BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 990649B-TP

In the Matter of

INVESTIGATION INTO PRICING
OF UNBUNDLED NETWORK
ELEMENTS (SPRINT/VERIZON TRACK)
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VOLUME 3

Pages 373 through 546

PROCEEDINGS:	HEARING
BEFORE:	CHAIRMAN LILA A. JABER COMMISSIONER J. TERRY DEASON COMMISSIONER BRAULIO L. BAEZ COMMISSIONER MICHAEL A. PALECKI COMMISSIONER RUDOLPH "RUDY" BRADLEY
DATE:	Monday, April 29, 2002
TIME:	Commenced at 9:35 a.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	LINDA BOLES, RPR Official FPSC Reporter (850) 413-6734
APPEARANCES:	(As heretofore noted.)

I N D E X

WITNESSES

EXHIBITS

NUMBER:		ID.	ADMTD.
40	JVW-1 through JVW-2 (Direct)	376	376
41	JVW-1 through JVW-3 (Rebuttal)	377	377
42	MT-1 through MT-4	470	470
43	GJD-1 and GJD-2	503	503
44	WRF-1 through WRF-6	510	510
45	(Confidential) WRF-2 through WRF-5	510	510

(Transcript continues in sequence from Volume 2.)

MS. CASWELL: Verizon's next stipulated witness is James Vander Weide. Mr. Vander Weide had direct testimony consisting of 52 pages, and I would ask that that be inserted into the record as though read.

CHAIRMAN JABER: The prefiled direct testimony of James H. Vander Weide shall be inserted into the record as though read.

MS. CASWELL: Dr. Vander Weide had two exhibits attached to his direct testimony. Those were designated JVW-1 and JVW-2. I'd like those marked for identification and moved into the record, please.

CHAIRMAN JABER: JVW-1 and JVW-2 are identified as Composite Exhibit 40. And Composite Exhibit 40 is admitted into the record.

(Composite Exhibit 40 marked for identification and admitted into the record.)

MS. CASWELL: Dr. Vander Weide had rebuttal testimony of 40 pages. I'd like to ask that be inserted into the record as though read.

CHAIRMAN JABER: The prefiled rebuttal testimony of James H. Vander Weide shall be inserted into the record as though read.

MS. CASWELL: Dr. Vander Weide had three rebuttal exhibits labeled JVW-1 through JVW-3. May I have those marked

for identification?

CHAIRMAN JABER: JVW-1 through JVW-3 will be identified as Composite Exhibit 41. And Composite Exhibit 41 is admitted into the record.

(Composite Exhibit 41 marked for identification and admitted into the record.)

DIRECT TESTIMONY OF JAMES H. VANDER WEIDE

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is James H. Vander Weide. I am Research Professor of Finance and Economics at the Fuqua School of Business of Duke University. I am also President of Financial Strategy Associates, a firm that provides strategic and financial consulting services to clients in the electric, gas, insurance, telecommunications, and water industries. My business address is 3606 Stoneybrook Drive, Durham, North Carolina.

Q. WOULD YOU PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PRIOR ACADEMIC EXPERIENCE?

A. I graduated from Cornell University in 1966 with a Bachelor's Degree in Economics. I then attended Northwestern University where I earned a Ph.D. in Finance. In January 1972, I joined the faculty of the School of Business at Duke University and was named Assistant Professor, Associate Professor, and then Professor.

Since joining the faculty I have taught courses in corporate finance, investment management, and management of financial institutions. I have taught a graduate seminar on the theory of public utility pricing and lectured in executive development seminars on the cost of capital, financial analysis, capital budgeting, mergers and acquisitions, cash management, short-run financial planning, and competitive strategy. I have also served as Program Director of several executive education

programs at the Fuqua School of Business, including the Duke Advanced Management Program, the Duke Executive Program in Telecommunications, Competitive Strategies in Telecommunications, and the Duke Program for Manager Development for managers from the former Soviet Union.

I have conducted seminars and training sessions on financial analysis, financial strategy, cost of capital, cash management, depreciation policies, and short-run financial planning for a wide variety of U.S. and international companies, including ABB, Accenture, Allstate, Ameritech, AT&T, Bell Atlantic, BellSouth, Contel, Fisons, Glaxo Wellcome, GTE, Lafarge, MidAmerican Energy, New Century Energies, Norfolk Southern, Pacific Bell Telephone, Progress Energy, The Rank Group, Siemens, Southern New England Telephone, TRW, and Wolseley PLC.

In addition to my teaching and executive education activities, I have written research papers on such topics as portfolio management, the cost of capital, capital budgeting, the effect of regulation on the performance of public utilities, and cash management. My articles have been published in *American Economic Review*, *Financial Management*, *International Journal of Industrial Organization*, *Journal of Financial and Quantitative Analysis*, *Journal of Bank Research*, *Journal of Accounting Research*, *Journal of Cash Management*, *Management Science*, *The Journal of Portfolio Management*, *Atlantic Economic Journal*, *Journal of Economics and Business*, and *Computers and Operations Research.* I

have written a book titled *Managing Corporate Liquidity: an Introduction to Working Capital Management*, and a chapter for *The Handbook of Modern Finance*, "Financial Management in the Short Run."

Q. HAVE YOU PREVIOUSLY TESTIFIED ON FINANCIAL OR ECONOMIC ISSUES?

A. Yes. As an expert on financial and economic theory, I have testified on the cost of capital, competition, risk, incentive regulation, forward-looking economic cost, economic pricing guidelines, depreciation, accounting, valuation, and other financial and economic issues in more than 300 cases before the U.S. Congress, the Canadian Radio-Television and Telecommunications Commission, the Federal Communications Commission, the National Telecommunications and Information Administration, the Federal Energy Regulatory Commission, the public service commissions of 39 states, and the insurance commissions of five states. With respect to implementation of the Telecommunications Act of 1996, I have testified in 26 states and in Washington, D.C. on issues relating to the pricing of unbundled network elements and universal service cost studies. I have also consulted with Bell Canada, Deutsche Telekom, and Telefónica on similar issues.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. Verizon Florida Inc. (Verizon Florida) asked me to make an independent appraisal of the appropriate weighted average cost of capital to be used

in Verizon Florida's studies of the forward-looking economic cost of providing interconnection and unbundled network elements (UNEs). I conclude that 12.95 percent is a conservative estimate of the appropriate weighted average cost of capital for use in Verizon Florida's forward-looking economic cost studies.

II. FUNDAMENTAL ECONOMIC PRINCIPLES

A. THE FCC'S FORWARD-LOOKING ECONOMIC COST STANDARD

Q. HAS THE FCC DETERMINED WHAT ECONOMIC PRINCIPLES SHOULD BE USED IN SETTING RATES FOR UNBUNDLED NETWORK ELEMENTS?

A. Yes. The FCC determined the basic economic principles for setting rates for unbundled network elements in its First Report and Order, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996* (*Local Competition Order*). In that order, the FCC decided that three fundamental economic principles should be used to set rates for unbundled network elements. First, the FCC decided that rates for unbundled network elements should be based on forward-looking economic costs, not embedded or accounting costs. Second, the FCC decided that rates for unbundled network elements should approximate the rates the incumbent LEC would be able to charge in a competitive market for unbundled network elements. Third, the FCC decided that rates for unbundled network elements should provide correct economic signals for the investment decisions of both competitive and

incumbent local exchange carriers.

Q. DO THE FCC'S RULES ADDRESS THE COST OF CAPITAL THAT SHOULD BE USED IN A FORWARD-LOOKING COST STUDY?

A. Yes. Rule 51.505(b)(2) provides that a "forward-looking cost of capital shall be used in calculating the total element long-run incremental cost of an element." Forward-looking costs are the costs "that a carrier would incur in the future," and do not include embedded or historical costs. (*Local Competition Order* at ¶¶ 683, 704.)

Q. DOES YOUR INDEPENDENT ANALYSIS REFLECT THE FCC'S FORWARD-LOOKING COST PRINCIPLE?

A. Yes. I calculated the forward-looking cost of capital using a forward-looking cost of debt, forward-looking cost of equity, and forward-looking capital structure. In doing so, I did <u>not</u> consider Verizon Florida's embedded, historical or accounting costs, nor did I consider Verizon Florida's embedded or "book" capital structure. The cost of capital I compute is appropriate for use in determining the forward-looking cost of providing UNEs through the application of correct economic principles.

Q. DOES YOUR ESTIMATED COST OF CAPITAL ASSUME THAT A CARRIER INSTANTANEOUSLY CONSTRUCTS A NEW NETWORK?

A. No. My 12.95 percent weighted cost of capital is forward-looking, but does not reflect the forward-looking assumptions some parties use when calculating other costs, such as the incremental cost of investments.

Specifically, their total element long run incremental cost (TELRIC) studies assume that a carrier instantaneously constructs an all-new ubiquitous, efficient network based on the incumbent's existing wire center locations. In my opinion, the cost of capital for such a carrier would be significantly higher than the 12.95 percent cost of capital produced by my study. In contrast, my cost of capital reflects the forward-looking cost of established companies that operate in the real world.

Q. DO THE FCC'S RULES PRESCRIBE THE ECONOMIC PURPOSE OF FORWARD-LOOKING COST STUDIES?

A. Yes. The FCC has held that forward-looking economic costs should simulate the results of a competitive market for unbundled network elements. For example, at ¶ 679 of the *Local Competition Order*, the FCC states,

> "Adopting a pricing methodology based on forward-looking, economic costs best replicates, to the extent possible, the conditions of a competitive market . . . ***Because a pricing methodology based on forward-looking costs simulates the conditions in a competitive marketplace,*** it allows the requesting carrier to produce efficiently and to compete effectively, which should drive retail prices to their competitive levels." (Emphasis added.)

And at ¶ 738, the FCC states,

> "In this proceeding, we are establishing pricing rules that

should produce rates for monopoly elements and services ***that approximate what the incumbent LEC would be able to charge if there were a competitive market for such offerings***." (Emphasis added.)

Q. HAS THE FCC RECENTLY REITERATED ITS DECISION THAT FORWARD-LOOKING ECONOMIC COSTS SHOULD "SIMULATE[S] THE CONDITIONS IN A COMPETITIVE MARKETPLACE"?

A. Yes. In its recent ruling on Verizon Massachusetts' Section 271 Petition, the FCC reiterated that it has:

> "determined that new entrants "should make their decisions whether to purchase unbundled elements...based on the relative economic costs of these options," and that such competitors would not be able to make such decisions "efficiently" unless the BOC was offering UNEs based on forward-looking economic costs. The FCC equated "efficient entry" with the availability of UNEs at forward-looking economic costs, which *"replicates...the conditions of a competitive market."* "Efficient entry" simply means that competitors seeking entry *will face the same sorts of costs they would face in a fully competitive market*, that is, TELRIC-based UNE rates. (*Memorandum, Opinion, and Order in CC Docket No. 01-9, FCC 01-130*, adopted April 16, 2001 (Mass. 271 Order), 42.)"

(Emphasis added.)

Q. DO VERIZON FLORIDA'S COMPETITIVE LOCAL EXCHANGE (CLEC) CUSTOMERS SUPPORT THE OPINION THAT THE USE OF THE FORWARD-LOOKING ECONOMIC COST STANDARD REPLICATES CONDITIONS IN A COMPETITIVE MARKET FOR UNES?

A. Yes. The CLECs have repeatedly stated that forward-looking costs must replicate the conditions of a competitive market. (Note that throughout my testimony I use the term "CLEC" to refer to Competitive Local Exchange Companies or Alternative Local Exchange Companies.) AT&T, for example, has repeatedly supported this concept in its testimony on UNEs throughout the country.

Q. DO YOU AGREE THAT THE FORWARD-LOOKING ECONOMIC COSTS IN UNE COST MODELS SHOULD APPROXIMATE THE COSTS THE INCUMBENT LEC WOULD INCUR IN A COMPETITIVE TELECOMMUNICATIONS MARKET?

A. Yes. However, I believe the costs Verizon Florida would incur in a competitive market should be estimated on the basis of realistic assumptions about the dynamic economic environment in which Verizon Florida operates. In contrast, the CLECs have generally based their cost estimates on the hypothetical assumption that the telecommunications network is instantaneously re-constructed using the most efficient technology for meeting the current demand for telecommunications service. Because it ignores the technological and demand uncertainties

of the real world, the CLECs' hypothetical construct is unrelated to the way telecommunications networks are operated and constructed in reality.

Q. DOES THE FORWARD-LOOKING ECONOMIC COST STANDARD CREATE ANY CHALLENGES FOR PARTIES SEEKING TO ESTIMATE UNE COSTS?

A. Yes. Because forward-looking economic costs are, by their nature, not observable, parties have been forced to estimate forward-looking economic costs from engineering cost models that may, or may not, reflect the incumbent LEC's future operating conditions.

Q. DOES ECONOMIC THEORY OFFER ANY SUGGESTIONS FOR THE CONSTRUCTION OF SUCH AN ENGINEERING COST MODEL?

A. Yes. Economic theory offers at least two suggestions for the construction of such a cost model. First, such a model should seek to approximate the costs the incumbent LEC would expect to incur to construct and operate a telecommunications network for the purpose of offering UNEs. Specifically, a cost model should be based on realistic assumptions that mirror the dynamic economic environment the incumbent LEC faces in making future investment and operating decisions.

Second, the model should be based on a consistent assumption regarding the level of competition in the UNE market. It is not appropriate for CLECs to invoke the competitive market assumption in estimating the

expense and amount of investment components of their cost models, for example, at the same time they assume that the market for UNEs is monopolistic when estimating the cost of capital component.

Q. DO THE FCC'S RULES ADDRESS THE APPROPRIATE ROLE FOR UNE RATES IN SENDING CORRECT ECONOMIC SIGNALS TO PARTICIPANTS IN A COMPETITIVE TELECOMMUNICATIONS MARKET?

A. Yes. The FCC's rules clearly establish that UNE rates should send correct economic signals for the investment and operating decisions of new entrants and incumbent LECs alike. For example, in ¶ 620 of the *Local Competition Order*, the FCC states:

> "In dynamic competitive markets, firms take action based . . . on the relationship between market-determined prices and forward-looking economic costs. If market prices exceed forward-looking economic costs, new competitors will enter the market. If their forward-looking economic costs exceed market prices, new competitors will not enter the market and existing competitors may decide to leave . . . New entrants should make their decisions whether to purchase unbundled elements or to build their own facilities based on the relative economic costs of these options."

Q. DOES YOUR COST OF CAPITAL RECOMMENDATION IN THIS PROCEEDING PROVIDE CORRECT ECONOMIC SIGNALS FOR THE

INVESTMENT DECISIONS OF NEW ENTRANTS AND THE INCUMBENT LECS?

A. Yes. My 12.95 percent weighted average cost of capital recommendation in this proceeding reflects the forward-looking risk and required return on the incumbent LEC's investment in the network facilities required to provide unbundled network elements in a competitive market. If UNE rates were based on a lower cost of capital, new entrants would find it advantageous to purchase unbundled network elements rather than to build their own facilities, even if they could provide telecommunications service more efficiently than the incumbent LEC. In addition, if rates were based on a lower cost of capital, the incumbent LEC would have no incentive to continue to invest in its network.

Q. IS YOUR COST OF CAPITAL RECOMMENDATION IN THIS PROCEEDING APPROPRIATE FOR A UNE COST MODEL THAT ASSUMES INCUMBENTS WILL MAKE MASSIVE SUNK INVESTMENTS TO INSTANTANEOUSLY REPLACE THEIR NETWORKS, COMPETITORS HAVE THE OPTION TO IMMEDIATELY DISCONTINUE THEIR USE OF THE INCUMBENTS' NETWORKS WHEN THEIR OWN FACILITIES ARE BUILT, AND UNE PRICES WILL BE RE-SET EVERY FEW YEARS UNDER THESE SAME ASSUMPTIONS?

A. No. The appropriate cost of capital would be substantially higher for a model that assumes: (1) incumbent LECs instantaneously replace their networks through massive sunk investments in network facilities;

(2) competitors have the option to abandon their use of the incumbents' networks immediately after they build their own facilities; (3) UNE pricing proceedings occur every few years; and (4) at each UNE pricing proceeding, prices are based on a hypothetical cost model where the network is assumed to be replaced yet again, creating the added risk that what are today forward-looking investments will become stranded. As Dr. Jerry A. Hausman explained in his Reply Affidavit in CC Docket No. 96-98, the cost of capital required in such an extreme application of forward-looking principles may well be several times higher.

B. The Cost of Capital

Q. DOES THE COST OF CAPITAL PLAY ANY ROLE IN THE FCC'S GUIDELINES FOR FORWARD-LOOKING COST STUDIES?

A. Yes. As noted above, the FCC requires that unbundled network element cost studies be based on the forward-looking economic cost of providing interconnection and unbundled network elements. The forward-looking economic cost of providing interconnection and unbundled network elements includes both capital costs and expenses. The capital costs, in turn, include three elements: (1) the LECs' incremental investment in the telecommunications facilities required to provide interconnection or unbundled network elements; (2) the economic depreciation on these facilities; and (3) the required rate of return, or cost of capital, associated with these facilities.

Q. HOW DO ECONOMISTS DEFINE THE REQUIRED RATE OF RETURN, OR COST OF CAPITAL, ASSOCIATED WITH PARTICULAR INVESTMENT DECISIONS, SUCH AS THE DECISION TO INVEST IN THE BUILDING OF TELECOMMUNICATIONS NETWORK FACILITIES?

A. Economists define the required rate of return on a particular investment as the return that investors forego by making that investment instead of an alternative investment of equal risk.

Q. HOW DOES THE COST OF CAPITAL AFFECT A FIRM'S INVESTMENT DECISIONS?

A. The goal of a firm is to maximize the value of the firm. This goal can be accomplished by accepting all investments in plant and equipment with an expected rate of return greater than or equal to the cost of capital. Thus, a firm should continue to invest in plant and equipment only so long as the return on its investment is greater than or equal to its cost of capital.

Q. HOW DOES THE COST OF CAPITAL AFFECT INVESTORS' WILLINGNESS TO INVEST IN A COMPANY?

A. The cost of capital measures the return investors can expect on investments of comparable risk. Rational investors will not invest in a particular investment opportunity if the expected return on that opportunity is less than the cost of capital. Thus, the expected rate of return on an investment in a company must exceed the cost of capital

before investors will be willing to invest in that company.

Q. DO ALL INVESTORS HAVE THE SAME POSITION IN THE FIRM?

A. No. Debt investors have a fixed claim on a firm's assets and income that must be paid prior to any payment to the firm's equity investors. Since the firm's equity investors have a residual claim on the firm's assets and income, equity investments are riskier than debt investments. Thus, the cost of equity exceeds the cost of debt.

Q. WHAT IS THE OVERALL OR WEIGHTED AVERAGE COST OF CAPITAL?

A. The overall or weighted average cost of capital is a weighted average of the cost of debt and cost of equity, where the weights are the percentages of debt and equity in a firm's capital structure.

Q. CAN YOU ILLUSTRATE THE CALCULATION OF THE OVERALL OR WEIGHTED AVERAGE COST OF CAPITAL?

A. Yes. Assume that the cost of debt is 9 percent, the cost of equity is 15 percent, and the percentages of debt and equity in the firm's capital structure are 25 percent and 75 percent, respectively. Then the weighted average cost of capital is expressed by 0.25 times 9 percent plus 0.75 times 15 percent, or 13.5 percent.

Q. HOW DO ECONOMISTS DEFINE THE COST OF DEBT COMPONENT OF THE WEIGHTED AVERAGE COST OF CAPITAL?

A. Economists define the cost of debt as the market interest rate that a firm would have to pay on newly-issued debt obligations. In efficient markets, the market interest rate is also the best estimate of future interest rates. The correct economic definition of the cost of debt is thus forward-looking and market-oriented.

Q. HOW DO ECONOMISTS DEFINE THE COST OF EQUITY COMPONENT OF THE WEIGHTED AVERAGE COST OF CAPITAL?

A. Economists define the cost of equity as the return investors expect to receive on alternative equity investments of comparable risk. Since the return on an equity investment of comparable risk is not fixed by contract, the cost of equity is more difficult to measure than the cost of debt. There is agreement, however, as I have already noted, that the cost of equity is greater than the cost of debt. There is also agreement among economists that the cost of equity, like the cost of debt, is both forward-looking and market-based.

Q. WHAT APPROACHES DO ECONOMISTS EMPLOY TO OBTAIN NUMERICAL ESTIMATES OF THE COST OF EQUITY?

A. Economists generally use market models such as the Discounted Cash Flow (DCF) Model to estimate a firm's cost of equity. The DCF Model is based on the assumption that the market price of a firm's stock is equal to the present value of the stream of cash flows that investors expect to receive from owning the stock. The cost of equity in the DCF Model is that discount rate which equates the firm's stock price to the present

value of the future stream of cash flows investors expect from owning the stock.

Q. HOW DO ECONOMISTS MEASURE THE PERCENTAGES OF DEBT AND EQUITY IN A FIRM'S CAPITAL STRUCTURE?

A. Economists measure the percentages of debt and equity in a firm's capital structure by first calculating the market value of the firm's debt and the market value of its equity. Economists then calculate the percentage of debt by the ratio of the market value of debt to the combined market value of debt and equity, and the percentage of equity by the ratio of the market value of equity to the combined market values of debt and equity. For example, if a firm's debt has a market value of $25 million and its equity has a market value of $75 million, then its total market capitalization is $100 million, and its capital structure contains 25 percent debt and 75 percent equity.

Q. WHY DO ECONOMISTS MEASURE A FIRM'S CAPITAL STRUCTURE IN TERMS OF THE MARKET VALUES OF ITS DEBT AND EQUITY?

A. Economists measure a firm's capital structure in terms of the market values of its debt and equity because that is the best measure of the amounts of debt and equity that investors have invested in the company on a going-forward basis. Furthermore, economists generally assume that the goal of management is to maximize the value of the firm, where the value of the firm is the sum of the market value of the firm's debt and equity. Only by measuring a firm's capital structure in terms of market

values can its managers choose a financing strategy that maximizes the value of the firm.

Q. IS THE ECONOMIC DEFINITION OF THE COST OF CAPITAL, WHICH FOCUSES ON THE MARKET VALUES OF DEBT AND EQUITY, WIDELY ACCEPTED IN OTHER CONTEXTS BY CAPITAL MARKET PARTICIPANTS?

A. Yes. Homeowners measure the value of their homes in terms of market values, not historical cost or book values. Investors measure the return and risk on their portfolios in terms of market values, not book values. Companies use a market value definition of the cost of capital to make entry, investment, and innovation decisions.

Q. HOW DO INVESTORS MEASURE THE RATE OF RETURN ON THEIR INVESTMENT PORTFOLIOS?

A. Investors, like economists, measure the rate of return on their investment portfolios in terms of the market values of the debt and equity in their portfolios. Suppose an investor has a portfolio that has a market value of $100,000 at the beginning of 2000. Further suppose that the value of the portfolio at the end of 2000 is $112,000, and that the investor earns interest and dividends of $3,000 during the course of 2000. Then the investor's rate of return in 2000 is 15 percent [(112 – 100)/100 + 3/100 = 15 percent]. In making this calculation, I assumed that dividends and interest were not reinvested in the portfolio during the year.

Q. SUPPOSE THE INVESTOR IN YOUR PREVIOUS EXAMPLE PURCHASED HIS PORTFOLIO IN 1980 AT A COST OF $20,000. DOES THE HISTORICAL COST OF INVESTMENT IN 1980 HAVE ANY EFFECT ON EITHER THE INVESTOR'S EARNED OR REQUIRED RATE OF RETURN IN 2000?

A. No. The fact that the investor purchased the portfolio in 1980 for $20,000 has no bearing on either the investor's earned or required rate of return in 2000. Thus, the historical or embedded cost of the investment is irrelevant to the calculation of the rate of return. Investors calculate their rate of return based on market values, not book values.

Q. YOUR EXAMPLE CLEARLY DEMONSTRATES THAT THE INVESTOR'S EARNED RATE OF RETURN IN 2000 DEPENDS ON THE $100,000 MARKET VALUE OF THE PORTFOLIO AT THE BEGINNING OF 2000, NOT ON THE $20,000 HISTORICAL COST, OR BOOK VALUE, OF THE PORTFOLIO IN 1980. DO INVESTORS MEASURE THE *REQUIRED* RATE OF RETURN FOR 2001 IN TERMS OF THE MARKET VALUE OR THE BOOK VALUE OF THEIR PORTFOLIO AT THE BEGINNING OF 2001?

A. Investors measure their required rate of return for 2001 in terms of market values, not book values. Suppose that the investor's required rate of return for 2001 is 15 percent. Since the value of the portfolio at the beginning of 2001 is $112,000, the investor will require a dollar return of $16,800 in 2001 (15 percent x $112,000 = $16,800) including dividends, interest, and capital gains. If the investor expects a return less

than $16,800, he should sell this portfolio and invest his capital in another portfolio that has an expected rate of return of at least 15 percent.

Q. IF A GROUP OF INVESTORS WERE TO CONSTRUCT A PORTFOLIO THAT CONSISTED OF ALL OF A FIRM'S DEBT AND EQUITY, HOW WOULD THEY MEASURE THE REQUIRED RETURN ON THEIR INVESTMENT?

A. These investors would measure their required return by calculating a weighted average of their required returns on the debt and equity portions of the portfolio, where the weights are measured in terms of market values, not book values. For example, if a firm's debt has a market value of $25 million, its equity has a market value of $75 million, the market interest rate on corporate debt of similar risk is 9 percent, and the market required return on equity of similar risk is 15 percent, then the required rate of return on a $100 million portfolio containing all of the firm's debt and equity securities would be 13.5 percent (.25 x 9 percent + .75 x 15 percent = 13.5 percent).

Thus, the investors' required rate of return from an investment in the company is the same as the company's weighted average cost of capital, where both the required rate of return and the weighted average cost of capital are measured in terms of market value weights.

