from the use of assumptions, you mention inconsistencies with the**

2 **methodology applied by Mr. Draper in his testimony. Please explain.**

3

4 A. In calculating his two-stage discounted cash flow model Mr. Draper uses an "index"

5 of firms which he believes represents a "well-managed company in the business of

6 providing UNEs" (Draper page 2). However, in this index he includes two firms,

7 AT&T and Telephone & Data, whose primary business activities have nothing to do

8 with the provision of unbundled elements or even local telephone service. Telephone

9 and Data derives 3/4ths of its revenues from wireless telecommunications, and while a

10 minority of AT&T's revenues may indeed come from its offer of local telephone

11 service in select parts of the country, its relationship with unbundled network elements

12 is one of a purchaser, not a supplier. In any case, it is clear that for these two

13 companies the collective data that Mr. Draper uses in his DCF model—dividend

14 yields, stock prices, growth rates—does not represent a company primarily offering

15 local telephone service and "in the business of providing UNEs". As stated above,

16 Sprint believes that if data is to be used from other companies in calculating a cost of

17 equity (and cost of capital) then the companies that are used should have proven,

18 measurable corresponding risk. But if Mr. Draper chooses not to use objective

19 measures of risk, and instead simply assumes corresponding risk based on what

20 business activities a company pursues, then he should be consistent in his choice of

21 companies that engage in the correct business activities. By his own criteria, AT&T

22 and Telephone and Data do not belong in his "index".

23

1   **Q.**   **Have you reproduced Mr. Draper's results when these inappropriate companies**

2   **are removed from the index?**

3

4   **A.**   Yes. I employed a two-stage DCF model consistent with Mr. Draper's chosen

5   approach, the specification of which was...

6

$$P_0 = \sum_{t=1}^{4} \frac{D_t}{(1+r_E)^t} + \frac{D_5 \left[\frac{1+g}{r_E - g} \right]}{(1+r_E)^5}$$

7   Solving this for r_E I was able to reproduce his original result using the data provided in

8   his exhibits. I then repeated the calculation using a revised index which excluded the

9   data from AT&T and Telephone and Data. The raw data can be seen in the attached

10   exhibit, BKS-2. In that exhibit the top table reproduces portions of Mr. Draper's

11   exhibit DJD-4. The last table shows the corrected input to the two-stage DCF model.

12

13   **Q.**   **What was the result of this corrected DCF model?**

14

15   **A.**   The corrected model produced a required return of approximately 13.5%. This is

16   significantly higher than Mr. Draper's original suggested cost of equity of 11.45%.

17   Furthermore, it is quite close to Sprint's proposed required return on equity, as

18   calculated by its DCF model in my direct testimony, of 13.7%.

19

20   **Q.**   **Are there inconsistencies in Mr. Draper's other cost of equity calculation, using**

21   **the Capital Asset Pricing Model (CAPM)?**

22   **A.**   Yes. With regard to Mr. Draper's CAPM calculation the problem is one of

1   A.   Yes. With regard to Mr. Draper's CAPM calculation the problem is one of

2   subjectively altering the raw data. In the process of calculating the required market

3   return (R_m) Mr. Draper states that prior to calculating a DCF result for the market as a

4   whole he removed companies with growth rates greater than 20% to get an "accurate

5   representation of the market return" (Draper page 10). He did not provide any

6   justification as to why he believed excluding these firms was appropriate.

7

8   Q.   **Why is it inappropriate to remove companies with growth rates greater than**

9   **20%?**

10

11   A.   Because the market return in the CAPM must reflect the *entire* market, not a pre-

12   selected portion of the market that suits a particular purpose. By eliminating these

13   firms Mr. Draper is not producing an "accurate representation" but rather a skewed,

14   truncated version of a market return.

15

16   Q.   **What impact does excluding these firms have on the DCF results that entered**

17   **Mr. Draper's CAPM as the required market return?**

18

19   A.   All else held equal, excluding these firms has the effect of lowering the required

20   return, thereby lowering the cost of equity produced by his CAPM.

