BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 030851-TP

In the Matter of

IMPLEMENTATION OF REQUIREMENTS ARISING FROM FEDERAL COMMUNICATIONS COMMISSION'S TRIENNIAL UNE REVIEW: LOCAL CIRCUIT SWITCHING FOR MASS MARKET CUSTOMERS.

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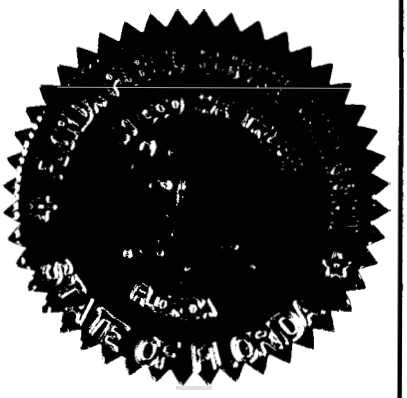

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VOLUME 19

Pages 2556 through 2709

PROCEEDINGS: HEARING

BEFORE: CHAIRMAN BRAULIO L. BAEZ
COMMISSIONER J. TERRY DEASON
COMMISSIONER LILA A. JABER
COMMISSIONER RUDOLPH "RUDY" BRADLEY
COMMISSIONER CHARLES M. DAVIDSON

DATE: Thursday, February 26, 2004

TIME: Commenced at 9:00 a.m.

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PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	JANE FAUROT, RPR Chief, Office of Hearing Reporter Services FPSC Division of Commission Clerk and Administrative Services (850) 413-6732
APPEARANCES:	(As heretofore noted.)

I N D E X

WITNESSES

EXHIBITS

NUMBER:		ID.	ADMTD.
106	Exhibits to Witness Staihr's Prefiled Testimony	2561	
107	Exhibits to Witness Dickerson's Prefiled Testimony	2646	

P R O C E E D I N G S

(Transcript follows in sequence from Volume 18.)

CHAIRMAN BAEZ: Now, are we going to be -- we'll just move along. I have the next witness as Alleman.

MS. MASTERTON: Commissioner, I think we already moved Terry Alleman's testimony in.

CHAIRMAN BAEZ: Did we move Alleman's testimony?

MS. MASTERTON: Yes.

CHAIRMAN BAEZ: Okay, great. And the same for Staihr.

MS. MASTERTON: No.

CHAIRMAN BAEZ: No? Okay. Then let's go ahead and take up Mr. Staihr.

MS. MASTERTON: For Dr. Staihr, Sprint would move his direct testimony filed on December 4th consisting of 30 pages, including corrections that were filed on February 23rd. His revised rebuttal testimony filed on February 16th, consisting of 43 pages, and his surrebuttal testimony filed on January 28th, consisting of 10 pages.

CHAIRMAN BAEZ: Okay. Show the direct, revised rebuttal, and surrebuttal testimony of Brian K. Staihr moved into the record as though read.

MS. MASTERTON: And he had two exhibits, neither of which are confidential, BKS-1 and BKS-2.

CHAIRMAN BAEZ: Show Mr. Staihr's Exhibits BKS-1 and

BKS-2 marked as Composite Exhibit 106.

(Composite Exhibit 106 marked for identification.)

SPRINT-FLORIDA/SPRINT COMMUNICATIONS LP
DOCKET NO. 030851-TP
FILED: December 4, 2003

BEFORE THE PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

DR. BRIAN K. STAIHR

BACKGROUND/PURPOSE

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

A. My name is Brian K. Staihr. I am employed by Sprint Corporation as Senior Regulatory Economist in the Department of Law and External Affairs. My business address is 6450 Sprint Parkway, Overland Park, Kansas 66251.

Q. Please briefly describe your educational background and work experience.

A. I hold a B.A. in Economics from the University of Missouri-Kansas City, and an M.A. and Ph.D. in Economics from Washington University in St. Louis. My field of specialization is Industrial Organization, including Regulation.

I began working with Sprint's Regulatory Policy Group in 1996. In my current position I am responsible for the development of state and federal regulatory and legislative policy for all divisions of Sprint Corporation. I am also responsible for the coordination of policy across business units. My particular responsibilities include 1) ensuring that Sprint's policies are based on sound economic reasoning, 2) undertaking or directing economic/quantitative analysis to provide support for Sprint's policies, and 3) conducting original research. The specific policy issues that I address include universal service, pricing, costing (including cost of

capital), access reform, reciprocal compensation and interconnection, local competition, and more.