Q. IS THE ECONOMIC DEFINITION OF THE AVERAGE COST OF CAPITAL CONSISTENT WITH THE WAY COMPETITIVE FIRMS

DETERMINE THE REQUIRED RATE OF RETURN ON INVESTMENT DECISIONS?

A. Yes. Managers also use a market value definition of the weighted average cost of capital in making investment decisions. From the manager's perspective, the firm's cost of capital is equal to the return investors can earn on the market value of other investments of the same risk. Rational managers, like rational investors, will not commit resources to investments in new markets or technologies unless the expected return on the market value of these investments in new markets or technologies is greater than or equal to the firm's cost of capital, measured on a market value basis, for projects with the same degree of risk.

Q. DOES THE ECONOMIC LOGIC BEHIND THE DEFINITION OF THE COST OF CAPITAL HAVE ANY IMPLICATIONS FOR COMPETITIVE ENTRY IN THE LOCAL EXCHANGE MARKET IN FLORIDA?

A. Yes. If the Florida Public Service Commission wants to encourage efficient facilities-based competitive entry in the market for local exchange services, the cost of capital input in Verizon Florida's forward-looking cost studies must be at least as large as the return those potential facilities-based competitors can earn on other investments of the same risk. If potential competitors can lease local exchange facilities from Verizon Florida at rates that include a ten percent rate of return on investment, for example, they will have no incentive to invest in their own facilities if they can earn returns greater than ten percent on other investments of comparable risk. In short, it would make more sense for

those competitors to lease the undervalued unbundled network elements from Verizon Florida than to build their own facilities. To provide correct incentives for entry into local exchange markets, the Florida Commission should measure Verizon Florida's cost of capital in the same way that potential competitors measure their own costs of capital.

Q. DOES THE ECONOMIC DEFINITION OF THE COST OF CAPITAL HAVE ANY IMPLICATIONS FOR THE POLICY GOAL OF ENCOURAGING INVESTMENT AND INNOVATION IN TELECOMMUNICATIONS SERVICES?

A. Yes. The Florida Commission should likewise use a market definition of the cost of capital if it wishes to promote efficient investment and innovation in telecommunications services. In competitive markets, the incumbent and its competitors can only be encouraged to invest in new technologies, products, and services if the rate of return they can earn on the market value of their investments exceeds the rate of return they could earn on the market value of other investments of the same risk.

Q. WHY DO INVESTORS MEASURE THE RETURN ON THEIR INVESTMENT PORTFOLIOS USING MARKET VALUE WEIGHTS RATHER THAN BOOK VALUE WEIGHTS?

A. Investors measure the return on their investment portfolios using market value weights because market value weights are the best measure of the amounts the investors currently have invested in each security in the portfolio. From the investor's point of view, the historical cost or book

value of his investment is entirely irrelevant to the current risk and return on his portfolio because if he were to sell his investment, he would receive only its market value and not the historical cost. Thus, the return can only be measured in terms of market values.

Q. IS THE ECONOMIC DEFINITION OF THE AVERAGE COST OF CAPITAL CONSISTENT WITH REGULATORS' TRADITIONAL DEFINITION OF THE AVERAGE COST OF CAPITAL?

A. No. As noted above, the economic definition of the average cost of capital is based on the market costs of debt and equity, the market value percentages of debt and equity in a company's capital structure, and the future expected risk of investing in the company. Regulators, in contrast, have traditionally defined the average cost of capital using the embedded cost of debt, the book values of debt and equity in a company's capital structure, and the risk of investing in a franchised provider of telecommunications services.

Q. WHAT IS THE DIFFERENCE BETWEEN THE MARKET COST OF DEBT AND A COMPANY'S EMBEDDED COST OF DEBT?

A. The market cost of debt is the rate of interest a company would have to pay if it issued debt under today's market conditions. The embedded cost of debt is the company's total interest expense divided by the total book value of its debt. Thus, the embedded cost of debt is an average of the interest rates the company has paid in the past to issue debt securities. This calculation of the embedded cost of debt, however,

provides no basis for measuring the market cost of debt.

Q. WHAT IS THE DIFFERENCE BETWEEN THE MARKET VALUE AND THE BOOK VALUE OF A COMPANY'S DEBT?

A. The market value of a company's debt represents the current price in the capital markets of the company's debt obligations. The book value of a company's debt is the historical face value of its debt adjusted for the accounting amortization of premiums and discounts. The market value of a company's debt is approximately equal to the book value of its debt when market interest rates are approximately equal to the average interest rate of the company's previous debt issuances.

Q. WHAT IS THE DIFFERENCE BETWEEN THE MARKET VALUE AND THE BOOK VALUE OF A COMPANY'S EQUITY?

A. The market value of a company's equity is simply the market price of the company's stock times the number of shares outstanding. The book value of equity is more complex: it represents the sum of paid-in capital and retained earnings, where paid-in capital represents the amount of capital a firm has historically obtained from stock issuances, and retained earnings represent the cumulative earnings over the life of the company that have not been paid out as dividends. In addition, the book value of a company's equity is adjusted periodically for accounting events such as changes in accounting rules and regulations, write-offs, and extraordinary events.

Q. DOES THE BOOK VALUE OF A COMPANY'S EQUITY REFLECT THE HISTORICAL COST OF ITS ASSETS?

A. Yes. The book value of a company's equity is defined as the book value of a company's assets minus the book value of the company's debt:

Book Value of Equity = Book Value of Assets - Book Value of Debt.

Since the book value of a company's assets, in turn, is equal to the historical cost of a company's assets minus accumulated depreciation, the book value of a company's equity can also be stated as the historical cost of a company's assets, minus the accumulated book depreciation on these assets, minus the book value of a company's debt:

Book Value of Equity = Historical Cost of Assets – Accumulated Book Depreciation – Book Value of Debt

Thus, the book value of a company's equity reflects the historical cost of the company's assets.

Q. WHY HAVE STATE AND FEDERAL REGULATORS DEFINED THE AVERAGE COST OF CAPITAL IN TERMS OF EMBEDDED COSTS AND BOOK VALUES RATHER THAN FORWARD-LOOKING COSTS AND MARKET VALUES?

A. State and federal regulators traditionally have defined a company's average cost of capital in terms of embedded costs and book values because these concepts were consistent with the regulators' accounting model of the firm. Economists, in contrast, generally employ an economic model of the firm in which forward-looking costs and market values are the relevant standards.

Q. IS THE TRADITIONAL STATE AND FEDERAL REGULATORY DEFINITION OF THE AVERAGE COST OF CAPITAL CONSISTENT WITH THE ECONOMIC PRINCIPLES UNDERLYING A FORWARD-LOOKING COST STUDY?

A. No. As I have already noted, the economic principles underlying a forward-looking economic cost study require that the average cost of capital be calculated using a market interest rate, a market value capital structure, and a cost of equity that measures the return investors require in competitive markets on other investments of the same risk. In contrast, the regulatory definition of the weighted average cost of capital is based on an embedded interest rate, a book value capital structure, and a cost of equity that measures the return investors require in markets that are at least partially protected from competition. The regulatory definition of the weighted average cost of capital is inconsistent with the economic principle that economic costs are forward looking and market based, not backward looking and accounting based.

Q. IN SUM, THEN, WHAT IS THE PROPER DEFINITION OF THE AVERAGE COST OF CAPITAL FOR USE IN VERIZON FLORIDA'S FORWARD-LOOKING COST STUDIES?

A. The Act removes all barriers to entry in the local exchange market and opens the market to full competition. In a competitive market for local exchange service, forward-looking economic cost is the appropriate cost benchmark for forward-looking cost studies. Furthermore, the FCC has

determined that forward-looking economic costs should approximate the costs the incumbent LEC would incur in a competitive market for UNEs. Thus, for use in Verizon Florida's forward-looking economic cost studies, the average cost of capital should be defined in terms of market interest rates, the market values of debt and equity in a company's capital structure, and investors' expectations regarding the future risk of investing in the company in a competitive environment. This is the only definition of the average cost of capital that is consistent with the underlying assumptions of Verizon Florida's forward-looking cost studies.

III. Risk

Q. DOES THE REQUIRED RATE OF RETURN ON AN INVESTMENT VARY WITH THE RISK OF THAT INVESTMENT?

A. Yes. Since investors are averse to risk, they require a higher rate of return on investments with greater risk.

A. Risk Implied by The FCC's Cost Standards

Q. HOW DO THE FCC'S FORWARD-LOOKING ECONOMIC COST STANDARDS AFFECT THE APPROPRIATE VIEW OF INVESTMENT RISK IN THE CONTEXT OF UNE MODELS?

A. The FCC has specifically stated that rates for UNEs should "approximate what the incumbent LEC would be able to charge if there were a competitive market for such offerings." CLECs have argued in other UNE proceedings that the expense and investment components of the

forward-looking economic cost of providing UNEs will be lower in a fully competitive market environment than in a less competitive market environment. However, they fail to acknowledge that the competitive market environment also has implications for investment risk, and thus the depreciation and cost of capital components of their cost studies. Firms in a fully competitive environment would certainly use shorter depreciation lives than firms in a less competitive environment, and they would certainly face higher costs of capital as well.

Q. WHAT WOULD BE THE EFFECT OF USING THE COMPETITIVE MARKET ASSUMPTION TO ESTIMATE THE EXPENSE AND INVESTMENT COMPONENTS, BUT A MONOPOLY MARKET ASSUMPTION TO ESTIMATE THE COST OF CAPITAL?

A. If the Florida Commission assumes the market is fully competitive when determining the expense and investment components in UNE cost models, but not when determining the cost of capital, the resulting forward-looking economic cost studies ***will not replicate*** the results of a competitive market. Indeed, since the resulting forward-looking economic costs would then be less than the costs competitors would face in building their own networks, there would be no incentive for facilities-based competition. Similarly, there would be no incentive for incumbent LECs to continue to invest in and upgrade their networks. Thus, customers would be deprived of the advanced technologies that the authors of the Telecommunications Act envisioned.

Q. YOU MENTIONED EARLIER THAT PARTIES IN UNE PROCEEDINGS FREQUENTLY USE COST MODELS TO ESTIMATE THE FORWARD-LOOKING ECONOMIC COST OF PROVIDING UNES. CAN YOU ILLUSTRATE HOW THE INVESTMENT ASSUMPTIONS IN SUCH MODELS AFFECT INVESTMENT RISK AND THE COST OF CAPITAL?

A. Yes. Consider four possible cost model scenarios, each with different assumptions regarding the required investment in network facilities to provide UNEs. The first scenario is one in which operating expenses and amounts of investment will be measured on the basis of historical costs.

The second scenario is one in which operating expenses and amounts of investment will be based on the forward-looking economic costs of the incumbent LEC, recognizing the existence of the incumbent LEC's current network, the optimal time path of replacing the current network with the optimal mix of new technologies, and the inherent uncertainties of demand and technology forecasts.

The third scenario assumes a hypothetical world where operating expenses and amounts of investment will be measured on the basis of the forward-looking economic costs of building the local exchange network all at once, using the most efficient technology for meeting the foreseeable demand for telecommunications services. This scenario ignores the economic consequences of both demand and technology uncertainty, as well as the huge costs of transitioning from the incumbent LEC's current network to an entirely rebuilt new local exchange network.

This is the scenario that most closely reflects Verizon Florida's cost model in this proceeding. As Mr. Tucek explains in his direct testimony, the costs produced by this model are, at best, a lower bound for the forward-looking economic costs Verizon Florida expects to incur in providing UNEs.

The fourth scenario is the same as scenario three, except that Verizon Florida is also assumed to be able to achieve extraordinary cost savings by: (1) purchasing all switches at large new-switch discounts; (2) sharing outside plant facilities with electric and cable companies, even though these companies are not planning to rebuild their networks from scratch; and (3) achieving unrealistic expense reductions that are inconsistent with experience in Florida.

These four scenarios involve increasing levels of risky investments in new technology and increasingly optimistic assumptions about the costs of operating and transitioning to the new technology. In fact, the fourth scenario assumes investment and expense levels that are significantly less than those that any efficient local exchange carrier could be expected to achieve. The increasing level of investment risk must be recognized when estimating the cost of capital input in the corresponding UNE cost model.

Q. WHY DO YOU CONSIDER SCENARIO THREE TO INVOLVE CONSIDERABLY MORE INVESTMENT RISK THAN SCENARIO TWO?

A. Scenario three involves more investment risk than scenario two because it assumes that the network is built all at once, whereas scenario two recognizes the reality that networks are built gradually over time. Scenario three ignores most of the economic effects of demand and technology uncertainty, as well as the very realistic transition costs of moving from the installed network to the technology embodied in the reconstructed network. A firm building an entirely new local exchange network all at once is placing a very large bet on the accuracy of its demand and technology forecasts. In reality, a firm building a network all at once would face greater risks that (1) actual demand could be significantly different from forecasted demand; (2) the optimal mix of technology could change as new technology becomes available; (3) the cost of installing and operating the modeled technology may be greater than expected; and (4) the modeled technology may not provide the quality and number of services that had been predicted. Furthermore, the investment required to build an entirely new local exchange network all at once would be enormous, and the investment would be sunk once the network was installed. The risks of making such a large investment in fixed network technology is even greater given that customers have the option to abandon their use of UNEs and build their own network facilities at any time. Indeed, the Act is intended to encourage that behavior.

Q. CAN YOU PROVIDE ANY REAL WORLD EXAMPLES OF THE RISKS OF MAKING A HUGE SUNK INVESTMENT IN AN ENTIRELY NEW TELECOMMUNICATIONS NETWORK WHEN DEMAND IS

UNCERTAIN AND TECHNOLOGICAL CHANGE IS RAPID?

A. Yes. Over the last several years, companies such as Teligent, Allegiance, Covad, Rythms, Level 3, Qwest, Global Crossing, Metromedia Fiber Network, Williams Communications, McLeodUSA and others have invested billions of dollars in constructing entirely new telecommunications networks both here and abroad. These companies have found that telecommunications demand was not as large as they originally forecast, and advances in technology may soon make some parts of their networks obsolete. As a result, these companies have lost anywhere from 60 percent to 90 percent of their market value as investors have come to realize that these networks were built on overly optimistic demand and cost forecasts. The companies and their investors are now aware of the enormous risk of making high-cost, sunk investments in new telecommunications technology.

Q. WHY DO YOU CONSIDER SCENARIO FOUR TO INVOLVE MORE RISK THAN SCENARIO THREE?

A. Scenario four involves more investment risk than scenario three because, in addition to assuming that Verizon Florida builds an entirely new local exchange network from scratch, using the most efficient technology for satisfying the foreseeable demand for telecommunications service, it also assumes that Verizon Florida will be able to achieve unrealistic levels of cost savings through new switch discounts, sharing facilities with other companies, and extraordinary reductions in operating expenses. Under these assumptions, there is a high risk that Verizon Florida would not be

able to earn an economic rate of return on its investment.

Q. WHY IS IT IMPORTANT TO CONSIDER THE RISK IMPLICATIONS OF THE FORWARD-LOOKING ECONOMIC COST STANDARDS WHEN INVESTORS IN THE CAPITAL MARKETS DETERMINE THE COST OF CAPITAL?

A. There are at least two reasons for considering the risk implications of the FCC's cost standards. First, there are no publicly-traded companies whose sole business is constructing and operating telecommunications networks for the purpose of offering UNEs. Thus, one must necessarily use cost of capital proxies whose stock is publicly traded, and whose risk approximates the risk of investing in the facilities to provide UNEs. One must thoroughly understand the risks of investing in UNE facilities in order to properly evaluate the results of applying cost of capital methodologies to these proxy companies.

Second, the cost of capital obviously depends on the risk of the economic environment assumed in the UNE cost study. If one develops a UNE cost model based on a more risky economic environment, then the analyst must include this higher risk in the estimate of the cost of capital input for this cost model to be consistent. If the analyst does not include the higher risk in estimating the cost of capital input, the results of the economic cost study will be economically meaningless.

Q. WHAT DO YOU MEAN WHEN YOU SAY THAT THE RESULTS OF AN

ECONOMIC COST STUDY WILL BE ECONOMICALLY MEANINGLESS IF THE ANALYST DOES NOT CONSIDER THE RISK OF THE ECONOMIC SCENARIO WHEN ESTIMATING THE COST OF CAPITAL?

A. I mean that the resulting UNE rates will not provide correct economic signals to either new entrants or incumbent LECs. If a CLEC develops a cost study based on scenario four, for example, but fails to include the higher risk of scenario four in the cost of capital input, then the resulting UNE rates would be significantly less than the cost a new entrant would face in building its own network, even if it is more efficient in building the new network than the incumbent LEC. Thus, there would be no economic incentive for efficient entry.

With respect to the incumbent, a failure to include the higher level of risk of scenario four in the cost of capital input implies that UNE rates would be significantly less than the forward-looking economic cost of providing UNEs. Thus, the LEC would have no incentive to continue to introduce new technology in the local exchange, and the goal of the Telecommunications Act to bring advanced technology to customers would be thwarted.

Q. WHICH SCENARIO DID YOU ASSUME WHEN CONDUCTING YOUR COST OF CAPITAL STUDIES?

A. I have estimated the cost of capital under scenario two. Because the cost of capital would be higher in the more risky scenarios three or four,

using my cost of capital estimate will understate UNE costs. All other aspects of Verizon Florida's cost model are based on the more risky scenario three.

B. Risk Implied By Actual Competitive Market Conditions

Q. IN ADDITION TO MODEL ASSUMPTIONS, WHAT ARE THE MAJOR FACTORS THAT AFFECT THE RISK OF INVESTING IN THE FACILITIES REQUIRED TO PROVIDE LOCAL EXCHANGE SERVICE IN FLORIDA?

A. The risk of investing in the facilities required to provide local exchange service in Florida depends on operating leverage, the level of competition, rapidly changing technology, and the regulatory environment.

Q. WHAT IS OPERATING LEVERAGE?

A. Operating leverage refers to the relationship between the company's revenues, on the one hand, and the company's fixed and variable costs on the other. The provision of facilities-based telecommunications services is a business that requires a large commitment to fixed costs in relation to variable costs, a situation called high operating leverage. The relatively high degree of fixed costs in the provision of facilities-based telecommunications service exists because of the average LEC's large investment in fixed assets such as central office, transport, and loop facilities. High operating leverage causes Verizon Florida's net income to

be highly sensitive to fluctuations in revenues. There is a positive correlation between operating leverage and risk: as operating leverage rises, so does the risk of operation.

Q. IS THE CURRENT LEVEL OF LOCAL EXCHANGE COMPETITION RELEVANT?

A. No. The FCC's rules require that forward-looking UNE cost studies *assume* a fully competitive market. However, if the Florida Commission analyzes the level of competition in Florida, it should look at the forward-looking level of competition over the life of the investment, not the current level of competition.

Q. ARE INVESTORS PRIMARILY CONCERNED WITH CURRENT OR EXPECTED FUTURE COMPETITION WHEN THEY ASSESS THE INVESTMENT RISK OF VERIZON FLORIDA?

A. Investors are primarily interested in expected future competition when they assess the current investment risk of Verizon Florida because expected future competition is a primary determinant of volatility in the expected returns on their investment.

Q. CAN VERIZON FLORIDA'S INVESTMENT RISK BE MEASURED BY VERIZON FLORIDA'S CURRENT SHARE OF THE LOCAL EXCHANGE MARKET?

A. No. Remarkable as the growth of CLEC revenues and market share may be, current market share statistics are nonetheless a poor indicator of

competitive risks in the local exchange market. An incumbent's current market share reflects its historical position as the franchised provider of local exchange services in its service territory. The position of the incumbent as the franchised provider has been eliminated. Investors' perception of risk depends on expected future competition, not current competition as reflected in market share.

Q. YOU NOTED PREVIOUSLY THAT THE COST OF CAPITAL TO BE USED IN VERIZON FLORIDA'S COST STUDIES MUST BE BASED ON THE PRINCIPLE OF FORWARD-LOOKING ECONOMIC COST. IS THE FORWARD-LOOKING ECONOMIC COST PRINCIPLE CONSISTENT WITH THE USE OF VERIZON FLORIDA'S CURRENT MARKET SHARE AS AN INDICATOR OF INVESTMENT RISK?

A. No. First, the forward-looking economic cost principle is economically relevant only in a competitive market for telecommunications services. Thus, the forward-looking economic cost principle, at its heart, is based on the assumption that the market for local exchange services is fully competitive.

Second, the forward-looking economic cost principle requires a consideration of the level of competition and investment risk over the entire future life of Verizon Florida's investment in network facilities. Given the rapid changes in the telecommunications industry and the certainty that competition will increase, Verizon Florida's current market share is a poor indicator of future competition and risk.

Q. ARE YOU AWARE OF THE STATE OF COMPETITION IN FLORIDA?

A. Yes. Local exchange competition is extensive in Florida. Some 463 CLECs are certificated to offer local exchange service, and CLECs have access to all of Verizon Florida's lines. CLECs own and operate at least 36 switches in Verizon's service area. Facilities-based competitors to Verizon include, among others, 2nd Century, AT&T, Intermedia, ITC Deltacom, KMC, MCI WorldCom, Sprint, Teligent, and Time Warner.

In addition, as shown in the Commission's annual reports on telecommunications competition in Florida, CLECs continue to increase their share of both business and residential access line markets (see Table 1). According to the Commission's draft report released in October 2001, CLEC market share as of June 30, 2001, was 15.6 percent of the business access line market and 4.4 percent of the residential access line market.

TABLE 1

CLEC Access Lines Served At June 30, 2001

As Reported by the Florida Public Service Commission

	1996	1997	1998	1999	2000	2001
Number of CLECs	39	86	191	265	362	463
CLECs Providing Local Service	6	22	51	80	91	107

CLEC Access Lines (Thousands of Lines):						
Business	0.6	42	141	439	493	580
Residential	0	14	50	97	218	367
Total Lines	0.6	56	191	536	711	947
Annual Growth – Business Lines		6900%	236%	211%	12%	18%
Annual Growth – Residential Lines			257%	94%	125%	68%
Annual Growth – Total Lines		9233%	241%	181%	33%	33%
CLEC Market Share						
Business Lines		1.4%	4.3%	12.2%	14.2%	15.6%
Residential Lines		0.2%	0.7%	1.3%	2.7%	4.4%
Total Lines		0.5%	1.8%	5.0%	6.1%	7.9%

The Commission's 2000 competition report identifies numerous communities where CLECs have captured up to 25 percent of the business access line market, including Tampa, Ft. Lauderdale, Jacksonville, Destin, Winter Garden, Orlando, and Pensacola. The 2001 draft report does not show comparable data, apparently because some CLECs have not reported data to the Florida Commission on an exchange basis. However, data compiled by Verizon which is not reflected in the Commission's report shows that, as of June 30, 2001, CLECs have 290 NXXs covering all of Verizon Florida's exchanges and

interconnection trunks serving all of Verizon Florida's central offices; and CLECs have purchased resale service in every Verizon Florida central office.

Q. IS THERE ANY INDICATION THAT DATA IN REPORTS SUCH AS THOSE PREPARED BY THE FLORIDA COMMISSION AND THE FCC MAY CONSERVATIVELY ESTIMATE CLECS' MARKET SHARE PENETRATION?

A. Yes. First, CLECs are not compelled to respond to inquiries regarding their activities; and, since they are active participants in adversarial proceedings such as this one, they have an incentive not to disclose information about the lines they serve. (For example, the Florida competition report notes that there are instances where incumbents report having resold lines in an exchange, but no CLEC acknowledges providing service.) In addition, many larger businesses, educational institutions, and governmental organizations have private networks that provide telecommunications services that bypass the facilities of incumbents; and these activities are not taken into account in the competition reports prepared by the Florida Commission and the FCC. Furthermore, the data in reports prepared by the Florida Commission and the FCC relate only to CLEC activity, not to competitive services offered using competing infrastructures such as cable, Internet, and wireless networks. For example, a recent FCC broadband survey report indicates that subscribership to high-speed Internet access services increased by 63 percent during the second half of 2000 and that the incumbent LECs

have less than a 30 percent share of the broadband access line market. ["Understanding the Local Exchange and Broadband Markets in Florida," Division of Policy Analysis and Intergovernmental Liaison, October 2001, pp. 20 – 21, reporting to an August 9, 2001, FCC report on broadband demand at year-end 2000.]

Q. HOW DOES RAPIDLY CHANGING TECHNOLOGY AFFECT THE RISK OF INVESTING IN INCUMBENT LOCAL EXCHANGE COMPANIES SUCH AS VERIZON FLORIDA?

A. Rapidly changing technology increases Verizon Florida's risk in two ways. First, it threatens Verizon Florida's ability to recover the investment cost of its new telecommunications plant. Second, it reduces the cost of entry for competitors. Rapid advances in fiber optics, wireless, and multimedia transmission technologies, for example, have shortened the economic lives of the incumbent LECs' current investments in copper-based facilities and allowed cable TV, interexchange, and wireless companies to compete efficiently to offer local exchange service. Advances in these technologies further threaten the incumbent LECs' heavy investment in landline telecommunications service.

Q. IS VERIZON FLORIDA ABLE TO COMPETE ON EQUAL TERMS WITH COMPETITORS IN THE LOCAL EXCHANGE?

A. No. Verizon Florida faces a number of disadvantages in its efforts to compete in a fully competitive local exchange market. First, as the incumbent LEC, Verizon Florida has the unique obligation to provide

telecommunications services to *all* customers, even those whose rates fail to cover the cost of providing service. Telecommunications prices have historically been set to provide subsidies to high-cost customers in low-density geographic areas. Such subsidies are inconsistent with the competitive framework of the Act. Although the Act provides for the FCC and states to implement mechanisms that eliminate the implicit subsidies that have previously financed the provision of basic local telecommunications service, those implicit subsidies have not yet been eliminated. In truly competitive markets, there are no sources to subsidize prices that are lower than cost. Investors are concerned that the universal service support mechanisms that will be put in place may not be sufficient to balance the incumbent LEC's obligation to continue to provide service in high-cost areas. Competitors, in stark contrast, are free to serve only the most profitable markets.