21

22   Q.   **Have you been able to quantify the effect of Mr. Draper's truncation of the data?**

23

1   A.   Somewhat. I performed a similar truncation of the data used in Sprint's original filing,

2   to obtain a *relative* measure of the impact that such a truncation might have. As stated

3   in my original testimony, Sprint conducted a DCF analysis for all 621 market-traded,

4   dividend-paying firms in its original cluster analysis (Staihr Direct page 24). The

5   results for these 621 firms serve as a proxy for the required return on a market overall.

6   I repeated this analysis with a subset of firms, eliminating all firms with growth rates

7   exceeding 20%, as Mr. Draper did. The effect was to reduce the average DCF result

8   by approximately 0.9%.

9

10   Q.   **How would this affect Mr. Draper's CAPM result?**

11

12   A.   Mr. Draper's CAPM result was based on a market return of 10.87%. If we correct the

13   market return, holding all else equal, we have the following...

14

Original Draper CAPM	5.4% + 1.02 * (10.87% - 5.4%) + .04% = 11.02%
Corrected Draper CAPM	5.4% + 1.02 * (11.77% - 5.4%) + .04% = 11.94%

15

16   This corrected Draper CAPM result is significantly closer to Sprint's corresponding

17   CAPM result of 12.21%. Removing the .04 basis points adjustment for flotation costs

18   (which Sprint adds to its 12.21) produces a corrected Draper CAPM result of

19   approximately 11.9%.

20

21   Q.   **Given these corrections, how does Staff's proposed return on equity correspond**

22   **to Sprint's proposal for return on equity?**

1   A.   The corrected Staff DCF result is 13.5%. The corrected Staff CAPM result is 11.94%.

2   Both of these, correctly, include adjustments for flotation costs. The average of these

3   two is 12.72%. By adding a 25 basis point adjustment as recommended by Mr. Draper

4   on page 10 of his testimony I obtain a corrected forward-looking return on equity for

5   Sprint of 12.97%. This is relatively close to Sprint's proposed forward-looking return

6   on equity of 13.10% contained in my original direct testimony, and significantly

7   higher than Staff's recommended 11.49% (11.24% Revised Draper Exhibit DJD-6

8   plus .25%, Draper Direct page 10).

9

10   **IV. CAPITAL STRUCTURE**

11   **Q.   Please comment on the capital structures used by Mr. Draper and Dr. Ford in**

12   **their respective cost of capital calculations.**

13

14   A.   Both Dr. Ford and Mr. Draper incorrectly use a book-value based capital structure,

15   rather than a market-value based capital structure, in calculating their costs of capital.

16

17   **Q.   Why is use of a book-value based capital structure incorrect in this instance?**

18

19   A.   Because, as Mr. Draper states on page 2 of his testimony, the FCC has mandated that

20   "the forward-looking cost of capital shall be used" in calculating the cost of unbundled

21   elements. The forward-looking cost of capital has (generally) three components: a

22   forward-looking cost of debt, a forward-looking cost of equity, and a *forward-looking*

23   capital structure. The FCC has explicitly stated *that "forward-looking costs simulate*

1   *the conditions in a competitive marketplace.*"[1] This means the forward-looking cost of

2   capital must represent the conditions in the competitive market for capital. And this

3   means that market-values, not book-values, must be used as weights in calculating a

4   competition-simulating, forward-looking weighted average cost of capital. As Dr.

5   Michael Ehrhardt states in his book The Search for Value: Measuring the Company's

6   Cost of Capital, "It may be tempting to use the balance sheet... to estimate the weights

7   for the weighted average cost of capital, but it can lead to substantial mistakes...In

8   summary, you should use market values when you estimate the weights for the

9   components of your capital structure.".[2]

10

11   Echoing Dr. Ehrhardt's views, Dr. Shannon Pratt states in Cost of Capital: Estimation

12   and Applications, "The critical point is that the relative weightings of debt and equity

13   or other capital components are based on the market value of each component, not on

14   the book value."[3] In short, if the weighted-average cost of capital is not based on

15   market values in the capital structure it will not provide a competitive rate of return

16   that is sufficient to attract investor capital, which is one of the requirements listed in

17   the Supreme Court Hope decision referenced above and in the FCC's First Report and

18   Order CC Docket 96-98 (footnote 1707).

19

20 Q.   **What is Mr. Draper's rationale for using a capital structure based on book values**

21   **for his weighted average cost of capital?**

---

[1] FCC's First Report and Order, CC Docket 96-98, released August 8, 1996.
[2] Pages 74-76, The Search for Value: Measuring the Company's Cost of Capital, Harvard
Business School Press, 1994.