In my position I have testified before Congress on telecommunications issues, and my research has also been used in congressional oversight hearings. I have appeared before the Florida Public Service Commission, the Kansas Corporation Commission, the New Jersey Board of Public Utilities, the Pennsylvania Public Utility Commission, the North Carolina Utilities Commission, the Public Service Commission of South Carolina, the Public Service Commission of Nevada, the Texas Public Utilities Commission, the Illinois Commerce Commission, the Oregon Public Utility Commission, and the Missouri Public Service Commission. I have also worked extensively with the Federal Communication Commission's staff and presented original research to the FCC.

In January 2000 I left Sprint temporarily to serve as Senior Economist for the Federal Reserve Bank of Kansas City. There I was an active participant in the Federal Open Market Committee process, the process by which the Federal Reserve sets interest rates. In addition, I conducted original research on telecommunication issues and the effects of deregulation. I returned to Sprint in December 2000.

For the past eight years I have also served as Adjunct Professor of Economics at Avila University in Kansas City, Missouri. There I teach both graduate and undergraduate level courses.

Prior to my work in Sprint's Regulatory Policy Group I served as Manager-Consumer Demand Forecasting in the marketing department of Sprint's Local Telecom Division. There I was responsible for forecasting the demand for services in the local market, including basic local service, and producing elasticity studies and economic and quantitative analysis for business cases and opportunity analyses.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to put forth Sprint's positions regarding specific issues dealing with market definition, analysis of impairment based on actual switch deployment ("competitive triggers") and analysis of impairment based on potential for self-provisioning of local switching ("economic analysis of potential deployment") listed in the Issues List of Docket No. 030851-TP (Mass Market Local Switching) dated November 7, 2003. These include, but are not limited to, Issues 1, 2a, 2b, 2c, 4a, 4b, 5e, and 5f. In this proceeding Sprint is also sponsoring the testimony of Mr. Kent Dickerson, whose testimony will supplement my own on Issue 5f (the calculation of appropriate cutoff for multi-line DS-0 customers), and the testimony of Ms. Terry Alleman who will address issues regarding batch cut processes (Issue 3).

Q. Does Sprint bring a unique perspective to this proceeding?

A. Yes it does. Sprint is one of the major incumbent local exchange carriers ("ILEC") providing basic telephone service in Florida, but Sprint is also a competitive local exchange carrier ("CLEC") in Florida and in many other states throughout the country, providing basic local service to hundreds of thousands of

residential and business customers nationwide. Therefore Sprint is uniquely situated to understand the needs of both *providers* and *purchasers* of unbundled network elements, and to understand the competitive impacts of the availability—or lack of availability—of unbundled elements on both providers and purchasers. In the process of arriving at the policy positions that form the basis of its testimony Sprint is required to balance, internally, the same competing interests that policymakers must balance in proceedings such as this one.

Q. With regard to local switching, as an ILEC, is Sprint challenging the FCC's national finding of impairment for its Florida serving territory?

A. No. With regard to mass market local switching Sprint is not challenging the FCC's national finding of impairment for any market in its ILEC serving territory in Florida during this initial nine month proceeding. However, Sprint reserves the right to challenge the FCC's national finding of impairment at some point in the future.

MARKET DEFINITION—MASS MARKET LOCAL SWITCHING (Issues 1, 2)

Q. What unit of geography does Sprint propose for analyzing impairment with regard to mass market local switching?

A. Based on the understanding (discussed below) of *how* the geographic unit must be used in subsequent impairment analysis, Sprint recommends that the Metropolitan Statistical Area ("MSA" as defined by the U.S. Census Bureau) be used as the basic geographic unit for evaluating impairment.

Q. How must the market—defined as an MSA—be used when evaluating impairment?

A. When identifying the appropriate unit of geography to use as a basis for evaluating impairment it is important to keep in mind that this unit represents the geographic area *throughout which* the concept of impairment will be evaluated. In other words, when investigating an actual or potential competitor serving "the mass market" it must be acknowledged that the mass market is found throughout the entire MSA, not merely in portions of the MSA. This concept is consistent with the FCC's statements regarding both actual deployment and potential deployment. For example, the TRO states that the competitive triggers are intended to provide evidence of "the technical and economic feasibility of an entrant serving the mass market with its own switch."[1] And the TRO states that an analysis of potential deployment is intended to provide evidence of how an entrant could "economically serve the market without access to the incumbent's switch."[2] Note that both references refer to evidence of serving "the market" (or "the mass market") as a whole. As the Florida Commission conducts its impairment analysis it is not looking for evidence of serving *portions* or *segments* of the market. Rather, it should examine whether the defined market area is being served by competitors such that mass market customers *throughout* the market have real competitive choices to the ILEC. Therefore the market—the MSA—should be considered a unit-as-a-whole for purposes of analyzing impairment. This is discussed in more detail below.