Second, Verizon Florida has the unique obligation to make significant investments in the technology and software needed to provide unbundled network elements to competitors. Verizon Florida's competitors, however, have announced their intention to develop their own facilities for providing local exchange service. Thus, Verizon Florida faces the considerable risk that its investments in the technology and software needed to provide unbundled network elements to competitors will not be recovered, and is therefore at a cost disadvantage relative to its competitors.

Third, Verizon Florida has the unique obligation to share the benefits of network investments with competitors. When Verizon Florida invests to upgrade the technology in its network, Verizon Florida must share the benefits of this investment with competitors through resale and through leasing of unbundled network elements. However, when Verizon Florida's competitors invest to upgrade the technology in their networks, Verizon Florida receives no benefit from the CLECs' investments because Verizon Florida's competitors are not required to unbundle their networks. For example, if AT&T is able to provide a complete package of video, Internet, and voice services from its investments in TCI and MediaOne, AT&T will have a significant competitive advantage compared to Verizon Florida, who is unable to offer such bundled services. However, when Verizon Florida enhances the local portion of its service offerings through upgrades of its network, it is required to share these benefits with all competitors, including AT&T.

Q. HOW DOES REGULATION AFFECT THE RISK OF VERIZON FLORIDA?

A. Since regulation constrains Verizon Florida's activities more than those of its competitors, it impairs Verizon Florida's ability to compete on the same terms as its competitors, thereby increasing the risk of investing in Verizon Florida and thus increasing Verizon Florida's cost of capital.

Q. IS THE RISK OF PROVIDING UNBUNDLED NETWORK ELEMENTS GREATER THAN THE RISK OF PROVIDING LOCAL EXCHANGE

SERVICE IN THE CURRENT REGULATORY ENVIRONMENT?

A. Yes. In their eagerness to promote competition for local exchange service at the residential level, regulators have generally set rates for unbundled network elements based on forward-looking economic cost studies that include: (1) aggressive assumptions about the expenses and amount of investment required to build a new telecommunications network using the most efficient technology currently available; and (2) conservative estimates of the appropriate rate of depreciation and cost of capital for that forward-looking network. As a result of these contradictory approaches to estimating these four components of the forward-looking economic cost of providing unbundled network elements (that is, expenses, investment, cost of capital, and depreciation), local exchange carriers such as Verizon Florida have been required to lease unbundled network elements at rates that are below the cost of providing these elements in a competitive environment. Thus, the risk of providing unbundled network elements has exceeded the risk of providing local exchange service.

Furthermore, the provision of unbundled network elements presents its own unique risk. Verizon Florida is required to provide unbundled network elements primarily to facilitate its competitors' entry into the market. Those competitors will use unbundled network elements for short periods until it becomes economical for them to build their own networks, and abandon their use of Verizon Florida's network. Verizon Florida is essentially facilitating the movement of business off its network,

which presents a significant additional risk. In addition, Verizon Florida receives only a single revenue stream from the provision of unbundled network elements. By contrast, in the provision of local exchange service, Verizon Florida can compete to provide multiple services over the same line, and hence receive multiple revenue streams. Thus, the risk of providing unbundled network elements clearly exceeds the risk of providing local exchange service.

Q. HAVE YOU CONSIDERED THE POTENTIAL IMPACT OF LONG-TERM COMMITMENTS TO TAKE AND PAY FOR UNBUNDLED NETWORK ELEMENTS ON THE RISK OF INVESTING IN THE FACILITIES REQUIRED TO PROVIDE UNBUNDLED NETWORK ELEMENTS?

A. Yes. As noted above, Verizon's competitors may choose at any time to discontinue purchasing UNEs from Verizon. Long-term commitments to take and pay for unbundled network elements, in theory, could reduce the risk of Verizon Florida's forward-looking investment in facilities to provide unbundled network elements. However, the key rates to be established in this proceeding are quoted at a price per month, or per minute of use. A competing carrier may choose not to use Verizon Florida's facilities, or it may choose to use these facilities for one month at a time. Thus, while Verizon Florida is required to provide other carriers with unbundled network elements, competitors are under no obligation to use Verizon Florida's elements for any specific period of time. In short, there are no long-term commitments to take and pay for unbundled network elements that might reduce the risk of Verizon Florida's investment in the facilities

and software to provide interconnection and unbundled network elements.

Q. HOW DOES THE FORWARD-LOOKING RISK OF INVESTING IN THE FACILITIES REQUIRED TO PROVIDE UNBUNDLED NETWORK ELEMENTS COMPARE TO THE FORWARD-LOOKING RISK OF INVESTING IN THE STANDARD & POOR'S INDUSTRIALS (S&P INDUSTRIALS)?

A. The forward-looking risk of investing in the facilities required to provide unbundled network elements in Florida is at least as great as the forward-looking risk of investing in the S&P Industrials.

Q. WHY DO YOU BELIEVE THAT THE RISK OF INVESTING IN THE FACILITIES REQUIRED TO PROVIDE UNBUNDLED NETWORK ELEMENTS IN FLORIDA IS AT LEAST AS GREAT AS THE FORWARD-LOOKING RISK OF INVESTING IN THE S&P INDUSTRIALS?

A. As I noted above, the risk of investing in the facilities to provide unbundled network elements depends on operating leverage, the degree of competition, rapidly changing technology, and the regulatory environment. The degree of operating leverage required to provide facilities-based telecommunications services far exceeds the average degree of operating leverage required to provide the goods and services offered by companies in the S&P Industrials. Telecommunications is also a high technology business that is particularly sensitive to the risks of

rapidly changing technology. Furthermore, the regulatory environment has placed restrictions on incumbents in their ability to compete on equal terms with their competitors. These three factors—high operating leverage, rapidly changing technology, and the regulatory environment—tend to make the risk of investing in the facilities required to provide unbundled network elements greater than the risk of investing in the S&P Industrials.

The only factor that might reduce the risk of investing in the facilities required to provide unbundled network elements is the level of competition. However, the FCC's cost study principles require that cost studies "replicate . . . the conditions of a competitive market" for unbundled network elements. In addition, the level of competition for unbundled network elements is increasing rapidly. Taken as a whole, my analysis of the factors affecting the risk of investing in the facilities required to provide unbundled network elements causes me to believe that this risk is at least as great as the risk of investing in the S&P Industrials.

IV. Estimate of the Weighted Average Cost of Capital for Use in Verizon Florida's Forward-Looking Cost Studies

Q. HOW DID YOU CALCULATE THE WEIGHTED AVERAGE COST OF CAPITAL THAT YOU RECOMMEND FOR USE IN VERIZON

FLORIDA'S FORWARD-LOOKING COST STUDIES?

A. I calculated the weighted average cost of capital to be used in Verizon Florida's forward-looking cost studies by analyzing the market-based percentages of debt and equity in the capital structures of competitive firms, the market cost of debt, and the market-required rate of return on an equity investment in competitive firms of comparable risk.

A. Target Capital Structure

Q. HOW DID YOU DETERMINE AN APPROPRIATE TARGET CAPITAL STRUCTURE FOR USE IN VERIZON FLORIDA'S FORWARD-LOOKING COST STUDIES?

A. To determine an appropriate target capital structure for use in Verizon Florida's forward-looking cost studies, I examined capital structure data for both my proxy group of S&P Industrials and a group of telecommunications companies with incumbent local exchange subsidiaries. I examined the most current available data for these companies, and I also reviewed data for the past five years. In all periods, the average market value capital structure for these companies contains no more than 25 percent debt, and no less than 75 percent equity.

Q. WHAT ARE THE AVERAGE MARKET VALUE CAPITAL STRUCTURES OF THE S&P INDUSTRIALS AND THE TELECOMMUNICATIONS COMPANIES WITH INCUMBENT LOCAL

EXCHANGE OPERATIONS?

A. Table 2 below shows the average year-end market value capital structures of the S&P Industrials and the telecommunications companies for the five-year period 1996 through 2000. These data show that both groups, on average, have at least 75 percent equity (and generally have more than 75 percent equity) in their capital structures.

Table 2

Capital Structure of the S&P Industrials
and Telecommunications Companies at Year End
($ in Millions)

	S&P Industrials			Telecom Companies		
	Market Value	Total Debt	Percent Equity	Market Value	Total Debt	Percent Equity
1996	1,700,587	285,381	85.6%	107,320	28,004	79.3%
1997	2,289,166	323,858	87.6%	204,385	50,221	80.3%
1998	2,863,543	353,205	89.0%	308,876	53,124	85.3%
1999	3,052,212	405,374	88.3%	381,874	68,495	84.8%
2000	3,041,722	469,285	86.6%	398,381	111,479	78.1%
Total	12,947,231	1,837,104	87.6%	1,400,837	311,324	81.8%

Q. BASED ON YOUR REVIEW OF THESE DATA, WHAT IS YOUR RECOMMENDED TARGET MARKET VALUE CAPITAL STRUCTURE FOR USE IN VERIZON FLORIDA'S FORWARD-LOOKING COST STUDIES?

A. Based on my examination of these data, I recommend that a target market value capital structure containing 25 percent debt and 75 percent equity be used to calculate Verizon Florida's weighted average cost of capital.

B. Cost of Debt

Q. HOW DID YOU MEASURE THE MARKET COST OF DEBT INVESTMENTS?

A. I used the 7.55 percent average yield to maturity on Moody's A-rated industrial bonds for March 2001, as reported by Moody's Investors Service. This estimate is conservative because it does not include the flotation costs that must be paid to issue the debt securities required to finance the building of local exchange facilities on a forward-looking basis.

C. Cost of Equity

Q. HOW DID YOU MEASURE THE MARKET COST OF AN EQUITY INVESTMENT IN VERIZON FLORIDA?

A. I applied the Discounted Cash Flow (DCF) Model to the S&P Industrials.

Q. WHY DID YOU APPLY THE DCF MODEL TO THE S&P INDUSTRIALS?

A. A proper definition of the cost of capital for use in Verizon Florida's

forward-looking cost studies is based on the assumption that the market for local exchange services is competitive. As previously noted, the FCC stated in the *Local Competition Order* that it sought to establish UNE pricing rules that simulate conditions in a competitive marketplace. However, at the present time, there are no publicly-traded companies that have built telecommunications networks solely for the purpose of providing unbundled network elements in a competitive market. Since the S&P Industrials are a well-known sample of publicly traded competitive companies whose risk, on average, approximates the risk the incumbent LECs actually face in providing telecommunications services in a competitive market, I believe the S&P Industrial group is a conservative proxy for the risks of investing in the facilities required to provide local exchange services on a forward-looking basis.

Q. DOES THE S&P INDUSTRIAL GROUP FACE THE SAME RISK AS A COMPANY BUILDING A NEW TELECOMMUNICATIONS NETWORK?

A. No. The S&P Industrial group certainly faces less risk than a company building an entirely new telecommunications network for providing UNEs, using the most efficient technology to satisfy the foreseeable demand for telecommunications service. A better proxy group for this latter company would include such companies as Teligent, Allegiance, Covad, Rhythms, Metromedia Fiber Network, Level 3, Qwest, Global Crossing, The Williams Companies, and McLeodUSA. My recommended cost of capital would be many times higher if I looked at companies that were building entirely new networks to provide UNEs.

Q. WHAT DCF RESULT DID YOU OBTAIN FROM YOUR APPLICATION OF THE DCF MODEL TO THE S&P INDUSTRIALS?

A. As shown in Exhibit JVW-1, I obtained a market-weighted average DCF cost of equity of 14.75 percent for the S&P Industrials.

Q. IN ADDITION TO YOUR DCF RESULTS FOR THE S&P INDUSTRIALS, HAVE YOU ALSO CALCULATED DCF RESULTS FOR A GROUP OF TELECOMMUNICATIONS COMPANIES THAT PROVIDE LOCAL EXCHANGE SERVICE?

A. Yes, I have. As shown in Exhibit JVW-2, the average cost of equity for my group of telecommunications companies that provide local exchange service is 15.52 percent.

D. Weighted Average Cost of Capital

Q. WHAT IS YOUR ESTIMATE OF VERIZON FLORIDA'S OVERALL WEIGHTED AVERAGE COST OF CAPITAL?

A. I estimate Verizon Florida's overall weighted average cost of capital to be 12.95 percent. This estimate is based on a 7.55 percent market cost of debt, a target market value capital structure containing 25 percent debt and 75 percent equity, and a cost of equity of 14.75 percent (see Table 3).

Table 3

Weighted Average Cost of Capital Using 25/75 Capital Structure

Source of Capital	Cost Rate	Percent	Weighted Cost
Debt	7.55%	25.00%	1.89%
Equity	14.75%	75.00%	11.06%
WAAC			12.95%

Q. ON THE BASIS OF YOUR COST OF CAPITAL STUDIES, WHAT IS YOUR CONCLUSION REGARDING THE REASONABLENESS OF THE 12.95 PERCENT WEIGHTED AVERAGE COST OF CAPITAL VERIZON FLORIDA USED IN ITS FORWARD-LOOKING COST STUDIES?

A. I conclude that 12.95 percent is a conservative estimate of the weighted average cost of capital that should be used in Verizon Florida's forward-looking studies of the cost of providing unbundled network elements and interconnection.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

REBUTTAL TESTIMONY OF JAMES H. VANDER WEIDE

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is James H. Vander Weide. I am Research Professor of Finance and Economics at the Fuqua School of Business of Duke University. I am also President of Financial Strategy Associates, a firm that provides strategic and financial consulting services to clients in the electric, gas, insurance, telecommunications, and water industries. My business address is 3606 Stoneybrook Drive, Durham, North Carolina.

Q. ARE YOU THE SAME JAMES H. VANDER WEIDE THAT PREVIOUSLY FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I have been asked by Verizon Florida Inc. (Verizon Florida) to review the testimonies of Mr. David J. Draper on behalf of Staff, Dr. George S. Ford on behalf of Z-Tel Communications, Inc., and Dr. August H. Ankum on behalf of the ALEC Coalition, and to respond to their cost of capital recommendations in this proceeding.

II. REBUTTAL OF MR. DRAPER

A. Economic Principles

Q. HAS THE FCC ESTABLISHED ANY ECONOMIC PRINCIPLES FOR

SETTING RATES FOR UNBUNDLED NETWORK ELEMENTS?

A. Yes. In its First Report and Order, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996* ("Local Competition Order"), the FCC decided that three fundamental economic principles should be used to set rates for unbundled network elements. First, the FCC decided that rates for unbundled network elements should be based on forward-looking economic costs, not embedded or accounting costs. Second, the FCC decided that rates for unbundled network elements should approximate the rates the incumbent LEC would be able to charge in a competitive market for unbundled network elements. Third, the FCC decided that rates for unbundled network elements should provide correct economic signals for the investment decisions of both competitive and incumbent local exchange carriers.

Q. HOW WOULD A FORWARD-LOOKING ECONOMIC COST OF CAPITAL DIFFER FROM A COST OF CAPITAL BASED ON EMBEDDED OR ACCOUNTING COSTS?

A. As noted in my direct testimony, a forward-looking economic cost of capital would be based on market interest rates, market costs of equity, and a market value capital structure. In contrast, a cost of capital based on embedded or accounting costs would reflect the embedded cost of debt, the rate of return on book equity, and a book value capital structure.

Q. IS MR. DRAPER'S COST OF CAPITAL RECOMMENDATION IN THIS

PROCEEDING CONSISTENT WITH THE FCC'S FORWARD-LOOKING ECONOMIC COST PRINCIPLE?

A. No. Mr. Draper's cost of capital recommendation in this proceeding is based on his proxy telecommunications companies' book value capital structures, which reflect—contrary to the FCC's guidelines—the embedded, historical, and accounting costs of these companies' assets.

Q. CAN YOU EXPLAIN WHY THE BOOK VALUE CAPITAL STRUCTURES OF MR. DRAPER'S TELECOMMUNICATIONS GROUP REFLECT THE HISTORICAL, EMBEDDED, OR ACCOUNTING COSTS, OF THESE COMPANIES' ASSETS?

A. Yes. The book value of a company's equity is defined as the book value of a company's assets minus the book value of the company's debt:

Book Value of Equity = Book Value of Assets - Book Value of Debt.

Since the book value of a company's assets, in turn, is equal to the historical cost of a company's assets minus accumulated depreciation, the book value of a company's equity can also be stated as the historical cost of a company's assets, minus the accumulated book depreciation on these assets, minus the book value of a company's debt:

Book Value of Equity = Historical Cost of Assets – Accumulated Book Depreciation – Book Value of Debt

Thus, the book value of a company's equity reflects the historical cost of the company's assets. Similarly, the book value of a company's debt reflects the historical costs of the company's debt financing.

Q. IN ITS RECENT DECISION IN DOCKET NO. 990649TP, THE COMMISSION ADOPTED A BOOK VALUE CAPITAL STRUCTURE ON THE GROUNDS THAT THE TELECOMMUNICATIONS ACT REQUIRES USE OF FORWARD-LOOKING COSTS, BUT NOT THE USE OF MARKET VALUE CAPITAL STRUCTURES. DO YOU AGREE WITH THE COMMISSION'S ARGUMENT REGARDING THE USE OF A MARKET VALUE CAPITAL STRUCTURE?

A. No. The FCC has interpreted the Telecommunications Act to require the use of forward-looking ***economic*** costs, not historical, embedded, or accounting costs. Economic costs are based on ***market values***, not accounting or book values. I have taught corporate finance and economics for more than 30 years, and I have never seen a reputable finance or economic text recommend the use of book value capital structures to estimate the cost of capital.

Q. WHY DID THE FCC RECOMMEND THE USE OF FORWARD-LOOKING *ECONOMIC* COSTS, RATHER THAN HISTORICAL OR ACCOUNTING COSTS?

A. The FCC recommended the use of forward-looking ***economic*** costs, rather than historical or accounting costs, because it wanted to send correct economic signals to new entrants who were deciding whether to purchase unbundled network elements or to purchase their own facilities. For example, in paragraph 620 of the Local Competition Order, the FCC states:

> In the following sections, we first set forth ... a cost-based

pricing methodology based on forward-looking economic costs, which we conclude is the approach for setting prices that best furthers the goals of the 1996 Act. In dynamic competitive markets, firms take action based not on embedded costs, but on the relationship between market-determined prices and forward-looking economic costs. If market prices exceed forward-looking economic costs, new competitors will enter the market. If their forward-looking economic costs exceed market prices, new competitors will not enter the market and existing competitors may decide to leave. Prices for unbundled elements under section 251 must be based on cost under the law, and that should be read as requiring that prices be based on forward-looking economic costs. New entrants should make their decisions whether to purchase unbundled elements or to build their own facilities based on the relative economic costs of these options. By contrast, because the cost of building an element is based on forward-looking economic costs, new entrants' investment decisions would be distorted if the price of unbundled elements were based on embedded costs. In arbitrations of interconnection arrangements, or in rulemakings the results of which will be applied in arbitrations, states must set prices for interconnection and unbundled network elements based on the forward-looking, long-run, incremental cost methodology we describe below.

Q. YOU NOTED ABOVE THAT THE FCC REQUIRES THAT RATES FOR UNBUNDLED NETWORK ELEMENTS BE BASED ON FORWARD-LOOKING *ECONOMIC* COSTS, NOT HISTORICAL OR ACCOUNTING COSTS. ARE ALL FORWARD-LOOKING ECONOMIC ESTIMATES OF THE COST OF CAPITAL CONSISTENT WITH THE FCC'S ECONOMIC GUIDELINES FOR SETTING UNE RATES?

A. No. As noted above, the FCC also requires that UNE rates: (1) approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs; and (2) send correct economic signals to both potential new entrants and incumbent LECs. Forward-looking economic cost estimates that fail to approximate the cost of capital the incumbent LEC would incur in a competitive market for UNEs, and that fail to provide correct economic signals to both potential new entrants and incumbent LECs in making network investment decisions, are inconsistent with the FCC's economic guidelines for setting UNE rates.

Q. IS MR. DRAPER'S COST OF CAPITAL ESTIMATE IN THIS PROCEEDING CONSISTENT WITH THE FCC'S PRINCIPLE THAT UNE RATES MUST APPROXIMATE THE RATES THE INCUMBENT LEC WOULD BE ABLE TO CHARGE IN A COMPETITIVE MARKET FOR UNES?

A. No. Since competitive companies use market value capital structures to estimate their weighted average costs of capital, their rates are necessarily based on capital costs measured using market value capital

structures. In contrast, Mr. Draper uses a book value capital structure to calculate his recommended cost of capital in this proceeding. UNE rates based on Mr. Draper's estimate of the weighted average cost of capital cannot approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs.

Q. IS YOUR COST OF CAPITAL ESTIMATE IN THIS PROCEEDING CONSISTENT WITH THE FCC'S PRINCIPLE THAT UNE RATES MUST APPROXIMATE THE RATES THE INCUMBENT LEC WOULD BE ABLE TO CHARGE IN A COMPETITIVE MARKET FOR UNES?

A. Yes. Since my cost of capital recommendation reflects the forward-looking economic cost of capital of competitive companies of average risk, my recommendation approximates the cost of capital the incumbent LEC would incur in a competitive market for UNEs. However, as I discuss below, my cost of capital estimate does not reflect the forward-looking economic costs of building an entirely new telecommunications network from scratch using the most efficient technology at every moment of time.

Q. DO AT&T AND WORLDCOM AGREE WITH THE FCC'S CONCLUSION THAT THE TELRIC METHODOLOGY SHOULD PRODUCE RATES THAT "APPROXIMATE WHAT THE INCUMBENT LEC WOULD BE ABLE TO CHARGE IF THERE WERE A COMPETITIVE MARKET FOR SUCH OFFERINGS"?

A. Yes. AT&T and WorldCom have repeatedly supported this statement in

their testimony regarding UNE rates throughout the country. For example, in her direct testimony on behalf of AT&T and WorldCom in a proceeding before the FCC, AT&T/WorldCom witness Terry L. Murray states at page 5,

> First, as is consistent with the Commission's Total Element Long Run Incremental Cost ("TELRIC") methodology, **the prices for unbundled network elements should mimic the prices that would prevail if Verizon sold the same functionalities in a competitive market**. Competitive market forces would drive prices down to efficient forward-looking economic costs. Thus, to allow all providers of local exchange service to purchase inputs as if they were doing so in a competitive market, the Commission should establish prices for unbundled network elements that do not exceed forward-looking economic costs. (Murray Direct Testimony on behalf of AT&T and WorldCom in CC Docket No. 00-218, CC Docket No. 00-24, CC Docket No. 00-251, at 5 (emphasis added).)

In her rebuttal testimony, Ms. Murray states,

> TELRIC is the right methodology because, as this Commission explained when it adopted the TELRIC methodology in its Local Competition First Report and Order [at ¶ 679], "Adopting a pricing methodology based on forward-looking, economic costs best replicates, to the extent possible, the conditions of a competitive market."

(Murray Rebuttal on behalf of AT&T and WorldCom in CC Docket No. 00-218, CC Docket No. 00-24, CC Docket No. 00-251 at 5-6.)

Q. HAVE AT&T/WORLDCOM WITNESSES CONCEDED THAT THE COST OF CAPITAL MUST ASSUME A FULLY COMPETITIVE MARKET TO BE CONSISTENT WITH OTHER ASSUMPTIONS IN A UNE COST MODEL?

A. Yes. In the Virginia FCC Arbitration proceeding, AT&T/WorldCom economic witness Terry Murray stated: "I think all the model assumptions have to be consistent. So, to the degree that it requires a competitive market to get all of the other assumptions, that would be true for the cost of capital as well." (AT&T and WorldCom v. Verizon Virginia, Case No. 00-218 et al., Tr. at 3202 (October 23, 2001.)

Q. AT&T WITNESS ANKUM RECOMMENDS COST MODEL INPUTS IN THIS PROCEEDING THAT REFLECT HIS ASSUMPTION THAT VERIZON FLORIDA WILL BUILD AN ENTIRELY NEW TELECOMMUNICATIONS NETWORK FROM SCRATCH USING THE MOST EFFICIENT TECHNOLOGY AT EVERY MOMENT OF TIME. DOES MR. DRAPER'S COST OF CAPITAL ESTIMATE REFLECT THE RISKS OF A COMPANY THAT MUST BUILD AN ENTIRELY NEW TELECOMMUNICATIONS NETWORK FROM SCRATCH USING THE MOST EFFICIENT TECHNOLOGY AT EVERY MOMENT OF TIME?

A. No. Mr. Draper's cost of capital estimate, if it were calculated correctly,

reflects only the risks of the telecommunications holding companies' existing telecommunications businesses, not the risk of building an entirely new telecommunications network from scratch using the most efficient technology at every moment of time. This extreme competitive market assumption, which serves as the basis of the ALEC coalition's UNE cost recommendations, would require a significantly higher cost of capital than either Mr. Draper or I have recommended in this proceeding.

Q. HAS THE FCC RECOGNIZED THAT THE RISKS OF THE REGULATORY ENVIRONMENT, INCLUDING THE RISK OF THE UNE COST MODEL, SHOULD BE CONSIDERED IN ESTIMATING THE COST OF CAPITAL?

A. Yes. In its reply brief before the Supreme Court, the FCC stated, "Moreover, an appropriate cost of capital determination takes into account not only existing competitive risks...but also risks associated with the regulatory regime to which a firm is subject." (Reply Brief for Petitioners United States and the FCC, *Verizon Communications, Inc. et al. v. FCC et al.* (Nos. 00-551, 00-555, 00-587, 00-590, and 00-602) at 11 - 12.) Thus, the FCC clearly recognizes that the risks of the economic and regulatory environment assumed in the UNE cost model should be considered in estimating the cost of capital.

Q. WOULD MR. DRAPER'S COST OF CAPITAL ESTIMATE PROVIDE CORRECT ECONOMIC SIGNALS TO NEW ENTRANTS WHO ARE MAKING DECISIONS WHETHER TO PURCHASE UNBUNDLED

NETWORK ELEMENTS OR TO BUILD THEIR OWN FACILITIES?