1   A.   Mr. Draper provides no specific rationale. He states that the average book-value

2   equity ratio of his index of firms is 63%, and seeks to validate that with another book-

3   value equity ratio from the C.A. Turner utility report. He makes reference to

4   reviewing several Commission Orders, and then recommends a "forward-looking"

5   capital structure of 60% equity and 40% debt. Mr. Draper provides no explanation as

6   to how this capital structure—based on historical accounting data—is supposed to be

7   forward-looking as required by the FCC rules applicable to the costing of unbundled

8   elements using TELRIC-based economic costs.

9

10   **Q.   How would Mr. Draper's weighted average cost of capital change if it**

11   **incorporated a market-value based capital structure as the economists cited**

12   **above (and Sprint) advocate?**

13

14   A.   It would change significantly. Using Mr. Draper's own price-to-book value ratio of

15   2.71 taken from his Value Line data (Draper Exhibit DJD-1), we can convert his 63%

16   book-value equity weight (taken from his index) to a market-value weight if we

17   assume the market value of debt does not vary significantly from the book value.[4] For

18   simplicity, the table below shows the conversion based on a representative total

19   investor capital amount of 100.

---

[3] <u>Cost of Capital: Estimation and Applications;</u> John Wiley & Sons, Publisher; 1998.
[4] This is a reasonable assumption. In Sprint's original filing the market value of debt and the
book value of debt differed by less than two percent (2%). This is the figure used in the table
below.

1

Book Value Equity	63
Book Value Debt	37
Total Book Value Investor Capital	100
Market to Book Ratio Equity	2.71
Market to Book Ratio Debt	1.02
Market Value Equity	(2.71) * (63) = 170.7
Market Value Debt	(1.02) * (37) = 37.7
Total Market Value Investor Capital	170.7 + 37.7 = 208.4
Market Value Equity Weight	(170.7 / 208.4) = 81.1%
Market Value Debt Weight	(37.7 / 208.4) = 18.9%

2

3   As the table shows, using Mr. Draper's own price-to-book value we obtain a capital

4   structure of approximately 81% equity / 19% debt. This is relatively close to Sprint's

5   proposed capital structure of approximately 84% equity and 16% debt. If we re-

6   calculate the weighted average cost of capital by incorporating the appropriate market-

7   value based capital structure and the corrected cost of equity (discussed above) we

8   obtain an overall cost of capital relatively close to Sprint's proposed 12.26%. See

9   table below.

10

	RoE	Weight	RoD	Weight	WACC
Staff Original	11.49%	.60	7.43%	.40	9.90%
Staff Corrected	12.97%	.81	7.43%	.19	11.92%
Sprint Original	13.10%	.84	7.81%	.16	12.26%

11

12

13   **V. SUMMARY**

14   **Q.   Please summarize your rebuttal testimony.**

15

1   A.   In the process of advocating specific weighted, average costs of capital to be used in

2   this proceeding both Mr. Draper and Dr. Ford choose to make incorrect assumptions

3   regarding what businesses have corresponding risk, rather than to actually determine

4   the risk exhibited by various firms. Both Mr. Draper and Dr. Ford advocate the

5   incorrect use of a book-value based capital structure, when the only type of capital

6   structure that is consistent with the FCC's position regarding the proper estimation of

7   a forward-looking cost of capital is a capital structure based on market values. Using

8   his own criteria as a guide, Mr. Draper erroneously includes firms in his "index" that

9   are not representative of the business currently at issue, and he incorrectly truncates

10   the data used in his capital asset pricing model. By correcting these flaws, and by

11   replacing assumptions with objective analysis regarding corresponding risk, I have

12   shown that Staff's recommendation for a cost of capital to be used in the forward-

13   looking cost estimation of unbundled elements approaches Sprint's original

14   recommendation of 12.26. Mr. Draper has failed to produce persuasive arguments as

15   to why a book value capital structure is appropriate, and as to why his (original) cost

16   of equity is accurate.