Q. What direction does the FCC's Triennial Review Order give in terms of

[1] TRO paragraph 501.
[2] TRO paragraph 517.

defining the market?

A. Paragraph 495 of the FCC's Triennial Review Order ("TRO") provides direction for defining the geographic market to be used, and Sprint's proposal for using MSAs is consistent with this direction. Paragraph 495 states:

> ...State commissions have discretion to determine the contours of each market, but they may not define the market as encompassing the entire state. Rather, state commissions must define each market on a granular level, and in doing so they must take into consideration the locations of customers actually being served (if any) by competitors, the variation in factors affecting competitors' ability to serve each group of customers, and competitors' ability to target and serve specific markets economically and efficiently using currently available technologies. While a more granular analysis is generally preferable, states should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market....

Q. Please explain how the use of MSAs is consistent with the direction for defining the market found in TRO paragraph 495.

A. First, paragraph 495 requires that the relevant geographic area cannot include the entire state. MSAs obviously represent subsets of the entire state and therefore meet this requirement.

Second, the TRO states that the market definition should be considered from the point of view of the entrant—either actual or potential—

rather than the incumbent. In paragraph 495 the TRO says that the appropriate market definition must take into consideration the *competitor's* ability to serve customers economically and efficiently. MSAs tend to reflect the market from an entrant's point of view because they represent an economic community of interest and they generally reflect the geographic reach of newspapers, radio, and television advertising, thereby affecting a competitors' ability to target customers in the proposed market (MSA) from a mass marketing and advertising perspective.

Third, in the past the FCC has stated that MSAs are generally defined "narrowly enough so that competitive conditions within each area are reasonably similar" which supports the concept of an economic community of interest.[3] From an economic point of view this characteristic is particularly relevant because economists tend to define markets (geographically) based on the region within which market forces operate. Stated another way, in any market there are forces such as supply and demand that affect the pricing decisions, entry and exit decisions that firms make. If the pricing/entry/exit decisions of firms in one area are not affected by the forces of supply and demand in another area, the two areas are not in the same market.[4] This is also the approach used by the U.S. Justice Department when defining and analyzing geographic markets for purposes of evaluating competitive activity.[5]

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[3] Fifth Report and Order and Further Notice of Proposed Rulemaking, Access Reform Docket, CC 96-262, "Pricing Flexibility Order", released August 27, 1999, paragraph 71.
[4] Carleton and Perloff, *Modern Industrial Organization*, Second Edition, Harper Collins, 1994.
[5] See U.S. Department of Justice Horizontal Merger Guidelines, available at www.usdoj.gov.

Fourth, the MSA is large enough for the entrant to take advantage of scale economies as described in paragraph 495 of the TRO, but not so large as to potentially lead to diseconomies of scale.[6] A larger market, such as some LATAs, could exhibit diseconomies of scale which would clearly not reflect the *efficient* market from the point of view of the entrant.

Q. Doesn't the TRO also state that the actual locations of customers being served should play a role in defining the market?

A. Yes, paragraph 495 of the TRO indicates that state commissions must define the market taking into consideration the locations of customers actually being served by competitors. However the TRO also suggests that this data cannot be accepted at face value when used for evaluating impairment in the mass market. For example, the TRO clearly indicates that there are a *de minimus* number of mass market customers currently being served with UNE-L off of CLEC enterprise switches.[7] And the TRO states that these switches do not meet the necessary criteria for the "trigger" analysis that will often follow the defining of markets.[8] (This is addressed in more detail below.) So in many cases it is likely that the actual locations of customers being served are merely a remnant or by-product of CLECs serving the enterprise market. This makes it highly questionable whether the locations of such customers are particularly useful for defining the market because the reason the market is being defined in the first place is to analyze actual (or potential) competitors serving the *mass* market, not the enterprise market.

[6] In simple terms, a firm exhibits economies of scale when the cost per unit decreases as the number of units that the firm produces increases. Diseconomies of scale exist when the firm goes on to produce even more units and this has the effect of increasing the cost per unit.
[7] TRO paragraph 441.
[8] TRO paragraph 508.