A. No. As noted above, Mr. Draper uses the average book value capital structure of his proxy group of telecommunications companies to estimate the weighted average cost of capital for use in Verizon Florida's UNE cost studies. Book value capital structures reflect the embedded or historical costs of his telecommunications companies' assets. In contrast, new entrants necessarily issue debt and equity securities, and hence attract capital, at ***market*** values, not accounting or book values. Because Mr. Draper incorrectly uses a book value capital structure to estimate the weighted average cost of capital for use in Verizon Florida's UNE cost studies, his estimate would provide incorrect economic signals to new entrants who are deciding whether to purchase UNEs or to build their own facilities.

Q. ARE YOU AWARE THAT THE FLORIDA PUBLIC SERVICE COMMISSION HAS TRADITIONALLY USED BOOK VALUE CAPITAL STRUCTURES TO SET RATES FOR PUBLIC UTILITY SERVICES?

A. Yes. However, the Florida Public Service Commission has also used book values, or historical costs, to measure the company's investment in rate base assets. While a book value capital structure may have been appropriate in a world where assets were measured in terms of book values or historical costs, a book value capital structure is definitely not appropriate in a world where assets are measured in terms of market values, or forward-looking economic costs. If assets are measured in terms of market values or forward-looking economic costs, consistency

requires that the debt and equity components of the capital structure also be measured in terms of market values of forward-looking economic costs.

B. MR. DRAPER'S DCF METHOD

1. Mr. Draper's Proxy Companies

Q. WHAT RISK PROXY COMPANIES DID MR. DRAPER USE TO ESTIMATE THE COST OF CAPITAL INPUT IN UNE COST STUDIES?

A. Mr. Draper used a group of seven telecommunications holding companies, including AT&T, BellSouth, CenturyTel, Qwest, Sprint, Telephone & Data, and Verizon as risk proxies for the purpose of estimating the cost of capital input in UNE cost studies.

Q. WHAT SELECTION CRITERIA DID MR. DRAPER USE TO SELECT THE COMPANIES IN HIS RISK PROXY GROUP?

A. Mr. Draper describes his selection criteria on page 6 of his direct testimony, as follows:

> I first analyzed the publicly traded telecommunication carriers listed in Value Line's Investment Survey for Windows, November 2001 edition. ... In developing this index, I eliminated any company that received less than 75% of its annual revenues from telecommunications operations. I also eliminated any company with insufficient financial data to perform a financial analysis. Finally, I eliminated any company that was the subject of an ongoing

merger or acquisition.

Q. DOES MR. DRAPER PROVIDE ANY DATA THAT WOULD ALLOW ONE TO VERIFY THAT HIS GROUP OF SEVEN TELECOMMUNICATIONS HOLDING COMPANIES, IN FACT, MEET THE CRITERIA HE STATES?

A. No. While Mr. Draper's work papers contain some data on the seven telecommunications companies in his proxy group, they do not contain any data on the telecommunications companies that he eliminated in arriving at his proxy group. Furthermore, Mr. Draper does not provide any data on which companies were eliminated because they are "the subject of an ongoing merger or acquisition."

Q. DO ANY OF THE COMPANIES IN MR. DRAPER'S PROXY GROUP FAIL TO MEET HIS CRITERIA THAT THE COMPANY NOT BE INVOLVED IN AN "ONGOING MERGER OR ACQUISITION"?

A. Yes. At least two of Mr. Draper's companies, AT&T and CenturyTel, fail to meet his criteria that they not be "the subject of an ongoing merger or acquisition." AT&T is subject to a merger with Comcast, and CenturyTel is subject to a merger with ALLTEL.

Q. DID MR. DRAPER FAIL TO INCLUDE ANY COMPANIES THAT DID MEET HIS CRITERIA?

A. Yes. SBC Communications is a large telecommunications holding company that receives all its revenues from telecommunications

operations, has sufficient data to perform both a DCF and CAPM analysis, and is not involved in a merger or acquisition at this time.

Q. HAVE YOU CALCULATED DCF RESULTS FOR THE TELECOMMUNICATIONS COMPANIES THAT MEET MR. DRAPER'S SELECTION CRITERIA USING MR. DRAPER'S TWO-STAGE DCF METHODOLOGY?

A. Yes. The average DCF result for the Value Line telecommunications holding companies that meet Mr. Draper's selection criteria is 15.86 percent. This result is based on use of Mr. Draper's specific DCF methodology and data applied to each individual company that meets his selection criteria. See Vander Weide Rebuttal Exhibit JVW-1.

Q. WHAT RISK PROXY COMPANIES DID YOU USE TO ESTIMATE THE COST OF CAPITAL INPUT IN STUDIES OF THE FORWARD-LOOKING ECONOMIC COST OF PROVIDING UNBUNDLED NETWORK ELEMENTS IN FLORIDA?

A. I used both the S&P Industrials and a group of telecommunications holding companies as proxies for the risk of investing in the facilities required to provide unbundled network elements in Florida.

Q. WHY DID YOU USE THE S&P INDUSTRIALS AS A PROXY FOR THE RISK OF INVESTING IN THE FACILITIES REQUIRED TO PROVIDE UNES IN FLORIDA?

A. I used the S&P Industrials as a proxy for the risk of investing in the

facilities required to provide unbundled network elements for several reasons. First, there are no publicly-traded companies whose sole business is the provision of unbundled network elements to competitors. Companies that would most closely resemble a "network element leasing company" include companies such as Global Crossing, Level 3 Communications, and Metromedia Fiber Network. These companies provide telecommunications network services in the wholesale market. However, as I have noted, these companies do not have sufficient data for the application of traditional cost of equity techniques.

Second, the S&P Industrials are a broad sample of companies in competitive markets whose aggregate risk is average. Because the sample of companies in the S&P Industrials is broad, the use of the S&P Industrials significantly reduces the estimation error in the cost of capital that can arise when a small sample of companies is chosen from an industry that is undergoing unprecedented restructuring.

Third, the three remaining Regional Bell Holding Companies are simply too small a sample for the purpose of estimating the cost of capital. In addition, the RBHCs receive a very small percentage of their revenues from the leasing of unbundled network elements.

Finally, the risk of the RBHCs is approximately equal to the risk of the S&P Industrials, as evidenced by the fact that the RBHCs and the S&P Industrials have approximately the same average market value capital

structure. Companies with similar risk generally use similar capital structures to finance their business activities.

Q. WHY DID YOU ALSO USE A GROUP OF TELECOMMUNICATIONS HOLDING COMPANIES AS A PROXY FOR THE RISK OF INVESTING IN THE FACILITIES REQUIRED TO PROVIDE UNES IN FLORIDA?

A. I also used a group of telecommunications holding companies because some commissions maintain the view that companies must be in a similar line of business in order to be comparable in risk to the business of leasing unbundled network elements. Although this view is not economically correct, I felt it necessary to perform the analysis so that the Commission would have a complete set of information for consideration in making its decision.

Q. WHAT TELECOMMUNICATIONS HOLDING COMPANIES DID YOU USE IN YOUR ANALYSIS?

A. As shown in Vander Weide Exhibit JVW-2, I used ALLTEL, BellSouth, SBC Communications, and Verizon Communications as a risk proxy group of telecommunications holding companies. As shown on that exhibit, my DCF result for the group of telecommunications holding companies is slightly higher than my DCF result for the S&P Industrials.

2. Mr. Draper's Two-Stage DCF Model

Q. HOW DOES MR. DRAPER USE THE DCF MODEL TO ESTIMATE THE COST OF EQUITY FOR HIS PROXY COMPANIES?

A. Mr. Draper uses a two-stage annual DCF model in which investors expect future dividends to grow at one rate for the next four years and at a second rate thereafter.

Q. HOW DOES MR. DRAPER ESTIMATE THE TWO GROWTH RATES IN HIS DCF MODEL?

A. Mr. Draper uses Value Line dividend forecasts for the years 2002 and 2005 to estimate the short-term dividend growth in his DCF model, and Value Line estimates of the long-run rate of return on book equity and retention ratio to estimate the long-run growth rate in his DCF model. Mr. Draper's short-term and long-term growth estimates are shown in Exhibit DJD-4.

Q. DO YOU AGREE WITH MR. DRAPER'S APPLICATION OF HIS TWO-STAGE DCF METHOD TO HIS PROXY GROUP OF TELECOMMUNICATIONS HOLDING COMPANIES?

A. No. I have several problems with Mr. Draper's application of his two-stage DCF method to the telecommunications holding companies. First, as noted above, Mr. Draper applies his two-stage DCF model to a proxy group of companies that did not even meet his own selection criteria for inclusion in the proxy group. If Mr. Draper had applied his own selection criteria correctly he would have obtained a two-stage DCF result equal to 15.86 percent.

Second, Mr. Draper has not provided any evidence that investors use his

two-stage DCF method in making stock buy and sell decisions. As noted in my direct testimony, there is considerable evidence that investors use the I/B/E/S growth rates in a single-stage model in making stock buy and sell decisions.

Third, Mr. Draper's two-stage DCF model is based on the assumption that dividends are received only at the end of each year. In contrast, his proxy companies actually pay dividends quarterly. Investors recognize the quarterly payment of dividends when they value the stocks of Mr. Draper's telecommunications holding companies.

Fourth, Mr. Draper's two-stage DCF model produces the unreasonable result that two of his companies, AT&T and Telephone & Data Systems, have DCF costs of equity less than the current yield to maturity on Moody's A-rated utility bonds; and one company, Qwest, has a DCF cost of equity that is only slightly greater than the yield to maturity on Moody's A-rated utility bonds.

C. Mr. Draper's Capital Asset Pricing Model ("CAPM")

Q. HOW DOES MR. DRAPER USE THE CAPM TO ESTIMATE THE COST OF EQUITY FOR HIS PROXY COMPANIES?

A. The CAPM requires an estimate of the risk-free rate, the company-specific risk factor or beta, and the expected return on the market portfolio. For his estimate of the risk-free rate, Mr. Draper used the forecasted yield to maturity on long-term Treasury bonds. For his

estimate of the company-specific risk, or beta, Mr. Draper used the average Value Line beta for his proxy companies. For his estimate of the expected return on the market portfolio, Mr. Draper performed "a basic DCF analysis" for each company in the Value Line database. (See Draper testimony at p. 9.)

Q. DO YOU AGREE WITH MR. DRAPER'S APPLICATION OF THE CAPM?

A. No. I strongly disagree with Mr. Draper's estimate of the expected rate of return on the market portfolio.

Q. HOW DOES MR. DRAPER ESTIMATE THE EXPECTED RATE OF RETURN ON THE MARKET PORTFOLIO?

A. Mr. Draper estimates the expected rate of return on the market portfolio using a single-stage annual DCF model.

Q. HOW DOES MR. DRAPER ESTIMATE THE GROWTH COMPONENT OF HIS SINGLE-STAGE ANNUAL DCF MODEL?

A. Mr. Draper uses an average of Value Line's projected dividend and earnings growth forecasts as his estimate of the growth component for his DCF model.

Q. DO YOU AGREE WITH MR. DRAPER'S USE OF THE AVERAGE OF VALUE LINE'S FORECASTED DIVIDEND AND EARNINGS GROWTH RATES AS HIS ESTIMATE OF GROWTH IN HIS DCF MODEL?

A. No. Value Line's current average dividend growth forecast for Mr. Draper's companies is based on its assumption that the average Value Line company is in the process of adjusting to a lower target dividend payout ratio. As shown below, dividends must grow at the same rate as earnings once the companies have achieved their new target dividend payout ratio. Thus, Value Line's forecasted earnings growth rate is a better estimate of long-run dividend growth than its current forecasted dividend growth rate.

Q. DO YOU HAVE ANY EVIDENCE THAT VALUE LINE'S AVERAGE DIVIDEND FORECAST FOR THE COMPANIES IN MR. DRAPER'S MARKET RISK INDEX IS BASED ON THE ASSUMPTION OF A DECLINING DIVIDEND PAYOUT RATIO?

A Yes. As shown in Mr. Draper's work papers, the average earnings growth forecast for the companies in Mr. Draper's market risk index is greater than the average dividend growth forecast for these companies. Whenever earnings are expected to grow at a faster rate than dividends, the dividend payout ratio will necessarily decline.

Q. SUPPOSE THAT ANALYSTS EXPECT A COMPANY'S DIVIDENDS TO GROW BY LESS THAN ITS EARNINGS OVER THE NEXT SEVERAL YEARS BECAUSE OF THE COMPANY'S TRANSITION TO A NEW, LOWER TARGET DIVIDEND PAYOUT RATIO. DOES THIS SITUATION IMPLY THAT ANALYSTS' EARNINGS GROWTH PROJECTIONS FOR THIS COMPANY CANNOT BE USED TO ESTIMATE THE "G" TERM IN

THE DCF MODEL?

A. No. To illustrate, suppose that a company's current dividend payout ratio is approximately 75 percent and that the company intends to adjust its dividend payout ratio to 60 percent. Once the company achieves its new dividend payout target, dividends will grow at the same rate as earnings. As long as the transition is relatively short, the earnings growth forecast would still be a good estimate of long-term dividend growth in the DCF Model. (To illustrate why the earnings growth forecast would be a good estimate of long-term dividend growth, consider that, for any one year period of time, a company's earnings growth rate is given by the equation:

$$g_E = \frac{E_t}{E_{t-1}}$$

Assuming that the company has achieved its new dividend payout ratio of 60%, their dividend growth rate is given by the equation:

$$g_D = \frac{D_t}{D_{t-1}} = \frac{.6E_t}{.6E_{t-1}} = \frac{E_t}{E_{t-1}}$$

Thus, once the company achieves its new dividend payout ratio, dividends must grow at the same rate as earnings.)

Q. HAVE YOU CALCULATED DCF RESULTS FOR THE COMPANIES IN THE VALUE LINE UNIVERSE USING VALUE LINE'S EARNINGS GROWTH FORECASTS AND DATA AT NOVEMBER 2001 (THE SAME TIME PERIOD USED BY MR. DRAPER)?

A. Yes. My application of the basic annual DCF model to the companies in the Value Line universe, using Value Line earnings growth forecasts and data at November 2001, the same time period used by Mr. Draper,

produces a DCF result of 13.55 percent—nearly 300 basis points higher than the result used by Mr. Draper in his CAPM calculations. (See Vander Weide Rebuttal Exhibit JVW-2. Since Mr. Draper used an annual DCF model, I also used an annual DCF model in this instance. However, because the companies in the S&P 500 and Value Line universe pay dividends quarterly, the quarterly DCF model would provide a more accurate estimate of these companies' costs of equity.)

Q. IN YOUR APPLICATION OF THE ANNUAL DCF MODEL WITH THE VALUE LINE EARNINGS GROWTH FORECASTS, DID YOU INCLUDE ALL COMPANIES IN THE VALUE LINE DATA BASE?

A. No. Like Mr. Draper, I eliminated all companies that paid no dividends, had negative dividend growth, had negative projected earnings growth, and projected earnings growth in excess of 20 percent. I also eliminated companies that had DCF results less than the current approximate 7.5 percent yield on Moody's A-rated utility bonds or results greater than 20 percent. (The latter screen had only a minimal effect on the average DCF results, but did serve to eliminate companies with DCF results that are obviously unreasonable.)

Q. HAVE YOU ALSO APPLIED THE ANNUAL DCF MODEL TO THE S&P 500 USING THE I/B/E/S GROWTH FORECASTS AS YOUR ESTIMATE OF THE GROWTH COMPONENT?

A. Yes. My application of the annual DCF model to the S&P 500 using the I/B/E/S earnings growth forecasts produces an average DCF result of

14.45 percent. (See Vander Weide Rebuttal Exhibit JVW-3.)

Q. IN YOUR APPLICATION OF THE ANNUAL DCF MODEL WITH THE I/B/E/S EARNINGS GROWTH FORECASTS TO THE S&P 500, DID YOU INCLUDE ALL THE S&P 500 COMPANIES?

A. No. I eliminated all companies that paid no dividends and had fewer than 3 estimates of long-term growth from I/B/E/S. I also eliminated companies that had DCF results less than the current approximate 7.5 percent yield on Moody's A-rated utility bonds or results greater than 20 percent.

Q. WHAT CAPM RESULT WOULD MR. DRAPER HAVE OBTAINED IF HE USED EITHER THE 13.55 PERCENT RETURN ON THE VALUE LINE MARKET INDEX OR THE 14.45 PERCENT RETURN ON THE S&P 500?

A. Mr. Draper would have obtained CAPM results in the range 13.86 percent to 14.78 percent. [5.4% + 1.02(13.55% - 5.4%) + .15% = 13.86 percent: and 5.4% + 1.02(14.45% - 5.4%) + .15% = 14.78 percent. All data from Mr. Draper's Exhibit DJD-5.]

D. Mr. Draper's Capital Structure

Q. WHAT CAPITAL STRUCTURE DOES MR. DRAPER USE TO ESTIMATE THE COST OF CAPITAL INPUT IN VERIZON FLORIDA'S FORWARD-LOOKING ECONOMIC COST STUDIES?

A. Mr. Draper uses a book value capital structure containing 60 percent

equity and 40 percent debt.

Q. HOW DOES MR. DRAPER ARRIVE AT HIS RECOMMENDED CAPITAL STRUCTURE IN THIS PROCEEDING?

A. Mr. Draper notes on page 3 of his testimony that the average equity ratio for his proxy telecommunications companies was 63 percent, as reported by Value Line, and 57.6 percent, as reported by C. A. Turner. Mr. Draper's recommended capital structure containing 60 percent equity is the approximate midpoint of the Value Line and C. A. Turner reported equity ratios for Mr. Draper's proxy companies.

Q. ARE THE VALUE LINE AND C. A. TURNER REPORTED EQUITY RATIOS REFERRING TO BOOK VALUE EQUITY RATIOS OR MARKET VALUE EQUITY RATIOS?

A. The Value Line and C. A. Turner reported equity ratios are book value equity ratios, not market value equity ratios.

Q. HOW DOES A COMPANY'S BOOK VALUE CAPITAL STRUCTURE DIFFER FROM ITS MARKET VALUE CAPITAL STRUCTURE?

A. A company's book value capital structure represents the percentages of debt and equity shown on the company's accounting books. The company's market value capital structure represents the values of the company's debt and equity as determined in the capital markets.

Q. DO YOU AGREE WITH MR. DRAPER'S USE OF A BOOK VALUE

CAPITAL STRUCTURE TO CALCULATE THE APPROPRIATE WEIGHTED AVERAGE COST OF CAPITAL FOR USE IN VERIZON FLORIDA'S UNE COST STUDIES?

A. No. As noted above, the use of a book value capital structure is inconsistent with the FCC's three basic guidelines that UNE rates must: (1) reflect forward-looking *economic* costs, not historical, embedded, or accounting costs; (2) approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs; and (3) send correct economic signals to both new entrants and incumbents.

With regard to the FCC's requirement that UNE rates reflect forward-looking economic costs, the FCC states in the Local Competition Order:

> In this section, we describe this forward-looking, cost-based pricing standard in detail. ... [W]e address potential cost measures that ***must not be included in a TELRIC analysis, such as embedded (or historical) costs*** (Emphasis added.) (Local Competition Order at para. 673.)

Since a company's book value capital structure reflects the "embedded (or historical) costs" of its assets, Mr. Draper's use of a book value capital structure is undoubtedly inconsistent with the FCC's forward-looking economic cost guideline.

With respect to the need to approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs (see Local Competition Order at para. 738), I note that competitive companies use

market value capital structures, not book value capital structures, to estimate the weighted average cost of capital. Thus, Mr. Draper's book value capital structure is also inconsistent with the FCC's guideline that UNE rates must approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs.

Finally, with regard to the requirement that UNE rates send correct economic signals to all participants in the UNE market, the FCC recognizes that new entrants make their decisions based on economic costs, not embedded costs (see Local Competition Order at para. 620). Thus, Mr. Draper's book value capital structure is also inconsistent with the guideline that UNE rates must provide correct economic signals to participants in the UNE market.

Q. WHAT CAPITAL STRUCTURE DID YOU USE TO ESTIMATE THE COST OF CAPITAL IN THIS PROCEEDING?

A. I used a market value capital structure that conservatively approximates the average market value capital structures of the S&P Industrials and the telecommunications holding companies over the last five years.

Q. WHY DID YOU USE THE AVERAGE MARKET VALUE CAPITAL STRUCTURES OF THE S&P INDUSTRIALS AND THE TELECOMMUNICATIONS HOLDING COMPANIES RATHER THAN THEIR AVERAGE BOOK VALUE CAPITAL STRUCTURES?

A. I used the average market value capital structures of these proxy

companies because they are the only capital structures that are consistent with the FCC's guideline that UNE rates must: (1) be based on forward-looking ***economic*** costs, (2) approximate the rates that the incumbent LEC would be able to charge if there were a competitive market for UNEs; and (3) send correct economic signals to both incumbents and new entrants regarding their investment decisions. Book value capital structures are inconsistent with each of these three economic principles of UNE rate setting.

III. REBUTTAL OF DR. FORD

Q. WHAT IS DR. FORD'S ESTIMATE OF VERIZON FLORIDA'S WEIGHTED AVERAGE COST OF CAPITAL FOR USE IN UNE COST STUDIES?

A. Dr. Ford recommends a weighted average cost of capital equal to 8.50 percent, based on a 6.25 percent estimate of the cost of debt, a 10 percent estimate of the cost of equity, and a capital structure containing 40 percent debt and 60 percent equity.

A. DR. FORD'S COST OF DEBT

Q. DO YOU AGREE WITH DR. FORD'S ESTIMATE OF THE COST OF DEBT FOR USE IN UNE COST STUDIES?

A. No. Dr. Ford's estimate of the cost of debt is based on his assumptions that Verizon Florida could: (1) attract short-term debt over the life of its telecommunications network at an interest rate of 2.01 percent; and (2) attract long-term debt at an interest rate of 7.12 percent. I disagree with both these assumptions.

Q. WHY DO YOU DISAGREE WITH DR. FORD'S ASSUMPTION THAT VERIZON FLORIDA COULD ATTRACT SHORT-TERM DEBT OVER THE LIFE OF ITS NETWORK AT AN INTEREST RATE OF 2.01 PERCENT?

A. I disagree with Dr. Ford's short-term interest rate assumption because the current 2.01 percent interest rate on short-term debt is an historically low interest rate that reflects the Federal Reserve's efforts to stimulate the U. S. economy. The cost of short-term debt will surely rise as the economy moves out of its current recession. If Dr. Ford had wanted to include short-term debt in his cost of capital calculations, he should at least have used an average short-term debt interest rate over a full business cycle. The cost of debt over the last full business cycle significantly exceeded Dr. Ford's 2.01 percent estimate of the cost of short-term debt.

Q. DO YOU AGREE WITH DR. FORD'S ASSUMPTION THAT VERIZON FLORIDA COULD ATTRACT LONG-TERM DEBT FINANCING FOR CONSTRUCTION OF A TELECOMMUNICATIONS NETWORK USED TO PROVIDE UNES TO COMPETITORS AT AN INTEREST RATE OF 7.12 PERCENT?

A. No. If Verizon Florida were to attempt to attract financing to construct a telecommunications network for the purpose of offering UNEs to competitors, it would probably have to offer an average yield at least equal to the yield to maturity on A-rated industrial bonds. According to

Mergent's Bond Record, the average yield to maturity on A-rated industrial bonds in December 2001 was 7.57 percent.

B. Dr. Ford's Cost of Equity

Q. HOW DID DR. FORD ESTIMATE THE COST OF EQUITY COMPONENT OF THE WEIGHTED AVERAGE COST OF CAPITAL HE RECOMMENDS FOR USE IN VERIZON FLORIDA'S UNE COST STUDIES?

A. Dr. Ford used the Capital Asset Pricing Model ("CAPM") to estimate the cost of equity component of his recommended weighted average cost of capital.

Q. DO YOU AGREE WITH DR. FORD'S USE OF THE CAPM TO ESTIMATE THE COST OF EQUITY INPUT IN VERIZON FLORIDA'S UNE COST STUDIES?

A. No. First, Dr. Ford fails to recognize the pervasive evidence that the CAPM underestimates the cost of equity for companies that have betas of less than 1.0. Second, Dr. Ford ignores the extensive evidence that the investor's required rate of return depends on more than the risk-free rate and the expected return on the market.

Q. WHAT EVIDENCE DO YOU HAVE THAT THE TRADITIONAL CAPM TENDS TO UNDERESTIMATE THE COST OF EQUITY FOR COMPANIES WHOSE EQUITY BETAS ARE LESS THAN 1.0 AND TO OVERESTIMATE THE COST OF EQUITY FOR COMPANIES WHOSE EQUITY BETAS ARE GREATER THAN 1.0?

A. The original evidence that the traditional CAPM tends to underestimate the cost of equity in those instances was presented in a paper by Black, Jensen, and Nobel Laureate Scholes, "The Capital Asset Pricing Model: Some Empirical Tests." Numerous subsequent papers have validated the Black, Jensen, and Scholes findings, including those by Litzenberger and Ramaswamy, Banz, Fama and French, and Fama and MacBeth. (Fischer Black, Michael C. Jensen, and Myron Scholes, "The Capital Asset Pricing Model: Some Empirical Tests," in *Studies in the Theory of Capital Markets*, M. Jensen, ed. New York: Praeger, 1972; Eugene Fama and James MacBeth, "Risk, Return, and Equilibrium: Empirical Tests," *Journal of Political Economy* 81 (1973), pp. 607—36; Robert Litzenberger and Krishna Ramaswamy, "The Effect of Personal Taxes and Dividends on Capital Asset Prices: Theory and Empirical Evidence." *Journal of Financial Economics* 7 (1979), pp. 163—95; Rolf Banz, "The Relationship between Return and Market Value of Common Stocks," *Journal of Financial Economics* (March 1981), pp. 3—18; and Eugene Fama and Kenneth French, "The Cross-Section of Expected Returns," *Journal of Finance* (June 1992), pp. 427—465.)