17

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

19

20   A.   Yes it does.

21

22

23

24   h:\data\jpf\utd\990649b\testimony\staihr rebuttal-2.doc

Mr. Draper's Group		Dr. Ford's Group		Sprint's Group	
AT&T	1.862	BellSouth	.771	SBC	.529
BellSouth	.771	Qwest	1.190	Kimberly-Clark	.547
CenturyTel	2.225	SBC	.529	Kerr-McGee	.559
Qwest	1.190	Verizon	1.247	Talisman	.566
Sprint	--			New York Times	.704
Telephone & Data	2.228			USX-Marathon	.736
Verizon	1.247			BellSouth	.771
				EOG Resources	.775
				Procter & Gamble	.788
				Mitchell Energy	.810
				Noble Affiliates	.827
				Hershey Foods	.869
				Delta Airlines	.881
				Applebees	.904
				Devon	.923
				Avery Denison	.944
				Briggs & Stratton	.976
				Alltel	.989
				Vintage Petroleum	1.041
				Alcoa	1.054
AVERAGE	1.59	AVERAGE	.934	AVERAGE	.81

	DIV0	DIV1	DIV2	DIV3	DIV4		GR1-4	GR4+	HI Price	LO Price	AVER Price
ATT	0.15	0.15	0.15	0.15	0.15		1.0000	1.0478	20.00	15.17	17.585
BST	0.76	0.80	0.81	0.83	0.84		1.0164	1.1755	42.47	36.26	39.365
Century	0.20	0.20	0.23	0.26	0.30		1.1447	1.1114	35.00	30.25	32.625
Qwest	0.05	0.05	0.05	0.05	0.05		1.0000	1.0831	19.95	12.50	16.225
Sprint	0.50	0.50	0.50	0.50	0.50		1.0000	1.0883	24.39	18.80	21.595
Telephone	0.50	0.58	0.61	0.63	0.66		1.0440	1.0704	98.90	87.75	93.325
Verizon	1.54	1.60	1.64	1.68	1.72		1.0244	1.1436	55.99	49.00	52.495
Average	0.529	0.554	0.570	0.586	0.603		1.033	1.103	42.386	35.676	39.031

10.3%

	DIV0	DIV1	DIV2	DIV3	DIV4		GR1-4	GR4+	HI Price	LO Price	AVER Price
ATT											
BST	0.76	0.80	0.81	0.83	0.84		1.0164	1.1755	42.47	36.26	39.365
Century	0.20	0.20	0.23	0.26	0.30		1.1447	1.1114	35.00	30.25	32.625
Qwest	0.05	0.05	0.05	0.05	0.05		1.0000	1.0831	19.95	12.50	16.225
Sprint	0.50	0.50	0.50	0.50	0.50		1.0000	1.0883	24.39	18.80	21.595
Telephone	0.50	0.58	0.61	0.63	0.66		1.0440	1.0704	98.90	87.75	93.325
Verizon	1.54	1.60	1.64	1.68	1.72		1.0244	1.1436	55.99	49.00	52.495
Average	0.592	0.622	0.640	0.658	0.678		1.038	1.112	46.117	39.093	42.605

11.2%

	DIV0	DIV1	DIV2	DIV3	DIV4		GR1-4	GR4+	HI Price	LO Price	AVER Price
ATT											
BST	0.76	0.80	0.81	0.83	0.84		1.0164	1.1755	42.47	36.26	39.365
Century	0.20	0.20	0.23	0.26	0.30		1.1447	1.1114	35.00	30.25	32.625
Qwest	0.05	0.05	0.05	0.05	0.05		1.0000	1.0831	19.95	12.50	16.225
Sprint	0.50	0.50	0.50	0.50	0.50		1.0000	1.0883	24.39	18.80	21.595
Telephone											
Verizon	1.54	1.60	1.64	1.68	1.72		1.0244	1.1436	55.99	49.00	52.495
Average	0.610	0.630	0.646	0.664	0.682		1.037	1.120	35.560	29.362	32.461

12.0%