Furthermore, the concept of where customers are "actually being served" is itself problematic for defining a market. If a few mass market customers happen to be served in a very small geographic area, those customers are *actually being served* in all of the following areas: 1) a single wire center, 2) a single census block group, 3) a single census tract, 4) a single MSA, 5) a single UNE zone, 6) a single local calling area, 7) a single LATA and 8) a single ILEC study area. Therefore it is important to choose among these possibilities—all of which represent where customers are *actually being served*—a unit of geography that best represents market realities from the point of view of an entrant. Sprint believes this is the MSA.

Q. Why would the appropriate geographic unit not be something smaller, such as an individual wire center?

A. The TRO explicitly requires that the defined market should be large enough for the entrant to take advantage of scale economies. In many cases wire centers are situated such that an entrant could, for example, co-locate in one wire center and use extended, enhanced loops (EELs) to serve another wire center at an overall lower per-unit cost than if the two were served separately. This is precisely the type of scale economies that are available when the market is defined as something larger than a wire center. The same can be said for many other costs of entering a market aside from network costs (for example, advertising, collection systems, billing, etc.). Furthermore, because wire center distinctions are essentially meaningless to end-users it is doubtful that a single wire center—particularly in an urban area—represents anything close to a unique economic community of interest all by itself.

Q. What about a geographic area that is often larger than an MSA, such as a LATA?

A. In some cases LATA boundaries track MSA boundaries rather closely, and in those cases LATAs offer many of the same benefits as MSAs. But in other cases LATA boundaries are simply artificial creations that emerged from a history of regulation and have no relationship whatsoever to a *market* in the common sense of the term. For example, the Fort Myers LATA includes both Sprint's Okeechobee wire center and Sprint's Everglades wire center, despite the fact that Everglades is a part of the Naples MSA and Okeechobee is not a part of any MSA, and despite the fact that these two wire centers are over one hundred miles apart. There is no reason to believe that any single entrant that was planning to serve "the mass market" with its own switches would consider the residential and small business customers in these two wire centers to be the same market. If nothing else, geographic distance tends to separate Okeechobee and Everglades into two distinct communities of interest, so it is extremely unlikely that the Fort Myers LATA represents a single community of interest. But it is extremely *likely* that the diseconomies of scale that I mentioned above would exist if a single entrant attempted to serve the entire LATA, particularly using UNE-L. For these reasons, the MSA is preferred as a market because the MSA represents a geographic unit that consistently exhibits both the community of interest characteristics and the economies of scale to function as a single market.

ANALYSIS OF ACTUAL SWITCH DEPLOYMENT—COMPETITIVE TRIGGERS (ISSUE 4A)

Q. Issue 4a seeks to identify markets in which three or more CLECs, not affiliated with each other OR with the ILEC, are serving mass market customers with their own switches. When analyzing impairment based on evidence of actual deployment (competitive triggers) what exactly must the Florida Commission evaluate?

A. It is important for the Commission to keep in mind that the TRO indicates that the identification process described in Issue 4a extends well beyond a mere "counting exercise." As stated above, paragraph 501 indicates that the triggers are intended to "...demonstrate[s] adequately the technical and economic feasibility of an entrant serving the mass market with its own switch..." Or, alternately, a trigger analysis may be viewed as a counting exercise as long as it is clear that there are specific and explicit criteria laid out in the TRO—consistent with the quotation above—that must be met before any CLEC can be "counted" toward meeting the trigger.

Q. What are these criteria that must be met before a CLEC can "count" toward meeting the trigger?

A. First, enterprise switches do not count toward meeting the triggers.

Second, CLEC switches must be serving a *non de minimus* number of mass market customers in the market.

Third, the CLEC must be serving, or holding itself out to serve, or capable of serving *throughout* the market, not just in highly-select portions of the market.

Fourth, the CLEC must be actively serving the mass market and likely to continue to do so. Each of these is addressed in detail below.

CLECS MEETING COMPETITIVE TRIGGERS MUST NOT BE USING ENTERPRISE SWITCHES

Q. What is one example of the criteria laid out in the TRO that CLECs must meet before the competitive triggers are satisfied?