Q. WHAT EVIDENCE DO YOU HAVE THAT THE MARKET PRICES OTHER SOURCES OF SYSTEMATIC RISK?

A. There are many studies that demonstrate that stock returns cannot be adequately explained by the risk-free rate and the return on the market portfolio, as assumed by the CAPM. These studies demonstrate that additional variables, such as interest rates, dividend yields, market

capitalization, and the market-to-book ratio, are required to explain the variation in stock returns.

Q. WHAT ARE THE IMPLICATIONS OF THE WIDESPREAD EVIDENCE THAT THE MARKET PRICES OTHER SOURCES OF SYSTEMATIC RISK?

A. These studies provide evidence that the analyst must be careful in interpreting the results of an application of the traditional CAPM. Since investors generally recognize additional sources of systematic risk besides that captured in the traditional CAPM, the traditional CAPM may underestimate the investors' required rate of return on equity for companies that are sensitive to these additional factors.

Q. DO YOU HAVE ANY OTHER RESERVATIONS ABOUT THE USE OF THE CAPM AT THIS TIME?

A. Yes. The CAPM relates a company's cost of equity to the interest rates on risk-free Treasury securities. For many years, the spread between the yield on long-term Treasury securities and the yield on A-rated utility bonds has been approximately 100 basis points. Since the summer of 1998, however, the spread between the yields on long-term Treasury bonds and A-rated utility bonds has increased to more than 200 basis points due to: (1) an increased demand for U.S. Treasury securities resulting from international capital market uncertainty; and (2) the Treasury's move to significantly reduce the supply of long-term Treasury bonds. The increased spread between the yield on long-term Treasury

bonds and A-rated utility bonds has caused the CAPM cost of equity results to decline at a time when the cost of money for utilities as measured by the yield on A-rated utility bonds has remained relatively constant. Thus, in addition to the tendency, as noted above, of the CAPM to underestimate the cost of equity for companies whose betas are less than 1.0, the unadjusted CAPM further underestimates the cost of equity at this time because of the unusually large spread between the yields on long-term Treasury bonds and utility bonds.

Q. RECOGNIZING YOUR DISAGREEMENT WITH DR. FORD'S USE OF THE CAPM, DO YOU HAVE ANY FURTHER DISAGREEMENT WITH THE PARTICULAR INPUTS DR. FORD USED IN HIS IMPLEMENTATION OF THE CAPM?

A. Yes. I strongly disagree with Dr. Ford's use of BARRA betas to estimate the systematic risk component of the CAPM cost of equity. Dr. Ford's 0.58 average beta is significantly below the 1.02 average Value Line beta Mr. Draper used in his application of the CAPM to the telecommunications holding companies. It is inconceivable that investors would believe that telecommunications companies are only 58 percent as risky as the market as a whole at a time when telecommunications technology is changing rapidly, regulatory uncertainty abounds, and customers are finding alternatives to landline service.

Q. WHAT COST OF EQUITY WOULD DR. FORD HAVE OBTAINED IF HE HAD USED MR. DRAPER'S 1.02 BETA ESTIMATE, BASED ON

VALUE LINE DATA, FOR THE TELECOMMUNICATIONS HOLDING COMPANIES?

A. Dr. Ford would have obtained a CAPM cost of equity estimate of 13.82 percent [5.34 + (1.02 x 8.34) = 13.82.]

C. Dr. Ford's Capital Structure Recommendation

Q. DO YOU AGREE WITH DR. FORD'S RECOMMENDED 40 PERCENT DEBT/60 PERCENT EQUITY CAPITAL STRUCTURE RECOMMENDATION IN THIS PROCEEDING?

A. No. As I discussed in my rebuttal of Mr. Draper, the FCC's forward-looking economic cost standard requires the use of market value capital structures, not book value capital structures, to estimate the weighted average cost of capital input in UNE cost studies. I presented extensive evidence in my direct testimony that the telecommunications companies and the S&P Industrials both have average market value capital structures with no more than 25 percent debt and at least 75 percent equity. Since Dr. Ford's recommended capital structure is based on book values rather than market values, it is necessarily inconsistent with the FCC guideline that UNE rates must be based on forward-looking ***economic*** costs rather than embedded, historical, or accounting costs.

D. Dr. Ford's Comments on My Testimony

Q. DOES DR. FORD OFFER ANY REBUTTAL OF YOUR COST OF CAPITAL TESTIMONY IN THIS PROCEEDING?

A. Yes. Dr. Ford claims that my cost of capital testimony should be dismissed because: (1) I failed to consider the impact of short-term debt on the cost of capital; and (2) I performed a DCF analysis on companies

in industries that are totally unrelated to telecommunications.

Q. DO YOU AGREE WITH DR. FORD'S ASSERTION THAT YOU FAILED TO CONSIDER THE IMPACT OF SHORT-TERM DEBT ON YOUR ESTIMATE OF VERIZON FLORIDA'S WEIGHTED AVERAGE COST OF CAPITAL FOR USE IN UNE COST STUDIES?

A. No. In estimating the percentage of debt to include in the capital structure, I definitely included the impact of short-term debt in my calculation. In estimating the cost rate for the debt component of the weighted average cost of capital, however, I considered only the cost of long-term debt, because I do not believe that Verizon Florida would use a significant portion of short-term debt to finance the construction of a telecommunications network built solely for the purpose of providing UNEs to competitors. Financial experts recommend that firms match the maturity of their liabilities with the maturity of their assets. Since telecommunications network assets are relatively long lived, Verizon Florida would very likely rely primarily on long-term debt to finance the construction of its telecommunications network.

Q. DO YOU AGREE WITH DR. FORD'S ASSERTION THAT YOUR COST OF CAPITAL RECOMMENDATION IS BASED ON THE RESULTS OF A DCF ANALYSIS FOR COMPANIES IN INDUSTRIES THAT ARE TOTALLY UNRELATED TO TELECOMMUNICATIONS?

A. No. First, Dr. Ford fails to recognize that I provided a DCF analysis for a group of telecommunications holding companies in my direct testimony. My DCF result for this group of telecommunications companies exceeded

my DCF result for the S&P Industrials. Second, Dr. Ford fails to recognize that my S&P Industrials are related to telecommunications companies in the most important dimension, namely, risk. As an economist, Dr. Ford should recognize that companies do not have to be in the same industry to be considered of comparable risk. Indeed, Dr. Ford's CAPM analysis is based on the fundamental assumption that all companies with the same beta have the same cost of equity, regardless of differences in their lines of business. If Dr. Ford believes that risk is related to a company's industry, rather than its beta, he should not use the CAPM to estimate the cost of equity.

IV. REBUTTAL OF DR. ANKUM

Q. DOES DR. ANKUM PROVIDE HIS OWN ANALYSIS OF THE WEIGHTED AVERAGE COST OF CAPITAL FOR USE IN UNE COST STUDIES IN THIS PROCEEDING?

A. No, he does not.

Q. DOES DR. ANKUM PROVIDE REBUTTAL COMMENTS ON YOUR COST OF CAPITAL ANALYSIS IN THIS PROCEEDING?

A. Yes. Dr. Ankum criticizes my: (1) recommended market value capital structure; and (2) use of the S&P Industrials as a proxy group for estimating the cost of equity.

Q. WHY DOES DR. ANKUM CRITICIZE YOUR RECOMMENDED MARKET VALUE CAPITAL STRUCTURE IN THIS PROCEEDING?

A. Dr. Ankum notes on page 102 of his testimony that the Commission has

previously stated that "the Telecommunications Act of 1996 requires the use of forward-looking costs, but not the use of a market value capital structure."

Q. DO YOU AGREE WITH THE COMMISSION'S STATEMENT THAT THE TELECOMMUNICATIONS ACT OF 1996 DOES NOT REQUIRE THE USE OF A MARKET VALUE CAPITAL STRUCTURE TO ESTIMATE THE WEIGHTED AVERAGE COST OF CAPITAL INPUT IN UNE COST STUDIES?

A. No. As I noted in my rebuttals of Mr. Draper and Dr. Ford, the FCC has interpreted the Telecommunications Act of 1996 to require that UNE rates must: (1) be based on forward-looking *economic* costs, not embedded, historical, or accounting costs; (2) approximate the rates that the incumbent would be able to charge in a competitive market for UNEs; and (3) provide correct economic signals to new entrants and incumbent LECs in making network investment decisions. Market value capital structures are the only capital structures that are consistent with the FCC's three basic criteria for setting UNE rates. First, since market value capital structures are based on market prices, they necessarily reflect forward-looking *economic* costs, not embedded, historical, or accounting costs. Second, since competitive companies use market value capital structures to estimate their weighted average costs of capital, the use of a market value capital structure would produce rates that approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs. Third, since new entrants use market value capital structures

to estimate their weighted average costs of capital (new entrants can only attract capital at market value), a market value capital structure would allow UNE rates to send correct economic signals to new entrants in making network investment decisions.

In contrast, the use of a book value capital structure in estimating the UNE cost of capital is inconsistent with the FCC's guideline that UNE rates reflect economic costs, not embedded, historical, or accounting costs. Use of a book value capital structure is also inconsistent with the capital structures competitive companies and new entrants use in estimating their costs of capital, and, thus, would provide incorrect economic signals to new entrants and incumbent LECS in making network investment decisions.

Q. DO YOU AGREE WITH DR. ANKUM'S ASSERTION THAT YOUR COST OF CAPITAL RECOMMENDATION SHOULD BE REJECTED BECAUSE IT IS BASED ON YOUR USE OF THE S&P INDUSTRIALS AS A RISK PROXY GROUP?

A. No. As I noted in my rebuttal of Mr. Draper and Dr. Ford, my cost of capital recommendation in this proceeding is based on my use of *both* a group of telecommunications holding companies and the S&P Industrials as risk proxies for Verizon Florida's UNE leasing business. Indeed, my estimates of the weighted average costs of capital for the telecommunications holding companies and the S&P Industrials are approximately the same.

Q. DOES DR. ANKUM ATTEMPT TO CITE ANY EVIDENCE THAT YOUR COST OF CAPITAL RECOMMENDATION IN THIS PROCEEDING MAY BE TOO HIGH?

A. Yes. Dr. Ankum notes that the New Jersey and New York Commissions have recently adopted cost of capital inputs in UNE cost proceedings that are less than my recommended cost of capital input in this proceeding.

Q. DO YOU HAVE ANY COMMENTS ON DR. ANKUM'S STATEMENT ABOUT RECENT NEW JERSEY AND NEW YORK COMMISSION RULINGS ON THE COST OF CAPITAL INPUT IN UNE COST PROCEEDINGS?

A. Yes. Dr. Ankum fails to mention that the New Jersey Board of Public Utilities offered no explanation whatsoever for its exceedingly low cost of capital decision. It merely adopted the cost of capital recommendation of a witness who re-filed testimony that was originally offered in a Verizon New Jersey alternative regulation rate of return proceeding. Furthermore, the Verizon New Jersey decision was based on a capital structure containing 62.37 percent debt and 37.63 percent equity. There is simply no way to reconcile a book value capital structure containing such a high percentage of debt, 62.37 percent, and low percentage of equity, 37.63 percent, with the FCC's forward-looking economic pricing principles. Finally, Dr. Ankum fails to note that the New York Commission's cost of capital decision is significantly above his recommendation in this proceeding, and that the FCC itself has recently

determined to maintain the 11.25 percent rate of return for rate-of-return regulated LECs, who are certainly less risky than companies building a new telecommunications network in a competitive market. (Docket Nos.: CC 00-256, 96-45, 98-77, 98-166, *Second Report and Order and Further Notice of Proposed Rulemaking* (FCC 01-304), October 11, 2001.)

Q. DO YOU HAVE ANY EVIDENCE THAT YOUR COST OF CAPITAL RECOMMENDATION IN THIS PROCEEDING MAY BE CONSERVATIVELY LOW?

A. Yes. My cost of capital recommendation in this proceeding is significantly less than the 15.31 percent after-tax weighted average cost of capital that Dr. Ankum's client, AT&T, has used to make investment decisions in its long distance network. (This proceeding requires a before-tax weighted average cost of capital input. AT&T's equivalent before-tax weighted average cost of capital would be approximately 50 basis points higher than its after –tax weighted average cost of capital.) Since AT&T has a strong incentive to use the correct after-tax weighted average cost of capital to make real world local exchange network investment decisions, the fact that AT&T used a 15.31 percent after-tax weighted average cost of capital in making these decisions is strong evidence that my recommended 12.95 percent before-tax, weighted average cost of capital is conservatively low. (AT&T indicated that it used a cost of capital of 15.31 percent throughout the country when it last used its Total Incremental Cost Model in 1997. This information was provided in response to interrogatories in New York, New Jersey, Virginia, and

Pennsylvania (BA ATT/MCI 1044 in Case No. 98 C 1357 in New York; VNJ-547 in Docket No. TO-00060356 in New Jersey; FCC CC Docket Nos. 00-218, 00-249 and 00-251, Response of AT&T to Staff Record Requests Concerning Cost of Capital; R-00016683, Nos. 73-78).)

Q. WHY IS AT&T'S INTERNAL ESTIMATE OF THE FORWARD-LOOKING COST OF CAPITAL FOR USE IN NETWORK INVESTMENT DECISIONS RELEVANT IN THIS PROCEEDING?

A. AT&T's estimate of the forward-looking cost of capital for use in its Total Incremental Cost Model (TICM) model is relevant because the TICM model is analogous to the incremental cost models that are the focus of this proceeding. The model was designed to measure the incremental cost of investing in telecommunications facilities such as those considered in this proceeding. AT&T's use of a 15.31 percent forward-looking cost of capital is strong evidence that the cost of capital recommendations of Mr. Draper, Dr. Ford, and Dr. Ankum are unjustifiably low.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

MS. CASWELL: Thank you. And the last stipulated witness for Verizon, witnesses, there are two of them, Dr. Timothy Tardiff and Francis Murphy who testified as a panel, they have surrebuttal testimony of 24 pages, and I would ask that to be moved into the record as though read.

CHAIRMAN JABER: Prefiled surrebuttal testimony of panel witnesses Timothy J. Tardiff and Francis J. Murphy shall be inserted into the record as though read.

MS. CASWELL: Those witnesses had four exhibits all attached to their surrebuttal testimony. They were labeled MT-1 through MT-4. May I have those marked for identification?

CHAIRMAN JABER: Composite Exhibit 42 will be MT-1 through MT-4. And Composite Exhibit 42 is admitted into the record.

(Composite Exhibit 42 marked for identification and admitted into the record.)

MS. CASWELL: Dr. Tardiff and Mr. Murphy also had supplemental testimony of, supplemental surrebuttal testimony of seven pages. May I have that moved into the record as though read?

CHAIRMAN JABER: The supplemental surrebuttal testimony of Timothy J. Tardiff and Francis J. Murphy shall be inserted into the record as though read.

MS. CASWELL: Thank you. And I think that concludes all of Verizon's stipulated witnesses.

CHAIRMAN JABER: Thank you, Ms. Caswell.

INTRODUCTION

Q. DR. TARDIFF, PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Timothy J. Tardiff. I am a Vice President at National Economic Research Associates ("NERA"). My business address is 1 Main Street, Cambridge, MA 02142.

Q. DR. TARDIFF, PLEASE DESCRIBE NERA AND THE WORK YOU PERFORM.

A. NERA provides micro-economic analysis, often in regulatory and litigation settings. During the last several years, our telecommunications practice in general, and I in particular, have been actively involved in the economic issues associated with implementing the Telecommunications Act of 1996 (the "Act"), including participating in unbundled network element ("UNE"), universal service fund ("USF"), and interLATA entry ("Section 271") proceedings. I have filed several affidavits in proceedings before the Federal Communications Commission ("FCC") (often in collaboration with Professor Alfred Kahn) covering issues such as the proper economic principles for costing and pricing local exchange services and UNEs, the competitiveness of high-capacity transmission services in support of applications by US West for forbearance under Section 10 of the Act, and public interest affidavits in support of SBC's applications for entry into the interLATA long-distance market. I have also testified in state regulatory proceedings and arbitrations pursuant to the Act on local network

unbundling and universal service funding. My academic credentials and professional experience are set forth in more detail in Attachment 1 to this joint testimony.

Q. MR. MURPHY, PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Francis J. Murphy. I am the President of Network Engineering Consultants, Inc. ("NECI"), located at 5 Cabot Place, Suite #3, Stoughton MA, 02072.

Q. MR. MURPHY, PLEASE DESCRIBE NECI AND THE WORK YOU PERFORM.

A. NECI specializes in the fields of cost model analysis and development, and network engineering, planning and implementation. I specialize in service cost analysis as it relates to the telecommunications industry. Since founding NECI, I have analyzed and evaluated telecommunications costing methodologies and models involved with local network unbundling, USF support, non-recurring costs, avoided costs, and collocation cost proceedings. I have also authored expert reports and provided expert testimony on engineering and cost analyses of models filed in numerous state and federal dockets. During the past five years, I have analyzed extensively the various releases of the HAI Model, the Benchmark Cost Proxy Model ("BCPM"), the FCC's universal service cost proxy model (the so-called "Synthesis Model" or "Model" (referred to by Dr. Ford as the "HCPM")),

as well as the three versions of the Modified Synthesis Model sponsored by AT&T Communications, Inc. ("AT&T") and WorldCom, Inc. ("WorldCom") in various UNE and USF proceedings. My work with these models has included an evaluation of how each model's platform and inputs were used in different applications including federal USF, state USF, and state UNE cost studies. My academic credentials and professional experience are set forth in more detail in Attachment 2 to this joint testimony.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. We will rebut Z-Tel Communications Inc.'s ("Z-Tel") witness George Ford's comparative cost analysis as between Verizon Florida Inc. ("Verizon") and BellSouth. We will show that the cost model Dr. Ford relied upon, the Synthesis Model, cannot identify differences between carriers providing UNEs in the same state, and that Dr. Ford has put the Model to a use for which it was never intended. Moreover, Dr. Ford has not, and does not intend to, run the Model -- he is so unfamiliar with the Model that his comparative cost analysis is inherently suspect. Dr. Ford's questionable and unexamined cost comparisons provide no useful information that the Florida Public Service Commission ("Commission") can use to evaluate Verizon's Integrated Cost Model ("ICM-FL") or select the proper inputs for its service territory in Florida.

II. DR. FORD'S COMPARATIVE COST ANALYSIS IS FUNDAMENTALLY FLAWED

A. The FCC Has Never Used, Nor Authorized the Use of, the Synthesis Model in the Manner Proposed by Dr. Ford

Q. CAN THE SYNTHESIS MODEL ACCURATELY IDENTIFY COST DIFFERENCES BETWEEN CARRIERS PROVIDING UNES IN THE SAME STATE?

A. Absolutely not. Despite Dr. Ford's statements to the contrary, the outputs of the Model cannot accurately measure the cost differences between carriers operating in the same state. Dr. Ford asserts, incorrectly, that the FCC has used his approach in numerous 271 proceedings. (Ford Revised Direct Testimony at 21.) The FCC has done no such thing. In the Section 271 context, the FCC uses the Synthesis Model to compare the rates of the *same incumbent local exchange carrier ("ILEC")* across *two states*. However, as Dr. Ford eventually conceded, the FCC has never used, nor has it authorized the use of, the Synthesis Model to identify the relative cost differences between *two ILECs* operating in a *single state*. (Ford Depo. Tr. at 51-52, 85-86, 103-104; *see also* Ford Depo. Tr. at 106 (Dr. Ford acknowledging that "[t]he FCC has never said a thing about . . . using the [Synthesis Model] to compare costs within a state").)

Q. IS DR. FORD'S USE OF THE SYNTHESIS MODEL CONSISTENT WITH THE MANNER IN WHICH THE FCC HAS USED THE MODEL IN SECTION 271 PROCEEDINGS?

A. No. Dr. Ford fails to recognize that the Synthesis Model comes into play only when the FCC is examining whether a state regulatory commission did not apply TELRIC, or did so improperly, when setting UNE rates. In such a case, the FCC uses the Synthesis Model to benchmark the proposed rates of the ILEC seeking Section 271 authorization against the ILEC's rates in a Section 271-approved state to determine whether the proposed rates fall within a TELRIC-based range of reasonableness. Associated with this comparison are the following prerequisites: "two states have a common BOC; the two states have geographic similarities; the two states have similar, although not necessarily identical, rate structures for comparison purposes; and the Commission has already found the rates in the comparison state to be reasonable." (Application of Verizon Pennsylvania Inc. et al. for Authorization to Provide In-Region, InterLATA Services in Pennsylvania, CC Docket No. 01-138, *Memorandum Opinion and Order* (Sept. 19, 2001) at ¶ 63 ("PA 271 Order").) Dr. Ford's use of the Synthesis Model fails to meet any of these FCC-mandated criteria. Moreover, as Dr. Ford acknowledges, he has not evaluated either ICM-FL's platform or inputs, and thus, can make no independent determination as to whether Verizon's proposed rates are TELRIC-compliant. (Ford Depo. Tr. at 127-128.)

Finally, to date, the FCC's applications of its "range of reasonableness" test have only demonstrated that previously-established rates were reasonable. Thus, while "passing" the test confirms the

reasonableness of rates, "failing" the test does not necessarily mean that the rates are unreasonable. Because of the complex nature of estimating UNE costs, there may well be perfectly reasonable explanations, including legitimate differences in critical inputs between companies, that properly account for cost differences that may seem unduly large.

Q. ARE DR. FORD'S CALCULATIONS THE SAME AS THOSE MADE AND REPORTED BY THE FCC IN 271 PROCEEDINGS?

A. No. Even assuming that Dr. Ford's use of the Synthesis Model were appropriate in this context -- which it is not -- it became apparent during Dr. Ford's deposition that he had failed to make the requisite adjustments, identified by the FCC, to the Synthesis Model's cost estimates as he had initially claimed. (Ford Depo. Tr. at 81; *see also* PA 271 Order at 37, n.249.) When first questioned about the consistency between the changes made to the Synthesis Model's outputs in this proceeding and the changes made by the FCC in Verizon's Pennsylvania 271 proceeding -- the FCC's most recent ruling on the subject -- Dr. Ford stated that, with respect to loops, he knew "*for certain*" that his modifications were consistent with the calculations made by the FCC in the Massachusetts and Pennsylvania 271 Orders. (Ford Depo. Tr. at 72 (emphasis added); *see also* Ford Revised Direct Testimony at 21; Z-Tel's Response to Verizon's Motion for Extension of Time to File Surrebuttal Testimony (noting that "the calculations performed by Dr. Ford using the output files of the Model *are the same*

calculations made and reported by the FCC in the Verizon-Massachusetts and Verizon-Pennsylvania 271 orders") (emphasis added).) This is simply not true.

Among other things, Dr. Ford's switching values do not reflect all of the modifications made in the Pennsylvania 271 Order (Ford Depo. Tr. at 81), and he was not certain whether his computations accounted for the fact that the FCC considered UNE-P to be a wholesale offering. (Ford Depo. Tr. at 80.) Despite having referenced the Pennsylvania 271 Order in his revised direct testimony (Ford Revised Direct Testimony at 21), Dr. Ford reported that he "didn't read the footnotes carefully enough" to realize the full complement of changes made by the FCC to the Synthesis Model for 271 purposes. (Ford Depo. Tr. at 81.) As Dr. Ford admits, his use of the Synthesis Model in this proceeding does not satisfy the criteria established by the FCC in its Pennsylvania 271 Order. (Ford Depo. Tr. at 85.) Indeed, with respect to switching, Dr. Ford admits that his calculations were "a guess." (Ford Depo. Tr. at 72.)

B. Dr. Ford's Unfamiliarity with the Synthesis Model Renders His Comparative Cost Analysis Inherently Suspect

Q. WAS DR. FORD OR Z-TEL INVOLVED IN THE DEVELOPMENT OF THE SYNTHESIS MODEL?

A. No. Neither Z-Tel or Dr. Ford, by his own admission, was not involved in the FCC's universal service proceeding (CC Docket Nos. 96-45 and

97-160), in which the Synthesis Model was developed and ultimately adopted by the FCC. (Ford Depo. Tr. at 32.) This proceeding spanned a number of years and involved representatives of all segments of the telecommunications industry, including ILECs (such as Verizon and BellSouth) and CLECs (such as members of the ALEC Coalition). However, while purporting to know the variety of purposes for which the Synthesis Model was developed, and uses to which it can be put, neither Dr. Ford, nor his employer Z-Tel, participated in the Model's development.

Q. HAS DR. FORD FAMILIARIZED HIMSELF WITH THE SYNTHESIS MODEL'S PLATFORM AND INPUTS?

A. No. Dr. Ford has read the Synthesis Model's documentation, but admittedly has "not studied it." (Ford Depo. Tr. at 33.) Dr. Ford admits that he has never run the Model, (Ford Depo. Tr. at 58, 78), or accessed anything other than Model outputs that were posted on the FCC's website over a year ago. (Ford Depo. Tr. at 34, 37, 41, 74 and 78.) As a result, Dr. Ford is generally unfamiliar with the Synthesis Model's platform and inputs.

Dr. Ford concedes that he does not understand the process the Model uses to compute loop costs, and has no idea whether it was similar or dissimilar to the methodology employed in ICM-FL. (Ford Depo. Tr. at 58.) In addition, with respect to inputs, Dr. Ford cannot identify which of the Model's approximately 1,400 default inputs reflect nationwide (as

opposed to state- or company-specific) values (Ford Depo. Tr. at 34-35), and has not attempted to verify the accuracy of the Model's input values. (Ford Depo. Tr. at 34.) In fact, when questioned as to his familiarity with a variety of the Model's inputs, including the customer location data, plant mix, structure sharing and switch discounts, Dr. Ford concedes that he did not know how the Synthesis Model reflected the differences between Verizon and BellSouth with respect to those inputs. (Ford Depo. Tr. at 61-62, 64-65.) Moreover, Dr. Ford acknowledges that he is not an engineer and is not familiar with outside plant design (Ford Depo. Tr. at 48, 60), and thus is unable to verify whether the Synthesis Model adheres to widely-accepted engineering design practices. (Ford Depo. Tr. at 59.)

C. Dr. Ford's Comparative Cost Analysis Is Based Upon An Obsolete and Error-Ridden Version of the Synthesis Model

Q. WHICH RELEASE OF THE SYNTHESIS MODEL DID DR. FORD USE IN CONDUCTING HIS ANALYSIS?

A. Dr. Ford was "not exactly sure" which version of the Synthesis Model he used to produce his results. (Ford Depo. Tr. at 41.) He assumed that his conclusions were based upon the version of the Synthesis Model contained on the FCC's website at the time he performed his calculations -- some 10 to 12 months ago. (Ford Depo. Tr. at 41, 74; *see also* Ford Depo. Tr. at 43 (Dr. Ford admitting that he did not "recall updating the model . . . within the last 10 months").) In fact, the outputs Dr. Ford uses are from the version that produced the FCC's

cost estimates for the universal service fund for 2000, which were posted on the FCC's website in January of that year.

Q. IS THIS THE MOST RECENT RELEASE OF THE SYNTHESIS MODEL?

A. No. In the 10 to 12 months that have transpired since Dr. Ford conducted his analysis, the FCC has released at least four new versions of the Synthesis Model -- in June, July, August, and as recently as December of 2001. (Ford Depo. Tr. at 43 and Depo. Exhibit 3 ("Design History of HCPM").) Thus, any change or update to the Synthesis Model, or correction of errors contained therein, is not reflected in the comparative cost analysis performed by Dr. Ford. On this point there is no dispute: the Model's output file, which forms the basis of his analysis, is obsolete (Ford Depo. Tr. at 41-44, 75), and Dr. Ford admits that he has not reviewed the various changes made by the FCC to the Synthesis Model since he initially performed his calculations over a year ago. (Ford Depo. Tr. at 43.)

Q. WHAT TYPES OF CHANGES HAS THE FCC MADE TO THE SYNTHESIS MODEL SINCE DR. FORD CONDUCTED HIS ANALYSIS?

A. The FCC has made a number of changes to the Synthesis Model since Dr. Ford conducted his analysis. For example, the December 18, 2001 release of the Model changed the line counts (i.e., demand), as well as the usage data, employed by the Model. (Ford Depo. Tr. at 44.) The

Model Dr. Ford used does not reflect any of this updated information. (Ford Depo. Tr. at 44.)

Equally problematic is the fact that Dr. Ford is unaware of the numerous corrections that have been made to various Model components upon which the Synthesis Model is based. For example, Dr. Ford had no idea that the FCC, and/or the sponsors of modified versions of the Synthesis Model (i.e., AT&T and WorldCom), have acknowledged, and attempted to fix, a host of errors contained in both the Synthesis Model's loop module (Depo. Exhibit 3 ("Design History of HCPM")) and the HAI Model's switching and interoffice module, from which the Synthesis Model's switching and interoffice module was derived. (Ford Depo. Tr. at 64.)

III. THE SYNTHESIS MODEL WAS NEVER DESIGNED TO ESTIMATE RELATIVE COST DIFFERENCES BETWEEN CARRIERS IN A SINGLE STATE

Q. WHAT IS YOUR OVERALL ASSESSMENT OF DR. FORD'S RELATIVE COST COMPARISONS?

A. For the reasons we discuss below, even if they were valid (which they are not), Dr. Ford's relative cost comparisons provide no useful information to the Commission in evaluating the ICM-FL's platform and Verizon-specific inputs. In fact, each of the comparisons Dr. Ford provides in Exhibit GSF-11 (loops, switching, and transport) is flawed -- Dr. Ford's application of the Synthesis Model does not provide definitive information on whether Verizon's costs are (or should be)

higher or lower than BellSouth's.

Q. EVEN ASSUMING DR. FORD HAD MADE THE NECESSARY ADJUSTMENTS, IS THE SYNTHESIS MODEL CAPABLE OF ACCURATELY IDENTIFYING RELATIVE COST DIFFERENCES WITHIN A GIVEN STATE?

A. No. Dr. Ford's whole analysis rests on the faulty premise that the Synthesis Model properly represents the relative cost differences between companies, states, or by implication, any two entities one might want to compare. (Ford Depo. Tr. at 94.) In performing the comparison, however, many (if not most) of the critical inputs (e.g., the prices of network equipment, the amount of sharing with other companies, etc.) are assumed to be the same for the entities being compared. Applied in this fashion, the Synthesis Model will never produce valid relative costs, let alone absolute cost levels for Florida.

Q. IS DR. FORD'S BASIC PREMISE VALID?

A. No. The Synthesis Model will produce the wrong cost *levels* (i.e., its costs will be too high or too low) for two fundamental reasons: (1) its estimates of the quantities of network equipment (e.g., telephone poles, cable, etc.) are incorrect due to platform errors, and (2) the nationwide average inputs used to produce those quantities are incorrect. Dr. Ford's analysis assumes that, whatever errors may result from having the wrong cost levels, different entities will be affected in the same way (i.e., if an error causes Company A's costs to

be overstated by 25 percent, Company B's costs will also be overestimated by 25 percent). Dr. Ford further assumes that the specific manner in which a state commission measures these costs (i.e., through the use of a Commission-selected UNE cost model) is irrelevant to the Synthesis Model's purported ability to correctly depict these relative cost relationships. Dr. Ford ignores the fact that, in the real world, there is no reason to expect such a fortuitous result -- especially when analyzing a complex industry such as telecommunications. Given the complexity of cost models and the sheer number of user adjustable inputs they include, and the specific universal service application for which the Synthesis Model was developed, it is unreasonable to expect that the Synthesis Model has attained the level of perfection that Dr. Ford's basic premise implies.

Q. ARE THE SYNTHESIS MODEL'S LOOP COST COMPARISONS VALID IN FLORIDA?

A. No. Even before the FCC completed its development of the Synthesis Model, the Commission selected a cost model and associated inputs for universal service support in Florida. Despite that fact that neither the Commission's model (as evident from the Commission's selection of both a different platform and inputs for BellSouth's UNE rates) nor the Synthesis Model are capable of establishing proper UNE prices for Verizon, comparing the results from the respective models in Florida calls into question the notion that the Synthesis Model produces valid relative cost comparisons, let alone proper loop cost estimates for

Florida. As Table 1 (attached hereto as Attachment 3) demonstrates, compared to the Commission's universal service model and inputs, the Synthesis Model understates loop investment per line, but by noticeably different percentages for Bell South (29 percent) and Verizon (23 percent). Clearly, the fact that the Synthesis Model's platform flaws and/or nationwide inputs produce cost estimates that are incredibly unrepresentative of the costs of providing service in Florida casts doubt on usefulness and validity of Dr. Ford's comparative cost analysis.

Q. ARE THERE OTHER REASONS THAT THE SYNTHESIS MODEL CANNOT PROVIDE A PROPER BENCHMARK FOR VERIZON'S LOOP COSTS IN FLORIDA?

A. Yes. Not only does the Synthesis Model produce different relative costs when compared to the Commission's previous universal service cost model and inputs, its relative costs are very different from those produced by the ICM-FL sponsored by Verizon in this case. Dr. Ford's comparison would seem to suggest that if the Synthesis Model produces a cost estimate for a particular company that is 80 percent of an external cost measure for density zone 1, then approximately the same 80 percent ratio should apply to the costs for other density zones. The Synthesis Model, however, does not produce accurate measures of these relative costs, as demonstrated by Table 2 (attached hereto as Attachment 4), which compares the loop costs produced by the Synthesis Model for the density zones proposed by

Verizon (adjusted to match the average loop cost shown in Dr Ford's GSF-11) to the values reported in Verizon witness Dennis Trimble's testimony. Table 2 demonstrates that, unlike the ICM-FL, the Synthesis Model is incapable of accurately reflecting a carrier's cost differences between density zones, thereby casting doubt on its ability to accurately reflect the cost differences between carriers within a state.

Q. WHY IS THE SYNTHESIS MODEL INCAPABLE OF IDENTIFYING ACCURATE RELATIVE COSTS DIFFERENCES BETWEEN COMPANIES?

A. In representing the most fundamental characteristics of how loop plant is deployed (e.g., the size of the distribution areas that serve Florida's customers) the Synthesis Model does not adequately account for either the engineering principles used to design such areas or important local conditions that may well produce real differences between companies, but would be undetected by the Model. Indeed, the FCC has acknowledged that the Synthesis Model does not conform to the Bellcore engineering standards, which guide real-world network planning. Although it could be adapted to accommodate networks designed for different jurisdictions, meet different service quality standards and network design principles (FCC HCPM Documentation, "Computer Modeling of the Local Telephone Network," (Oct. 1999) at Section 4.2, p. 20), Dr. Ford did not attempt to capitalize on the Model's ability to reflect such differences.

Further, the use of inappropriate engineering criteria is compounded by the Synthesis Model's use of imprecise and outdated data regarding the number and locations of customers and national inputs that do not reflect variations between companies. Consequently, the Model does not recognize such critical cost drivers such as the existence of any natural barriers (bodies of water), preservation areas, rights-of-way restrictions, highways, rail lines, etc. when configuring the network and determining the cost of facilities. As a result, the Model ignores real-world ILEC considerations, which would impact: (1) the actual characteristics of distribution areas (e.g., the lengths and sizes of cable facilities); (2) structure type (whether local ordinances, road side hazards, existing structure, etc., restrict the use of particular placement options, such as aerial); and (3) structure sharing opportunities (safety considerations, local ordinances, existing structure of other users). There is no reason to believe that ignoring the effects of such critical factors would distort the cost estimates for two different companies proportionately, as Dr. Ford assumes.

Q. IS DR. FORD'S END-OFFICE SWITCHING COMPARISON ACCUARTE?

A. No, for two reasons. First, the FCC includes only local usage in the monthly switching costs reported by Dr. Ford, so his comparison is incomplete at best. Second, and more important, the comparison itself seems puzzling and counterintuitive.

Q. PLEASE EXPLAIN.

A. Dr. Ford's comparison implies that BellSouth has a higher switching cost per line than does Verizon. The specific costs in Dr. Ford's Exhibit GSF-11 are incorrect because (among other things) they exclude non-local usage. Further, this result is counter-intuitive for the reasons the FCC provided in its Massachusetts 271 Order. (Memorandum Opinion and Order, *Application of Verizon New England Inc., Bell Atlantic Communications Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions) and Verizon Global Networks Inc., For Authorization to provide In-Region, InterLATA Services in Massachusetts,* 16 FCC Rcd 8488 (2001) at ¶ 16.) Switched costs per line are a function of the number of lines per switch and the relative number of remote switches in the network. Specifically, the Synthesis Model produces lower switching costs when switches are larger and when there are relatively more remotes. In fact, according to the Synthesis Model, BellSouth has a larger average switch size (33,000 lines versus 26,000 lines) and a greater proportion of remote switches (30 percent versus 13 percent), suggesting that its switching costs should be lower than Verizon's.

Q. WHAT ARE THE SPECIFIC PROBLEMS WITH THE SYNTHESIS MODEL'S TRANSPORT CALCULATIONS?

A. During the last couple of years, Verizon witnesses have uncovered fundamental errors in the switching and interoffice module of the Synthesis Model. These errors resulted in the exclusion of major

components of the fiber rings and associated electronics that make up interoffice facilities. Indeed, these "missing parts" account for the majority of the investment in interoffice facilities. The supplier of this module (HAI Consulting) and its sponsors (AT&T and WorldCom) have acknowledged these errors and supplied a purportedly corrected replacement module for use in the HAI Model. This replacement module has not yet been incorporated into the Synthesis Model. The Synthesis Model's error-ridden calculations could not possibly provide an accurate or useful benchmark for transport costs.

Q. WHY DOES THE SYNTHESIS MODEL PRODUCE SUCH INACCURATE AND IMPRECISE RESULTS FOR FLORIDA?

A. The Synthesis Model was designed for a very high level purpose -- to estimate the relative cost differences among states for a hypothetical carrier operating a narrowband-only network. As such, the Synthesis Model is fundamentally incapable of conducting the more detailed analysis necessary to identify the relative cost differences between two real-world carriers providing both narrowband and high-speed services within the same state. The Synthesis Model was never intended, let alone approved, by the FCC to estimate company-specific costs and use them in the manner proposed by Dr. Ford. In fact, when developing the Synthesis Model, the FCC specifically determined that it was not necessary to estimate the costs of a particular carrier. (Tenth Report and Order, *In re Federal-State Joint Board on Universal Service, In re Forward-Looking Cost Mechanism for High Cost Support*

for Non-Rural LECs, 14 FCC Rcd 20156, ¶ 162 (1999) (FCC explaining that, in adopting the Synthesis Model, it was "not attempting to identify any particular company's cost of providing the supported services") ("*Tenth Report and Order*").) Rather than engage in this time-consuming and burdensome, company- and jurisdiction-specific analysis in a nationwide proceeding, the FCC adopted a *national* proxy model, populated with *nationwide* input values, as an expedient. In doing so, the FCC acknowledged the obvious -- that its model could not accurately estimate the costs (forward-looking, TELRIC-based, or otherwise) of a particular carrier in a particular state. (*Tenth Report and Order* at ¶¶ 32, 162.) In fact, in light of the Synthesis Model's limited design parameters, the FCC has repeatedly and unequivocally stated that the Synthesis Model should not be used for purposes other than determining the *relative cost differences among states*. (*See e.g.*, *Tenth Report and Order* at ¶ 32; Memorandum Opinion and Order, *In the Matter of Verizon New England Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions) and Verizon Global Networks, Inc. for Authorization to Provide In-Region InterLATA Services in Massachusetts*, 16 FCC Rcd 8988 ¶ 32 (rel. Apr. 16, 2001).)

Q. ARE THERE OTHER REASONS WHY THE SYNTHESIS MODEL LACKS THE PRECISION NEEDED TO DETERMINE UNE COSTS?

A. Yes. The Synthesis Model was originally developed to identify costs for *high cost* areas, which the FCC has defined as 135 percent of the

national average cost produced by its Model. (In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, *Ninth Report and Order and Eighteenth Order on Reconsideration,* FCC 99-306 at ¶ 45 (rel. Nov. 2, 1999).) A state receives support only if the overall average cost in that state exceeds this benchmark, and federal universal service support is only allocated to those wirecenters that exceed the benchmark. (Id. at ¶ 70.) Therefore, the federal program ends up providing only a modest amount of funding to a very small number of wirecenters and lines. Indeed, when the FCC used the Model to determine 2000 funding levels, it provided high-cost funding for only 928 of the 12,501 wirecenters nationwide (about 7 percent), and less than 3 million of the 163 million lines (under 2 percent) owned by the companies subject to the program.

Q. DO YOU AGREE WITH DR. FORD'S ASSERTION THAT THE PRECISION OF THE SYNTHESIS MODEL IS DEMONSTRATED BY THE FACT THAT IT IS USED TO SPREAD A LARGE AMOUNT OF FUNDS? (FORD DEPO. TR. AT 102.)

A. No. Dr. Ford asserts, incorrectly, that "if [the Synthesis Model] is good enough to spread around 350 or 400 million dollars . . . then I don't know why it can't be good enough to do what I've done here." (Ford Depo. Tr. at 102.) First, Dr. Ford's assertion is factually incorrect. The Model has been used to determine and allocate federal high cost funds for three years (2000, 2001, and 2002), and for each year, the total funds were a little over $200 million. Moreover, while $200 million per

year in federal universal service support is not insignificant, it is only a tiny fraction of the total costs for basic service -- on the order of $0.10 per-month when the average cost of basic service estimated by the Model is over $20 per month. Indeed, absolutely no federal high-cost funds are provided in any of the territories served by the Florida ILECs (Verizon, BellSouth, Sprint, and Central) subject to the program.

IV. THE SYNTHESIS MODEL'S PLATFORM AND INPUT FLAWS CONCEAL THE RELATIVE COST DIFFERENCES BETWEEN CARRIERS IN A SINGLE STATE

Q. WHAT SPECIFIC PLATFORM FLAWS RENDER THE MODEL INCAPABLE OF ACCURATELY ESTIMATING THE RELATIVE COST DIFFERENCES AMONG CARRIERS OPERATING IN A SINGLE STATE?

A. A number of the Model's platform flaws render it incapable of accounting for significant attributes of a given carrier's network and the specific operating realities faced by that carrier in certain serving areas. As such, the Model is inherently unable to account for the associated differences in costs incurred by carriers operating very real, yet very different, networks in a particular state. For example, the Synthesis Model is incapable of reflecting the relative differences in ILEC costs based on their mix of high-capacity special access services. As an expedient, the Model assumes a uniform dispersion of surrogate special access demand in its loop cost calculations. In the real world, however, the preponderance of these special access

services are provisioned over fiber or coaxial cable and are generally concentrated in a few large business locations. Thus, the Model -- with its simplistic assumptions regarding special access services -- distorts the amount of outside plant constructed between serving areas, wire centers and carriers; and, as a result, is fundamentally incapable of accounting for these costly, real-world operational differences.

The Synthesis Model is also incapable of accounting for local operating conditions with respect to outside plant, and thus would be unable to accurately reflect the comparative costs of carriers operating in different areas of the state. For example, a carrier operating in a city where the local ordinances prohibit the placement of aerial cable (thereby necessitating the placement of the more-costly underground or buried cable) would have comparatively higher costs than a carrier operating in a city where there was no such restriction. The Synthesis Model's platform design parameters, however, render it incapable of accounting for these local differences and any cost disparities that may exist between these two carriers would not be accounted for in the Model's outputs.

Finally, the Model cannot reflect the unique demand characteristics, and the costs associated therewith, for a particular serving area. The Synthesis Model builds a network to accommodate a known, fixed level of demand, thereby ignoring the fact that, in the real world, telecommunications companies must deploy network resources to

meet demand as it materializes, expands, and fluctuates over time. Accordingly, the Synthesis Model is fundamentally incapable of producing cost estimates that reflect a carrier's unique deployment and allocation of resources.

Q. WHAT SPECIFIC INPUT FLAWS RENDER THE MODEL INCAPABLE OF IDENTIFYING COMPANY- AND STATE-SPECIFIC COST DIFFERENCES?

A. Paramount among the flaws that render the Model incapable of identifying company- and state-specific cost differences is the Model's reliance on nationwide average inputs. By definition, these nationwide averages conceal the true company-specific cost differences between carriers. Instead of addressing how differences in inputs and/or characteristics of service territories may produce legitimate cost differences between companies, Dr. Ford's results are based upon the use of a common set of vintage, nationwide inputs -- a comparison that necessarily hides legitimate costs difference between companies. For example, the Synthesis Model's switching costs are based upon nationwide ILEC depreciation data, and are limited to new switch purchases only. As such, the Model's switch prices do not reflect the cost differences associated with a specific carrier's mix of switches in a given state.

Dr. Ford acknowledges the problems associated with the Model's use of nationwide averages, yet does nothing to address this inherent

model shortcoming. For example, with respect to material prices and labor rates, Dr. Ford acknowledges that the Synthesis Model's inputs are not state- or company-specific, and thus would not represent the labor rates or material prices that Verizon (or BellSouth for that matter) actually experiences in Florida. (Ford Depo. Tr. at 48.) Indeed, even the FCC acknowledges that the use of company-specific values may be more appropriate for critical outside plant inputs such as plant mix, plant-specific expenses, and cable and structure costs. (*Tenth Report and Order* at ¶¶ 92, 93 and 356.) Dr. Ford, however, makes no adjustments to the Model to account for these intra-state, company-specific cost differences. Indeed, he has not even attempted to analyze whether the use of company- or state-specific data would have any impact on the cost estimates produced by the Synthesis Model. (Ford Depo. Tr. at 52.)

In short, Dr. Ford's reliance on generic, standardized, nationwide inputs render the Model fundamentally incapable of identifying the relative cost differences between Verizon, BellSouth, or any other carrier operating in Florida -- the Model cannot recognize these differences because Dr. Ford refuses to acknowledge they exist.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

SUPPLEMENTAL SURREBUTTAL TESTIMONY OF

DR. TIMOTHY J. TARDIFF

AND

MR. FRANCIS J. MURPHY

Q. DR. TARDIFF, PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Timothy J. Tardiff. I am a Vice President at National Economic Research Associates ("NERA"). My business address is 1 Main Street, Cambridge, MA 02142.

Q. MR. MURPHY, PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Francis J. Murphy. I am the President of Network Engineering Consultants, Inc. ("NECI"), located at 5 Cabot Place, Suite #3, Stoughton, MA 02072.

Q. ARE YOU THE SAME DR. TARDIFF AND MR. MURPHY THAT PREVIOUSLY FILED TESTIMONY IN THIS DOCKET?

A. Yes. We filed joint Surrebuttal Testimony on March 18, 2002.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. We evaluate herein Z-Tel Communications Inc.'s ("Z-Tel") witness Dr. George S. Ford's updated comparison of Verizon Florida Inc.'s ("Verizon") costs and BellSouth's costs. We show that Dr. Ford has not remedied the fundamental flaws identified in our March 18, 2002 joint Surrebuttal Testimony. Dr. Ford's computations are not based upon the most recent version of the Federal Communications Commission's ("FCC") universal service model (the "Synthesis Model"). Moreover, Dr. Ford's supplemental testimony contains unsupported calculations that purportedly "mirror" those employed by the FCC in Section 271 Orders. Dr. Ford's questionable and unexamined updated cost comparisons provide no useful information that the Florida Public Service Commission ("Commission") can use to evaluate Verizon's Integrated Cost Model - Florida ("ICM-FL") or determine Verizon's forward-looking costs of providing unbundled network elements ("UNEs") in Florida.

Q. HAS DR. FORD USED THE OUTPUT FILES PRODUCED BY THE MOST RECENT VERSION OF THE SYNTHESIS MODEL TO PREPARE THE UPDATED COMPARATIVE COST ANALYSIS CONTAINED IN HIS SUPPLEMENTAL TESTIMONY?

A. No. Dr. Ford's allegedly "updated" comparative cost analysis uses the same output files produced by the same obsolete and error-ridden version of the Synthesis Model used to perform the comparative cost analysis contained in his January 30, 2002 Revised Rebuttal Testimony. The outputs Dr. Ford relied upon in his Revised Rebuttal

Testimony and Supplemental Testimony are based upon the January 2000 release of the Synthesis Model. (Murphy/Tardiff Surrebuttal at 9-10.)

The fact that Dr. Ford has not updated the data produced by the Synthesis Model can be shown by comparing specific worksheets posted on the web site Z-Tel identified in response to discovery relating to Dr. Ford's Rebuttal Testimony (www.egroupassociates.com /download.htm.) (Z-Tel's Response to Verizon's First Request For Production Of Documents (No. 1).) The documents available for download clearly show that Dr. Ford's updated exhibit are based on the same Synthesis Model output files used to produce the comparative cost analysis in his Rebuttal Testimony. For example, all of the numbers in the "Summary" worksheets for GTE Florida found in the original file ("ztelhcpm.zip") and updated file ("flvzup.zip"), both posted on the aforementioned web site, are identical. Further, both of these "Summary" worksheets are identical to the corresponding worksheet of the file containing the results that the FCC posted on its web site on January 20, 2000 (available at http://www.fcc.gov/wcb/tapd/hcpm /welcome.html).

Thus, despite Dr. Ford's and Z-Tel's statements to the contrary (Ford Supplemental Testimony at 1; Z-Tel's Response to Verizon's Motion for Extension of Time to File Surrebuttal Testimony), Dr. Ford's updated analysis is not based on the results produced by the most

recent version of the Synthesis Model (released on December 18, 2001) and its associated inputs, and thus does not reflect the corrections that have been made to the Synthesis Model's algorithmic errors since January 2000, nor the updated demand data contained therein. (*See* Murphy/Tardiff Surrebuttal Testimony at 10-11 (noting that the December 18, 2001 release of the Synthesis Model changed the line counts (i.e., demand) and the usage data employed by the Synthesis Model).) As such, Dr. Ford's supplemental testimony fails to remedy the numerous model platform and input errors identified in our joint Surrebuttal Testimony.

Q. WHAT CHANGES HAS DR. FORD MADE IN HIS UPDATED COMPARATIVE COST ANALYSIS?

A. Based on the limited analysis we were able to perform due to significant time constraints, Dr. Ford's incorrect suggestion that he has used the most recent vintage of the Synthesis Model, and the absence of documentation, it appears that Dr. Ford's updated calculations (and revised exhibit GSF-SR12) are nothing more than an unsupported attempt to replicate the calculations made by the FCC in certain Section 271 Orders -- Dr. Ford has done nothing to remedy his use of an outdated and fatally-flawed version of the Synthesis Model. Contrary to Dr. Ford's assertions, his supplemental testimony does not definitely establish that he has succeeded in "mirroring" the calculations used by the FCC in these Section 271 Orders. (Ford Supplemental Testimony at 1.) For example, rather than modify the

Synthesis Model to reflect the changes made by the FCC for Section 271 purposes (*see e.g., Application of Verizon Pennsylvania Inc., et. al for Authorization To Provide In-Region, InterLATA Services in Pennsylvania*, FCC 01-269 at ¶ 65 fn. 249 (Sept. 19, 2001)), Dr. Ford has attempted to make the adjustments outside of the model. Moreover, his workpapers include no documentation or explanatory notes. Thus, despite Dr. Ford's assertions that he made the same calculations used by the FCC in its Section 271 Orders (Ford Revised Rebuttal Testimony at 21; Ford Supplemental Testimony at 1), he never establishes that he has in fact done what he claims.

Moreover, as we discussed in our Surrebuttal Testimony, even if Dr. Ford had correctly implemented the changes made by the FCC to the Synthesis Model for Section 271 purposes, Dr. Ford's comparative cost analysis is fundamentally flawed. (Murphy/Tardiff Surrebuttal Testimony at 4.) First, the Synthesis Model is incapable of accurately identifying the relative cost differences between <u>two carriers</u> operating in the <u>same state</u>. In the Section 271 context, the FCC uses the Synthesis Model to compare the costs of the same incumbent local exchange carrier ("ILEC") across two different states. The FCC has never used, nor authorized the use of, the Synthesis Model to compare the costs of two ILECs operating in the same state. (Ford Depo. Tr. at 51-52, 85-86, 103, 104 106.)

Q. DO THE CHANGES MADE BY DR. FORD PRODUCE ACCURATE AND RELIABLE RESULTS?

No. The changes made by Dr. Ford produce inaccurate and counter-intuitive results. For example, although Dr. Ford attempts to adjust the switching costs in his updated exhibit GSF-SR12 to include total usage rather than just the local usage included in exhibit GSF-11 to his Rebuttal Testimony (*see* Murphy/Tardiff Surrebuttal at 16-17), his updated exhibit continues to show higher switching costs per line for BellSouth than Verizon. As we discussed in our Surrebuttal Testimony, this result makes no sense. As the FCC noted in its Massachusetts 271 Order, switched costs per line are a function of the number of lines per switch and the relative number of remote switches in the network (i.e., the Synthesis Model produces lower switching costs when switches are larger and when there are relatively more remotes). (*See* Memorandum Opinion and Order, *Application of Verizon New England Inc., et. al for Authorization to provide In-Region, InterLATA Services in Massachusetts,* 16 FCC Rcd 8488 at ¶ 23 (2001).) Thus, according to the Synthesis Model, because BellSouth has a larger average switch size (33,000 lines versus 26,000 lines) and a greater proportion of remote switches (30 percent versus 13 percent), its switching <u>costs</u> should be <u>lower</u> than Verizon's. However, the end-office switching <u>investment</u> per line produced by the Synthesis Model for Verizon is <u>higher</u> than that of BellSouth -- a completely counterintuitive result.

Similarly, Dr. Ford's results are still based on faulty transport calculations, which AT&T, WorldCom, and HAI Associates have admitted are erroneous, and in fact have attempted to remedy in recent proceedings in other states. (Indeed, the FCC's December 18, 2001 release does not even remedy these known errors.) As such, Dr. Ford's transport cost comparisons are essentially useless.

Q. WHAT IS YOUR OVERALL ASSESSMENT OF DR. FORD'S RELATIVE COST COMPARISONS?

A. For the reasons discussed above and in our Surrebuttal Testimony, Dr. Ford's misguided attempt to compare the cost estimates derived from an obsolete version of the Synthesis Model for Verizon and BellSouth produces invalid and meaningless results. Dr. Ford's fundamentally flawed comparative cost analysis provides no useful information upon which the Commission can rely in evaluating the ICM-FL's platform, algorithms or inputs. In short, the Synthesis Model was never designed nor intended to measure the cost differences between carriers providing UNEs in the same state. Dr. Ford's use of the Synthesis Model in this proceeding does not produce valid relative cost estimates, let alone accurate absolute cost levels for carriers operating in Florida.

Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL SURREBUTTAL TESTIMONY?

A. Yes.

CHAIRMAN JABER: Now, Staff, that brings us to the rebuttal testimony from the ALEC Coalition.

MR. FUDGE: Yes, Madam Chairman.

CHAIRMAN JABER: And who needs to identify those?

MR. HATCH: Did you want to deal with that now? That's fine.

CHAIRMAN JABER: I think so, yeah.

MR. HATCH: With respect to Greg Darnell, he filed rebuttal testimony consisting of six pages. We'd request that be inserted into the record as though read.

CHAIRMAN JABER: Okay. All right. The prefiled rebuttal testimony of Gregory J. Darnell shall be inserted into the record as though read.

MR. HATCH: And Mr. Darnell had two exhibits; GJD-1 and 2. Could we get those marked for identification, please?

CHAIRMAN JABER: GJD-1 and GJD-2 will be identified as Composite Exhibit 43. And Composite Exhibit 43 is admitted into the record.

(Composite Exhibit 43 marked for identification and admitted into the record.)

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. My name is Gregory J. Darnell. My business address is 6 Concourse Parkway, Atlanta, Georgia 30342.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by WorldCom, Inc., as Regional Senior Manager -- Public Policy.

Q. **HAVE YOU PREVIOUSLY TESTIFIED?**

A. Yes, I have testified in proceedings before regulatory commissions in Alabama, California, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee and on numerous occasions have filed comments before the FCC. Provided as Exhibit GJD-1 to this testimony is a summary of my academic and professional qualifications.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING AND FOR WHAT PURPOSE?

A. I am testifying on behalf of the "ALEC Coalition." That coalition is comprised on AT&T of the Southern States, MCImetro Access Transmission Service, LLC, MCI WorldCom Communications, Inc., and Florida Digital Network. The purpose of my testimony is to rebut the Verizon – FL rate proposal made by Mr. Dennis B. Trimble in this proceeding and provide the ALEC Coalition's monthly recurring rate

proposal for Verizon – FL.

Q. WHAT IS THE BASIS FOR THE ALEC COALITION'S RATE PROPOSAL FOR VERIZON – FL's MONTHLY RECURRING UNE RATES?

A. The ALEC Coalition's monthly recurring UNE rate proposal for Verizon – FL is based on both WorldCom's TELRIC rate proposal made for BellSouth Florida territory in Florida Public Service Commission's ("Commission") BellSouth-120 Day proceeding in Docket No. 990649A-TP and the UNE rates approved by this Commission for BellSouth in Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, and Order No. PSC-01-2132-PCO-TP, issued October 29, 2001 (collectively "FL BellSouth UNE Orders").

Q. HOW DO YOU PROPOSE THAT THIS BE APPLIED?

A. For the UNE rates currently still under investigation in the BellSouth-120 Day proceeding, the rates contained in Exhibit GJD-2 should be applied. The rates contained in Exhibit GJD-2 are those that AT&T/WorldCom have proposed in the BellSouth-120-Day proceeding. For UNE elements not contained in this exhibit, the UNE rates determined in the FL BellSouth UNE Orders should be applied.

Q. WHY IS THE ALEC COALITION'S RATE PROPOSAL FOR VERIZON – FL BASED ON THE AT&T/WORLDCOM'S BELLSOUTH FLORIDA PROPOSAL AND THE RATES DETERMINED BY THE FL BELLSOUTH

UNE ORDERS?

A. As demonstrated in the rebuttal testimony of Dr. August H. Ankum, Verizon – FL's Integrated Cost Model filed in this proceeding is not capable of producing rates that are compliant with the FCC's minimum UNE pricing rules or this Commission's previous UNE pricing decisions. Further, as demonstrated by Dr. Ankum, the UNE rates being proposed by Mr. Trimble are excessively high, are inconsistent with UNE prices for other Verizon states, were not determined in accordance with FCC UNE pricing rules and will not encourage the development of local competition. AT&T/WorldCom's UNE rate proposal for BellSouth Florida in Docket No. 990649A-TP is consistent with FCC UNE pricing rules, the UNE prices set for Verizon in other state proceedings and will encourage the development of local competition. Therefore, on an interim basis, AT&T/WorldCom recommend that the Commission establish monthly recurring UNE rates for Verizon that AT&T/WorldCom have proposed in the BellSouth 120-Day proceeding, and the rates contained in the Florida BellSouth UNE Orders for those rates that are not affected by the BellSouth 120-Day proceeding. ATT/WorldCom also recommend that the Commission establish a deaveraging rate structure for Verizon that is consistent with the recommendations of Mr. Warren R. Fisher.

Q. IS IT REASONABLE TO USE AT&T/WORLDCOM'S RATE PROPOSAL FOR UNE RATES IN VERIZON FLORIDA TERRITORY ON AN INTERIM BASIS?

A. Yes. FCC UNE pricing rules require UNE rates to be set equal to that of the

least cost most efficient provider of service given the territory being served and taking as a given the location of the existing wire centers. As such, the incumbent local exchange carrier that actually serves the territory and the current cost structure of the ILEC is not particularly relevant to the determination of UNE rates. All that matters in the development of UNE rates is how the least cost most efficient carrier would function in this territory. Therefore, the Commission should expect that areas with similar characteristics should have similar cost based rates. Given the demographic and geographic structure of Verizon – FL and BellSouth Florida territory it is reasonable to assume that cost based UNE rates in Verizon – FL territory should be slightly less than cost based UNE rates in BellSouth Florida territory. Further, Verizon is a larger company than BellSouth and therefore it should enjoy additional economies of scale in Administrative, Systems, Common Costs, Shared Cost and Procurement as compared to BellSouth. These additional economies of scale should serve to further lower Verizon's forward-looking cost as compared to BellSouth's. As such, the use of BellSouth Florida UNE rates in Verizon – FL territory would produce conservative, high UNE rates for Verizon – FL. Therefore, the Commission should adopt on an interim basis AT&T/WorldCom's proposed BellSouth Florida rates for Verizon – FL territory until such time that a direct determination of Total Element Long Run Incremental Cost (TELRIC) can be made for Verizon Florida territory.

Q. SHOULD THESE UNE RATES BE INTERIM AND SUBJECT TO A TRUE UP?

A. No. From an ALEC business perspective, the uncertainty created by making rates subject to a true up places a risk premium on all business plans. Making the UNE rates interim and subject to a true up would reward Verizon – Florida for its obstructionist practices and Verizon – Florida should not be rewarded for its attempt to thwart the development of local competition. Given that this Commission has been directed to encourage the development of local competition, these UNE rates should not be subject to a true-up.

Q. HOW SHOULD THE DEAVERAGED UNE RATE ZONE BE DETERMINED FOR VERIZON – FL?

A. The Verizon - FL wire centers that would be contained in each deaveraged UNE rate zone should be determined in accordance with the testimony of Mr. Warren Fisher in this proceeding.

Q. WHAT IS THE ALEC COALITION'S NONRECURRING UNE RATE PROPOSAL FOR VERIZON – FL?

A. The ALEC coalitions proposal for Verizon-Florida's nonrecurring rates is made by Mr. Sidney L. Morrison.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

MR. HATCH: And we also had the rebuttal testimony of Mr. Warren Fischer consisting of 31 pages. Could we have that inserted into the record as though read, please?

CHAIRMAN JABER: The prefiled rebuttal testimony of Warren R. Fischer shall be inserted into the record as though read.

MR. HATCH: And Mr. Fischer had two public exhibits, nonconfidential, WRF-1 and WRF-6. Could we get those marked for identificatioN, please?

CHAIRMAN JABER: WRF-1 and WRF-6 are identified as Composite Exhibit 44. And Composite Exhibit 44 is admitted into the record.

(Composite Exhibit 44 marked for identification and admitted into the record.)

MR. HATCH: And Mr. Fischer had four confidential exhibits, WRF-2 through WRF-5. Could we get those marked for identification, please?

CHAIRMAN JABER: Confidential exhibits WRF-2 through WRF-5 are identified as Composite Exhibit 45. And Composite Exhibit 45 is admitted into the record.

(Composite Exhibit 45 marked for identification and admitted into evidence.)

MR. HATCH: And that concludes our witnesses.

CHAIRMAN JABER: Thank you.

I. INTRODUCTION

A. Qualifications

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Warren R. Fischer. My business address is 3333 East Bayaud Avenue, Suite 820, Denver, Colorado 80209.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Quantitative Solutions, Inc. ("QSI") as a Senior Consultant. As such, I am responsible for providing expert testimony and analytical support on a number of subject matters involving implementation of the pro-competitive provisions of the Telecommunications Act of 1996 ("the Act").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I have a Bachelor of Science degree in Business Administration with a concentration in Accounting from the University of Colorado in Boulder, Colorado. I am licensed as a Certified Public Accountant in Colorado and California.

Q. WHAT IS YOUR EMPLOYMENT BACKGROUND?

A. After graduating from the University of Colorado, I worked for several years as an accountant with Deloitte & Touche conducting financial audits. Thereafter, I worked for two other major corporations as a financial analyst. I then joined AT&T Wireless Services in 1995 as a financial analyst where I

managed the preparation of annual revenue forecasts for the cellular division. In 1996, I transferred to AT&T Corporation where I became a financial manager and a subject matter expert on pricing and costing issues involving local exchange and exchange access services. In 2000, I joined QSI as a Senior Consultant.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS OR OTHER PUBLIC UTILITY COMMISSIONS?

A. Yes. I have filed testimony at the FCC and in several state regulatory proceedings on subjects such as alternative local exchange carrier ("ALEC") cost issues, revenue requirements, interconnection costs, access rate reform, Universal Service Fund reform, and Section 272 provisions of the Act. I have attached **Exhibit WRF - 1** for a more detailed explanation of my education, experience and previous testimony.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of AT&T Communications of the Southern States, Inc., MCImetro Access Transmission Services, LLC & MCI WorldCom Technologies, Inc. and Florida Digital Network ("ALEC Coalition").

B. Purpose and Scope of Testimony

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address the following issues from Appendix A in the Florida Public Service Commission's (Commission) Order

Establishing Procedure for this Phase III, Order No. PSC-01-1592-PCO-TP issued August 2, 2001, as they pertain to Verizon Florida, Inc. ("Verizon – FL"):

Issue 2 (a): What is the appropriate methodology to deaverage unbundled network elements ("UNEs") and what is the appropriate rate structure for deaveraged UNEs?

Issue 7: What are the appropriate assumptions and inputs for the following items to be used in the forward-looking recurring UNE cost studies?

(b): depreciation;

(c): cost of capital;

(t): expenses; and

(u): common costs.

The other relevant assumptions inputs under Issue 7 are addressed by the rebuttal testimony of ALEC Coalition witness, Dr. August Ankum.

C. Summary of Recommendations

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend that the Commission do the following:

1. Require Verizon – FL to geographically deaverage its UNE loop rates at the wire center level using a defined measure of cost variation that

results in the creation of zones based on cost differences, not protectionist policies, and which will promote competition. I believe applying the Sprint rate banding methodology to Verizon's unbundled loop costs will allow the Commission to objectively determine the required number of deaveraged rate zones. Further, the Commission must review the end results of any deaveraging methodology, just as it must review the rates themselves, to ensure that competition is not impeded by the rate structure.

2. Reject Verizon – FL's use of a 12.95% cost of capital and financial reporting lives for depreciation. Instead, the Commission should require Verizon – FL to re-run its cost studies with the cost of capital and depreciation lives recommended by Dr. Ankum.

3. Reject Verizon – FL's use of C. A. Turner indices to inflate investment and its use of Integrated Cost Model ("ICM") investment in expense-to-investment calculations.

4. For common cost recovery, the Commission should (1) require Verizon to properly account for its realized and expected merger savings and to determine a common cost factor that is consistent with Verizon being one of the largest ILECs in the country (2) use the common cost factor based upon total regulated revenue with consideration given to a smaller allocation of common costs to UNE loops, (3) require Verizon – FL to apply the common cost factor to deaveraged rates as a percentage, and (4) require Verizon – FL to

remove lobbying, legal, and regulatory costs from its common cost factor that are adverse to ALEC interests.

II. ISSUE 2 (a): WHAT IS THE APPROPRIATE METHODOLOGY TO DEAVERAGE UNES AND WHAT IS THE APPROPRIATE RATE STRUCTURE FOR DEAVERAGED UNES?

A. Deaveraging Recommendations

Q. WHAT ARE YOUR OVERALL RECOMMENDATIONS REGARDING GEOGRAPHIC DEAVERAGING FOR UNES IN THIS PROCEEDING?

A. At a minimum, the Commission should require geographic deaveraging of UNE loop rates similar to what it adopted in the BellSouth phase of this proceeding (Docket No. 990649-TP, Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, pages 40-41. *May 25, 2001 UNE Order*). This is essential because the loop is the primary bottleneck facility required by ALECs for competitive entry, and it is subject to significant cost differences based on customer density and distance. In implementing this policy, I recommend that the Commission:

1. Reject the statewide average rate proposal and fears of rate arbitrage promulgated by Verizon – FL witness, Dennis Trimble.

2. Adopt the geographic deaveraging methodology described in Sprint –

Florida, Inc. ("Sprint") witness Michael Hunsucker's direct testimony for use with Verizon - FL. The Sprint methodology applies an objective, measurable standard of cost variation to determining the required number of rate zones. This methodology limits the extent to which costs for a loop provisioned within a given wire center can exceed (or fall below) the average cost of the rate group within which the wire center is placed. In short, the Sprint methodology ensures that no wire center-level loop cost will exceed (or fall short of) the average loop rate within a rate group by more than 20%.

3. Adopt a deaveraging methodology that does not restrict competitive activity.

Q. WHY SHOULD THE COMMISSION REJECT VERIZON - FL'S PROPOSED STATEWIDE AVERAGE UNE RATE PROPOSAL?

A. Verizon - FL's proposal to price UNEs at a statewide average rate is rooted in its desire to have retail rate deaveraging implemented before UNE deaveraging is implemented (see Direct Testimony of Dennis Trimble, page 9). In fact, Verizon – FL's claim that the Commission is under no obligation to deaverage Verizon – FL's UNE rates at this time is totally without merit (Trimble Direct, pages 17-18). The Commission has already acknowledged that it is required to deaverage UNE rates in at least three geographic areas according to 47 C.F.R. §51.507(f) of the FCC's rules on general rate design requirements for the pricing of interconnection and UNEs (See *May 25, 2001 UNE Order*, page 32-33). Therefore, Verizon – FL's request should be

rejected out of hand.

B. Applying Sprint Deaveraging Methodology

Q. WHY DO YOU ADVOCATE THAT THE COMMISSION USE SPRINT'S RATE BAND METHODOLOGY FOR UNE RATE DEAVERAGING?

A. As the Commission has previously noted in the BellSouth phase of this proceeding, the Sprint rate banding methodology is an objective cost-based methodology that does not rely upon existing retail rate zones. In addition to complying with the FCC's deaveraging requirements of 47 C.F.R. §51.507, the Sprint rate-banding methodology gives the Commission the flexibility to adjust the number of zones created based upon the percentage of deviation it sets as a benchmark to compare individual wire center costs to. The ALEC Coalition believes that the Sprint proposal should be applied to Verizon – FL rates and that the methodology as applied must not restrict competitive activity.

Q. WHAT CRITERIA DID SPRINT EMPLOY TO CREATE PRICE ZONES FOR ITS UNES?

A. Sprint calculated the monthly recurring cost for each UNE it proposes to deaverage at the wire center level and then grouped these deaveraged costs into rate bands (price zones) of similar costs. The lower and upper boundary of each rate band was set at –20% and +20% ("± 20%"), respectively, of the average cost of the units in that proposed rate band. If a wire center exceeded these boundaries, it was redistributed into the appropriate rate

band. The benefit of this process is that it allows cost-zones to be created solely upon underlying costs characteristics, and not due to some artificial grouping of wire centers.

Q. HAVE YOU APPLIED THE SPRINT RATE BANDING METHODOLOGY TO VERIZON – FL'S UNE COSTS?

A. I have applied Sprint's methodology to Verizon – FL's 2-wire and DS1 loop costs, before any input adjustments are made to lower UNE costs through Verizon – FL's ICM, to demonstrate the impact of applying this methodology to the deaveraged UNE prices proposed by Verizon – FL. The UNE rate bands were created using Sprint's recommended 20% range of deviation resulting in eight rate bands or zones for a 2-wire loop and four zones for a DS1 loop. The results for each are reflected in the following exhibits. **Proprietary Exhibit WRF – 2** contains the detailed output from the Sprint deaveraging model for the 2-wire loop and **proprietary Exhibit WRF – 4** contains the detailed output for the DS1 loop.

Q. HAS THIS COMMISSION PREVIOUSLY MADE A DETERMINATION ON THE NUMBER OF RATE ZONES THAT ARE APPROPRIATE?

A. The Commission did make a determination that three rate zones were the most reasonable choice for BellSouth in the *May 25, 2001 UNE Order.* It made this determination based upon the belief that too many zones would be administratively burdensome and would not be necessary to reflect the level of variation in BellSouth's costs. Consistent with this determination, I have

included alternative rate band calculations that collapse the zones calculated in **proprietary Exhibits WRF-2** and **WRF-4** to three for both 2-wire and DS-1 loops. These three-zone calculations are contained in **proprietary Exhibits WRF-3** and **WRF-5.**

Q. DO YOU BELIEVE THAT THE COMMISSION SHOULD APPROVE MORE THAN THREE ZONES FOR VERIZON – FL?

A. Yes, I do if cost differences warrant it. In creating 47 C.F.R. §51.507(f), the FCC noted the following:

> ... A state may establish more than three zones where cost differences in geographic regions are such that if finds that additional zones are needed to adequately reflect the costs of interconnection and access to unbundled elements. (*Local Competition Order*, FCC 96-325, ¶765)

Clearly, the FCC's overriding concern is that the number of rate zones adequately reflect the differences in provisioning UNEs. The administrative cost to implement more than three rate zones should be minimal since the work required is mostly one-time charges to make programming changes in the ILEC's underlying rate tables within its billing system. Therefore, I do not believe the administrative costs to implement more than three rate zones would be burdensome in this instance.

The other issue the Commission referred to in its preference for three rate

zones was whether more zones are required to reflect the level of variation in BellSouth's costs. If one applies this same evaluation criterion to Verizon – FL's 2-wire loop cost by zone in Exhibit DBT-3 to Mr. Trimble's direct testimony, it is readily apparent that more than three rate zones are required.

Q. PLEASE EXPLAIN WHY MORE THAN THREE ZONES ARE REQUIRED FOR VERIZON-FL'S 2-WIRE UNE LOOP.

A. Page 1 of Exhibit DBT-3 illustrates the results of Verizon – FL's three-zone deaveraging proposal for a 2-wire loop. Zone 1 is based upon an average price of $18.94 with the statewide average rate of $22.94 as the ceiling. Consequently, approximately 67% of Verizon – FL's lines are priced below the statewide average rate. Zone 2 uses the statewide average rate of $22.94 as the floor and a rate 200% above the statewide average as the ceiling. Zone 3 contains wire centers with costs in excess of 200% of the statewide average. A 200% cost variation standard results in UNE rates that are overly averaged.

Q. WHAT ARE THE RESULTS OF APPLYING THE SPRINT RATE BANDING METHODOLOGY TO VERIZON'S WIRE CENTER COSTS?

A. The Sprint methodology as applied to Verizon's wire center costs is illustrated in **proprietary WRF-Exhibit – 2.** Approximately 82% of total lines would be priced below the statewide average cost of $22.94 before common costs are applied, but these lines would be segregated into three zones compared to Verizon's Zone 1. My proposed Zones 1 ($8.93) and 2 ($16.44)

would price approximately 22% of Verizon's lines below its Zone 1 rate of $18.94. The remaining 59% of lines priced below the statewide average rate of $22.94 would be placed in Zone 3 at a price of $21.42. Even using the three-zone version of 2-wire loop deaveraging in **proprietary Exhibit WRF-3,** the results are similar in that 82% of total lines are below the $22.94 statewide average cost and are segregated into two zones rather than the one zone Verizon – FL proposes. While the Commission may not want to implement eight rate zones for policy reasons, certainly the range of cost differences between wire centers calls for more than three rate zones.

C. Rationale For Extensive Deaveraging

Q. IS THERE A "RULE-OF-THUMB" THAT THE COMMISSION SHOULD USE WHEN DECIDING WHEN AND HOW TO ESTABLISH DEAVERAGED RATES?

A. Yes. The Commission should keep in mind that economic efficiency will be best served when the rates charged for gaining access to a particular UNE most closely match the costs associated with making the particular UNE available. The more the underlying costs supporting a given rate are averaged across a larger geographic area or across individual facilities (i.e., loops in different geographic locations) with disparate underlying costs, the more likely the cost differences between individual facilities (and the UNEs they support) will be "hidden." In other words, the cost differences will not be evident within the rate, and proper market incentives will be distorted. As a general rule, the Commission should favor more extensive geographic

deaveraging rather than less geographic deaveraging. A greater degree of geographic deaveraging will enhance economic efficiency and the development of competition.

Q. IS ECONOMIC EFFICIENCY BETTER SERVED WITH GREATER DEAVERAGING?

A. Yes, it will. Society's resources are more efficiently allocated when prices are set to recover only the underlying incremental costs incurred in providing the service. Prices set in this fashion provide information and incentives to buyers and sellers that allow them to make proper "build versus buy" and other decisions concerning consumption and production. Where prices are set to recover costs associated with providing an unbundled element and facilities already exist that can be used to provide service to a customer, a facilities buyer can make a reasonable determination whether it would be more efficient (i.e. cheaper) to buy that network element for use in serving the customer or to build a facility to serve that customer. In this way, the ALEC is provided the information necessary to make a rational decision as to whether it should build or buy the network element. As a result of making a decision in its own best economic interest, the ALEC is also making a decision in society's best interest (i.e., the ALEC is foregoing the deployment of societal resources that would be unnecessarily deployed given the availability of Verizon - FL's existing facility).

Q. WOULD HIGH-COST CUSTOMERS BEING SUBSIDIZED BY LOW-COST CUSTOMERS RESULT IN LESS COMPETITION AS A WHOLE?

A. Yes. There are substantial fixed costs associated with beginning a competitive telecommunications enterprise. In addition, competitors have limited resources available, after incurring these substantial upfront costs, to be used to attract customers. Carriers can only hope to compete with an incumbent in the long term by generating economies of scale and scope that bring its average, per-unit-cost of providing service down to a level comparable with the incumbent's (which already realizes economies of scale and scope associated with serving almost 100% of the customers in its particular service territory). Hence, when rates for essential network elements in low-cost areas are priced higher than they should be because of overly averaged rates, the customers which competitors are most likely to attract initially for purposes of gaining economies of scale and scope (because they can be served with the least amount of additional marginal outlay) are sheltered from competition by the fact that the costs of serving those customers are higher than they should be. As such, in areas with overly averaged rates, it is more difficult for ALECs to establish a "foothold" that can be used to gain the economies of scale and scope necessary to extend their competitive services.

Q. ARE THERE OTHER PROBLEMS THAT OCCUR WHEN RATES FOR UNBUNDLED NETWORK ELEMENTS ARE SET AT AN OVERLY AVERAGED LEVEL?

A. Yes. Competitors will be charged rates for UNEs and UNE combinations that are largely unrelated to the costs incurred by the ILEC to provide them.

Therefore, competitors may find themselves in a position in which incumbents have the ability to significantly undercut them. Verizon - FL, for example, could reduce its retail prices in high-density, low-cost areas to levels that are less than the average rates that competitors pay for UNEs required to provide their competing services. Verizon - FL, in such an instance, may not necessarily be charging prices below its own costs, but Verizon - FL would be charging retail prices below the overly averaged rate levels its competitors must pay to compete. This is exactly the situation that Congress was attempting to avoid when it established that rates for access to UNEs must be set in a nondiscriminatory and cost-based fashion (see Section 251(c)(3) of the Telecommunications Act of 1996 ("the Act")).

A deaveraging methodology that results in a minimal number of wire centers and access lines in zones where the lowest rates are available does not promote competition. **Proprietary exhibit WRF-3** illustrates the Sprint methodology applied to Verizon – FL's UNE costs before they are modified for input changes, and it assumes just three rate zones are used. (The ALEC Coalition recommends more than three zones). In this example, there would be 15 Zone 1 wire centers, serving 22% of Verizon's access lines. Depending on the level of the rates, such a distribution may not be sufficient to promote competition to a desirable level. Therefore, it is important that the Commission make a second-tier end-result evaluation for any methodology it approves to ensure that the competitive goals of the Act will be carried out and that the methodology adopted does not have arbitrary results.

III. ISSUE 7: WHAT ARE THE APPROPRIATE ASSUMPTIONS AND INPUTS FOR THE FOLLOWING ITEMS TO BE USED IN THE FORWARD-LOOKING RECURRING UNE COST STUDIES?

A. (b): Depreciation and (c): Cost of Capital

Q. DO YOU ADDRESS VERIZON'S PROPOSED DEPRECIATION LIVES AND COST OF CAPITAL IN DETAIL WITHIN YOUR TESTIMONY?

A. No, I do not. Dr. Ankum discusses the flaws in Verizon - FL's proposed depreciation rates and cost of capital. I rely upon Dr. Ankum's recommendations to perform sensitivity analyses within Verizon – FL's ICM model.

Q. WHAT IS YOUR OVERALL ASSESSMENT OF VERIZON-FL'S PROPOSED CAPITAL COST FACTORS?

A. I believe that Verizon – FL's capital cost factors are overstated for the following reasons:

- Verizon – FL uses a weighted average cost of capital of 12.95% (see Direct Testimony of Dr. James H. Vander Weide, page 4), which exceeds the ceiling of 10.24% recommended by ALEC Coalition witness Dr. August Ankum in this proceeding (see Rebuttal Testimony of Dr. August Ankum).

- Verizon – FL uses the accelerated depreciation lives employed in its financial reporting to shareholders as opposed to Dr. Ankum's recommendation that the FCC prescribed lives or the lives approved by this Commission in the BellSouth phase of this proceeding (see Direct Testimony of Allen E. Sovereign, pages 2-9) be used (see Rebuttal Testimony of Dr. August Ankum).

If the Commission were to implement Dr. Ankum's recommendations, the UNE recurring costs would be reduced significantly. For example, the 2-wire UNE loop rate would decline approximately $4 per month from a statewide average rate of $22.94 to $18.98, a 17% decline. Therefore, the Commission should require Verizon – FL to rerun its ICM and external cost models with the inputs recommended by Dr. Ankum.

B. (t): Recurring Expenses Derived Through Maintenance and Support Factors

Q. WHAT ARE VERIZON – FL'S MAINTENANCE AND SUPPORT FACTORS USED FOR?

A. Verizon – FL calculates a series of maintenance and support factors to apply against the investment modeled within its ICM which then produces the annual costs required to support that investment. These annual costs are then divided by twelve to produce monthly recurring maintenance and support costs for each UNE.

Q. HOW ARE MAINTENANCE AND SUPPORT FACTORS TYPICALLY CALCULATED?

A. Maintenance and support factors are a typically calculated by dividing expenses incurred in maintaining and supporting the network and related operations by the investment in the network and related operations that generates those expenses. The resulting ratio represents the relationship between expenses and investment that can be applied against future investment to estimate future expenses required to support that investment.

Q, HAS VERIZON OVERSTATED THE MAINTENANCE AND SUPPORT FACTORS USED IN DETERMINING RECURRING UNE COSTS IN THIS PROCEEDING?

A. Yes, it has. An expense factor is nothing more than a fraction, and a fraction can be overstated if the numerator is greater than it should be and/or if the denominator is less than it should be. Verizon- FL has overstated the fractions used to estimate annual recurring TELRIC expenses in at least three important ways.

First, it overstates the operating expenses used to calculate the numerator by not using a bottoms-up approach to calculate the forward-looking expense required to operate and support a network built from scratch. Instead, Verizon – FL relies upon a tops-down methodology which starts with book expenses and then incorporates a series of adjustments for accounting–based normalization entries, removal of certain non-forward looking costs such as analog switching, retail

avoided costs and costs recovered through other studies such as NRCs, Billing and Collection, etc. as outlined in its ICM Expense Module Methodology.

Second, it overstates the investment values used to calculate the capital carrying costs of support assets. These inflated capital carrying costs are then combined with other operating expenses to form the numerator portion of the expense-to-investment ratio described above.

Third, Verizon – FL inappropriately reduces the denominator, investment, of the above factor by replacing the investment used to generate the existing level of expenses with modeled investment out if its ICM.

Q. PLEASE EXPLAIN FURTHER WHY VERIZON – FL HAS NOT MADE <u>OPERATING EXPENSES</u> IN THE NUMERATOR OF ITS EXPENSE-TO-INVESTMENT RATIOS FORWARD-LOOKING.

A. The proper way to derive forward-looking expenses would be through a bottoms-up determination of the expenses needed to operate and support a forward-looking network. This would take into account the configuration and quantity of assets needed in the network and the appropriate level of staffing and support assets required to operate that network. It would also exclude those costs that should not be part of a wholesale UNE recurring cost study. As noted previously, the only adjustments Verizon – FL has made to its expenses are for accounting–based normalization entries, removal of certain non-forward looking costs such as analog switching, retail avoided costs and costs recovered through other cost studies.

Q. PLEASE EXPLAIN IN FURTHER DETAIL HOW VERIZON – FL OVERSTATES THE COSTS OF SUPPORT ASSETS AND THE NUMERATOR PORTION OF ITS EXPENSE-TO-INVESTMENT RATIOS.

A. Verizon – FL applies C. A. Turner Plant Indices to its book investment to bring it up to replacement cost (see Attachments J.1 – J.4 in the ICM Expense supporting documentation). The indices are simply tools to identify the relative change in price over a period of time. They do not identify whether the same quantity or type of investment would be required in a forward-looking construct. Therefore, application of a price index alone is insufficient to make investment forward-looking.

Verizon – FL applies the C. A. Turner indices to support investment contained in USOA accounts 2111 through 2124 (see Attachment K in Verizon – FL's ICM Expense supporting documentation). The net effect of this process is to increase support investment from $472,473,000 to $610,896,842, which is a 29% increase. Verizon – FL then applies its annual cost factors for (1) depreciation and cost of capital, (2) income taxes and (3) property taxes to calculate annual general support expenses.

These annual general support expenses then flow to the schedule where maintenance, support and common costs are compiled (see Attachment O in the ICM Expense supporting documentation). Based on Verizon – FL's allocation of support and direct expenses to its various direct cost pools and common costs, 63% of the overstatement caused by the C. A. Turner indices ends up in the numerator of the maintenance and support factor calculation. The remaining

37% of this overstatement ends up in the common cost expense amount used in the common cost factor calculation. Therefore, the Commission should reject Verizon – FL's use of the C. A. Turner indices because this methodology does not consider what physical quantity or type of support asset is necessary in a forward-looking construct. Instead, the C.A. Turner indices only serve to inflate the current embedded base of assets to today's prices. Consequently, the Commission should require Verizon – FL to recalculate its annual support costs using a forward-looking investment base to calculate forward-looking support costs and using appropriate capital cost factors for depreciation and cost of capital as recommended by Dr. Ankum. Clearly, the forward-looking investment base should be less than its current book investment.

Q. PLEASE EXPLAIN FURTHER HOW VERIZON – FL INAPPROPRIATELY REDUCES THE INVESTMENT USED IN THE DENOMINATOR PORTION OF THE EXPENSE-TO-INVESTMENT RATIO.

A. Verizon – FL inappropriately reduces the denominator portion of the expense-to investment ratio calculation by substituting the investment calculated within its cost model ("ICM Investment") for the level of investment that produced the expense used in the numerator portion of the ratio. This is accomplished through a process Verizon – FL calls calibration. Verizon – FL describes this process in the ICM Expense Module Methodology and in the following response to a Staff interrogatory:

> .... This calibration results in using the forward-looking ICM-FL modeled network investments when calculating the expense to

investment ratios vs. using replacement costs or historical book costs. Note that this calibration option can be selected or rejected by the user. If calibration is not selected by the user, ICM-FL uses the replacement cost of investment values to calculate the network expense to investment ratios. (see Verizon – FL response to Staff's Second Set of Interrogatories, No. 53)

An unwarranted reduction in the denominator increases the fraction, or cost factor, that is applied against the ICM Investment, which increases the annual recurring costs of each UNE. It appears that Verizon – FL anticipated calibration might be controversial by noting that the ICM user can reject this option.

Q. WHY IS THIS TYPE OF ADJUSTMENT TO THE DENOMINATOR INAPPROPRIATE?

A. The primary reason that Verizon – FL's reduction of the denominator is inappropriate is that you cannot use the output of the same model you are using to determine a factor that will then be applied against that output to calculate recurring expenses. This is circular logic at best. Consistency demands that like terms are used in the numerator and the denominator. If Verizon – FL chooses to use its calculation of forward-looking investment in the denominator, it must use a forward-looking determination of expenses in the numerator.

Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION REGARDING VERIZON – FL'S USE OF ITS CALIBRATION METHDOLOGY?

A. I recommend that the Commission reject Verizon – FL's use of the calibration option within its ICM for the reasons I discussed previously.

Q. CAN YOU QUANTIFY THE IMPACT OF VERIZON – FL'S CALIBRATION METHODOLOGY?

A. Yes, I can. Attachment J.4 within Verizon – FL's ICM Expense documentation details total investment in three categories:

INVESTMENT TYPE	INVESTMENT PER ATTACHMENT J.4	ICM INVESTMENT AS A PERCENTAGE
ARMIS (book) Investment	$4,336,566,501	70%
C. A. Turner-adjusted Investment	$4,989,392,818	61%
ICM Investment	$3,056,380,561	100%

The ICM investment is approximately 70% of the book investment and 61% of the C. A. Turner-adjusted investment. If the ICM investment is used in the expense-to-investment ratio as Verizon – FL's calibration methodology requires, the maintenance and support factors are overstated by the following percentages than if the other two investment balances were used in the denominator:

1. ARMIS (book) investment: 43% overstatement (1 / 0.70 = 1.43)

2. C. A. Turner-adjusted investment: 64% overstatement (1 / 0.61 = 1.64)

In the above calculations, the percentage noted in the denominator represents the impact of using ICM investment rather than book or adjusted book

investment. If the calibration option is turned off within ICM-FL, the statewide average 2-wire loop costs declines by approximately $1. If this change is made in conjunction with the depreciation and cost of capital changes recommended by Dr. Ankum, the cumulative reduction results in a statewide average 2-wire loop cost of $17.84 compared to Verizon – FL's proposed rate of $22.94.

C. (u): Allocation of Common Costs

Q. DO YOU HAVE ANY CONCERNS WITH VERIZON'S PROPOSED RECOVERY OF COMMON COSTS?

A. Yes, I have the following concerns.

1. The percentage of common cost recovery that Verizon – FL seeks, 14.09%, appears to be excessive for a company that is now part of one of the largest local exchange carriers in the nation.
2. Verizon – FL has chosen the higher common cost factor of the two versions it calculated within its cost studies while giving no consideration to the FCC's suggestion that only a relatively small share of common costs be allocated to critical network elements such as the local loop.
3. Verizon - FL does not consistently apply its common cost allocator as a percentage to deaveraged zone rates.
4. Verizon – FL has inflated its common cost recovery by including lobbying, legal, and regulatory costs that are adverse to the interests of the ALECs.

Q. PLEASE EXPAND ON THE IMPACT THAT THE BELL ATLANTIC / GTE MERGER SHOULD HAVE ON COMMON COSTS.

A. A firm with Verizon's size and scope should be accountable for the economies of scale and efficiencies it promised investors, regulators and customers when it promoted the benefits of the mergers between Bell Atlantic and NYNEX and then Bell Atlantic and GTE. In its Form S-4s filed with the Securities Exchange Commission prior to each merger, Bell Atlantic extolled the various capital, revenue and expense synergies that would occur after each merger was completed. For the merger with GTE, Bell Atlantic estimated that revenue, expense and capital synergies would be approximately $4.5 billion per year while incurring transition and integration costs of only $1.6 billion over three years. On the same page where Bell Atlantic outlined the anticipated benefits of the merger with GTE, it stated the following:

> Both GTE and Bell Atlantic have proven track records in successfully and quickly integrating business operations. GTE today thrives as a highly focused, integrated company after a series of major acquisitions over the past decade, including the acquisitions of Contel Corporation in 1991 and BBN Corporation in 1997. Bell Atlantic and NYNEX formed a wireless joint venture in 1994. By 1996, the wireless joint venture achieved a market leadership position with innovative products, faster customer growth and sharply improved profitability, which were further enhanced when the two companies merged in 1997. *The integration of Bell Atlantic and NYNEX is now largely complete, and the forecast efficiencies are being achieved successfully.*

[Emphasis added] (see page I-24 of Bell Atlantic Form S-4 filed April 13, 1999 attached as **Exhibit WRF-6**).

Based on the foregoing statement, Verizon should realize the anticipated GTE merger savings fairly rapidly. These expected savings should be considered in lockstep with this Commission previous determination that BellSouth, which is a much smaller carrier in total size than Verizon, should recover common costs using a 6.24% factor (see *May 25, 2001 UNE Order*, page 326-327). This is less than half of Verizon – FL's proposed common cost factor. By any measure of reasonableness, Verizon – FL's common cost factor should be within a few percentage points, either higher or lower, of BellSouth's factor.

Q. PLEASE EXPLAIN YOUR CRITICISM OF VERIZON – FL'S COMMON COST FACTOR METHODOLOGY.

A. First of all, Verizon – FL calculated two versions of its common cost factor within its cost studies. The 14.09% factor proposed by Verizon – FL (see Trimble direct, Exhibit DBT-1) is the result of dividing common costs by direct costs. While using direct cost as the denominator may be an acceptable method, the Verizon predecessor, GTE, typically used total regulated revenue as the denominator. In fact, Verizon – FL prepared an alternative common cost factor in its cost study documentation using total regulated revenues as the denominator resulting in an **11.55**% factor (see Attachment Q within the ICM Expense documentation). Mr. Trimble presents no explanation as to why the higher factor

based upon direct costs was chosen over the one based upon total regulated revenues. Consequently, the Commission should consider the lower factor based on revenue in conjunction with the company-wide merger savings noted above to ensure UNE rates are not overstated due to some arbitrary decision made by Verizon – FL.

Secondly, Verizon – FL gave no consideration to the alternative cost recovery method suggested by the FCC in the Local Competition Order. While acknowledging that a percentage markup over directly attributable forward-looking cost was a reasonable allocation method, the FCC also suggested that second reasonable method would allocate only a relatively small share of common costs to certain critical network elements, such as the local loop and collocation that are considered bottleneck facilities (¶ 696). The FCC concluded that this method would ensure that prices of network elements that are least likely to be subject to competition are not artificially inflated by a large allocation of common costs. Therefore, the Commission should consider requiring Verizon – FL to allocate a smaller portion of common costs to UNE loops.

Q. DO YOU AGREE WITH MR. TRIMBLE'S PROPOSAL TO RECOVER A UNIFORM AMOUNT OF COMMON COSTS FOR A PARTICULAR UNE REGARDLESS OF THE DEAVERAGED ZONE COSTS?

A. No, I do not. Mr. Trimble explains his rationale for applying a uniform or fixed amount of common cost to a UNE on pages 33-34 of his direct testimony. He states that it is unreasonable to assign a larger share of common costs to rural UNE loops than to urban loops. He therefore spreads common cost recovery

equally over each deaveraged zone for a UNE. This practice is inconsistent with the concept of deaveraging costs where higher cost areas bear the cost required to serve that area. Common cost recovery should be treated no differently than direct and shared costs that have been deaveraged. If Verizon – FL chooses to use a fixed allocator methodology to recover common costs, it should apply this allocator to the deaveraged TELRIC costs, not just to the statewide average TELRIC cost of a UNE. The consequence of Verizon – FL's proposal is an unjustified overstatement of its Zone 1 costs. Where a 2-wire loop is priced at $22.17 in Zone 1 using Verizon – FL's proposed inputs and its deaveraging methodology (see Trimble direct testimony, Exhibit DBT-2, page 1 of 8), it should cost $21.60 ($18.94 TELRIC cost in Zone 1 + ($18.94 * 14.09% common cost allocator)). Verizon – FL is simply raising the price in the zone most likely to experience competition initially without justification. Therefore, the Commission should require Verizon – FL to re-calculate its deaveraged rates by applying the common cost allocator as a percentage to each zone, not a fixed cost additive.

Q. SHOULD VERIZON – FL BE PERMITTED TO RECOVER EXTERNAL RELATIONS AND LEGAL COSTS FROM ALECS?

A. There should be no lobbying, legal, and regulatory costs included in Verizon – FL's common cost recovery to the extent they are incurred in a way that is adverse to the interests of ALECs. These costs are generally incurred for both retail and wholesale services. During my review of Verizon – FL's supporting adjustment factor schedule (see Attachment I in ICM Expense documentation), it appears that Verizon – FL removed approximately 15% of

its external relations (USOA 6722) and legal expense (USOA 6725) in its *Wholesale Adjust 1 Factor* (Column H). However, none of the expenses attributable to litigation and other actions adverse to the efforts of ALECs should be included in UNE rates. There are two reasons for this: (1) the legal, lobbying, and regulatory efforts exerted by incumbents are generally expended for the benefit of Verizon - FL's retail offerings; and, (2) the ALECs incur their own costs such as these, which are not recovered, in whole or in part, from the incumbent LECs. It is fundamentally unfair to require ALECs to support legal, lobbying and regulatory costs that are typically expended against them. The only allowable costs should be those associated with normal company operations and compliance with administrative requirements of state commissions such as tariff filings. All other expenses spent litigating and lobbying against ALEC interests should be removed. Absent such a disclosure, all of these costs should be removed. If the Commission were to order all of these expenses removed, Verizon – FL's common cost factor would decline from 14.09% to **12.97**% if the direct cost denominator was used and from 11.55% to **10.6**% if total regulated revenue were used as the denominator. These adjusted common cost factors require further reduction to account for the broader savings from the Bell Atlantic / GTE merger.

IV. CONCLUSION AND RECOMMENDATIONS

Q. BASED ON YOUR ANALYSIS OF VERIZON – FL'S TESTIMONY AND COST SUPPORT IN THIS PROCEEDING, WHAT ARE YOUR CONCLUSIONS AND RECOMMENDATONS?

A. I recommend that the Commission require the following:

1. Use the Sprint rate banding methodology to deaverage the relevant Verizon – FL UNEs. While I believe that Sprint's proposed ± 20% deviation standard is a reasonable benchmark to use in grouping wire centers by their forward-looking cost, the Commission can set a higher deviation standard if it decides to limit the number of rate zones or bands. However, the essential considerations in determining the number of zones is not administrative expediency, but the proper grouping of UNEs to reflect the spectrum of the costs required to provision those UNEs and ensuring that competitive activity is not restricted.

2. Reject Verizon – FL's use of a 12.95% cost of capital and financial reporting lives for depreciation. Instead, the Commission should require Verizon – FL to re-run its cost studies with the cost of capital and depreciation lives recommended by Dr. Ankum.

3. Reject Verizon – FL's use of the C. A. Turner indices to inflate book investment values and its use of ICM investment in its expense-to-investment ratio calculations.

4. For common cost recovery, the Commission should (1) require Verizon to properly account for its realized and expected merger savings and to determine a common cost factor that is consistent with Verizon being one of the largest ILECs in the country (2) use the

common cost factor based upon total regulated revenue with consideration given to a smaller allocation of common costs to UNE loops, (3) require Verizon – FL to apply the common cost factor to deaveraged rates as a percentage, and (4) require Verizon – FL to remove lobbying, legal, and regulatory costs from its common cost factor that are adverse to ALEC interests.

Q. PLEASE SUMMARIZE THE PROPOSED 2-WIRE LOOP RATES FOR VERIZON – FL THAT RESULT FROM YOUR RECOMMENDED INPUT CHANGES?

A. Verizon – FL proposes a statewide average 2-wire loop price of $22.94 before adding common costs. The 2-wire loop prices that result from my recommended input changes result in a reduction of approximately 22% broken down as follows:

1. If the Commission were to implement Dr. Ankum's recommendations on cost of capital and depreciation lives, the price would decline approximately $4 per month to $18.98, a 17% decline.

2. If the calibration option is turned off within ICM-FL, the price declines by an additional $1 to $17.84, an additional 5% decline.

Requiring Verizon – FL to apply its common cost factor as a percentage to deaveraged zone rates would cause a $0.57 decline in the Zone 1, 2-wire loop rate.

Applying a common cost factor based on regulated revenue adjusted for

removal of lobbying, regulatory and legal expenses would reduce Verizon – FL's proposed factor of 14.09% to 10.6%, resulting in a decrease in the common costs added to the statewide average 2-wire loop rate of $0.80 ($3.23 - $2.43).

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

MR. FUDGE: Madam Chairman, there were -- Staff would like to note that there were three witnesses that were stipulated earlier, Witnesses Wood, Ford and Draper. They also filed testimony pertaining to the Verizon portion, and Staff would just like to note that their testimony is, portion of that testimony is applicable to the Verizon portion of this docket.

CHAIRMAN JABER: And already inserted into the record.

MR. FUDGE: Yes, Commissioner.

CHAIRMAN JABER: All right. Let me go ahead and excuse Mr. Sovereign, Mr. Vander Weide, Dr. Tardiff, Mr. Murphy, Mr. Darnell and Mr. Fischer. Francis J. Murphy, is that a he or a she?

MR. HUTHER: It's a he.

(Witnesses excused.)

CHAIRMAN JABER: Okay. What else, Mr. Fudge?

MR. FUDGE: As noted in the prehearing order, there were two stipulations pending that AT&T, WorldCom and FDN had proposed. It's my understanding that Verizon and the ALEC Coalition are still working on those stipulations and would like to maybe take a ten-minute break to discuss the, see if they can resolve them.

CHAIRMAN JABER: I like the idea of a ten-minute break. Commissioners, how about we come back at 10:30. Thank

you.

(Recess taken.)

CHAIRMAN JABER: Staff, do you all feel like you need more time? Ms. Caswell, do you need more time?

MS. CASWELL: Yeah. The parties agree in principle; we're just having trouble nailing down the exact words to embody that principle. And the problem is that not all of the people that we need to talk to are in the room. I think some of the companies have experts back at the headquarters that we can't get too that quickly. So we've agreed to talk about it some more at lunch, if that's okay.

CHAIRMAN JABER: No. That's perfect. We are taking a lunch break from 12:00 to 1:00, so that'll -- at least you'll know to make phone calls and get folks down here, if you need to, from 12:00 to 1:00. And is there a way for us though to go forward?

MS. CASWELL: That's what Jason and I were just discussing. If we could just have a couple of minutes.

CHAIRMAN JABER: That's fine. Just let me know when you're ready.

MS. CASWELL: Okay.

CHAIRMAN JABER: The more you all stipulate, the more cooperative I'll be, just to let you know.

(Recess taken.)

CHAIRMAN JABER: All right. Mr. Fudge just told me

that we'll be able to finish this hearing today. So with that, let's go ahead and get started.

MR. FONS: Madam Chair, before we start, may I do two things? Number one, indicate that Sprint is interested in participating or trying to participate in the stipulation. Obviously it's going to take some time to do that. There's no -- and the second piece -- and I would like to be able to continue to participate in that, but at the same time there's no need for me to be here. Indeed, I need to go talk to my client about the proposed stipulation. And I would like to be, ask your permission to be temporarily excused from participating and to come back when and if needed.

CHAIRMAN JABER: Thank you, Mr. Fons. Your request is granted.

MR. FONS: Thank you.

MR. SELF: And, Madam Chairman, I would like to make the same request.

CHAIRMAN JABER: Well, you're a different matter, Mr. Self. Your request is granted, too.

MR. SELF: I'll give Mr. Hatch my proxy, for whatever it's worth.

MR. HATCH: This could be really fun.

CHAIRMAN JABER: I wasn't going to say anything.

MR. SELF: Thank you.

CHAIRMAN JABER: No problem. Mr. Fudge, should we

swear in the witnesses in the room or just take it a witness at a time?

MR. FUDGE: We can go ahead and swear everybody in.

CHAIRMAN JABER: Okay. Let me ask that the witnesses in the audience and the witness on the stand, please stand, raise your right hand.

(Witnesses collectively sworn.)

(Transcript continues in sequence with Volume 4.)

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STATE OF FLORIDA)

: CERTIFICATE OF REPORTER

COUNTY OF LEON)

I, LINDA BOLES, RPR, Official Commission Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorneys or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 2ND DAY OF MAY, 2002.

LINDA BOLES, RPR
FPSC Official Commissioner Reporter
(850) 413-6734