A. First, for a CLEC to count toward meeting the competitive trigger it must be clear that the switch being evaluated is not used primarily to serve enterprise customers. The TRO makes a clear distinction between "deployment of switches by competitive providers to serve the enterprise market" and "deployment of competitive LEC circuit switches to serve the mass market."[9] Switches that fall into the first category—enterprise switches—do not count toward meeting the competitive triggers.[10]

Q. If a CLEC switch was deployed primarily to serve enterprise customers, and is currently used primarily to serve enterprise customers, but also manages to serve some mass market customers, would such a switch count toward meeting the competitive trigger?

A. No. The FCC acknowledged in the TRO that mass market customers are in fact served off of enterprise switches.[11] Yet this fact by itself was not enough to negate a national finding of impairment by the FCC.

[9] TRO paragraph 435. Also, footnote 1354, "The dissents assertion that enterprise switches should be considered in our mass market triggers ignores the substantial differences between the switches serving the different markets."
[10] "...switches serving the enterprise market do not qualify for the triggers..." TRO paragraph 508. Also, footnote 1354 cited above.
[11] TRO paragraph 441.

Q. Does the TRO provide some specific method for identifying whether a CLEC switch is an enterprise switch—and therefore ineligible for meeting the trigger criteria—or a mass market switch?

A. No it does not. It appears that the FCC left that task to the state commissions as part of the states' charge to "assess impairment in the mass market on a market-by-market basis."[12] However, it would clearly be reasonable to use some measurable standard—such as switch capacity—as an initial test. For example, assume that three self-deployed CLEC switches are identified in a given market. To the extent that it was shown that the vast majority of the utilized capacity of those switches was actually being used to provide service to *enterprise* customers, the ILEC would be hard-pressed to prove that the switches represented "deployment of competitive LEC circuit switches to serve the mass market"[13] as discussed in the TRO.

Q. How difficult would it be to obtain such information on capacity?

A. It should not be difficult at all. The TRO defines the mass market as consisting of customers that "can only economically be served via analog DS-0 loops."[14] If we assume that CLECs attempt to serve their customers economically (a reasonable assumption and one well-grounded in economic theory) then it is simply a matter of identifying the portion of the utilized capacity of a switch that is used to provide DS-0-level service versus greater-than-DS-0-level service. If the vast majority of a switch's utilized capacity is used to provide service at a greater-than-DS-0-level, that switch is an enterprise switch, and does not count toward meeting the competitive triggers.

[12] TRO paragraph 493.
[13] TRO paragraph 435.
[14] TRO paragraph 459.

CLECS MEETING COMPETITIVE TRIGGERS MUST BE SERVING A NON DE MINIMUS PORTION OF THE MASS MARKET

Q. What is another example of the criteria laid out in the TRO that CLECs must meet before the competitive triggers are satisfied?

A. When evaluating evidence of impairment/non-impairment the FCC noted that the *quantity* of CLEC mass market customers mattered. In paragraph 438 and in paragraph 441 the TRO discusses CLEC inroads into the mass market and makes reference to, respectively, "only a small percentage of the residential voice market" and "extremely few mass market customers." In both cases the finding of only a *de minumus* number of CLEC mass market customers was associated with rejecting the notion of non-impairment. Therefore, in order to demonstrate non-impairment ILECs must show that CLEC switches are serving a *non de minimus* number of mass market customers in any given market. Not only is this consistent with the FCC's findings, but it goes hand-in-hand with the first criterion discussed above. That is, a handful of token mass market customers served off of an enterprise switch is not demonstrative of "the technical and economic feasibility of an entrant serving the mass market with its own switch."[15] Furthermore, it is appealing from a common-sense perspective when one considers the alternative.

Q. What would be the alternative?

A. Assume the market is defined, as suggested above, as an MSA. The lack of a *non de minimus* requirement would allow the existence of three self-provisioning CLECs, each serving only a handful of mass market customers and each *intending*

[15] TRO paragraph 501.

to serve only a handful of mass market customers, to remove unbundled mass market local switching from the entire MSA. This is exactly the type of situation that the FCC sought to avoid when it made its finding of impairment nationally.

Q. Is it reasonable that <u>each</u> trigger-meeting CLEC should be required to serve a non de minimus number of mass market customers, or that the trigger-meeting CLECs <u>combined</u> must serve a non de minimus number of mass market customers?

A. In the TRO it is clear that the FCC was addressing the combined CLEC market share. If there was concern regarding individual CLEC market shares it does not appear in the discussions contained in the TRO. Therefore it is reasonable that, when attempting to demonstrate non-impairment based on actual deployment, the combined number of mass market customers served by self-provisioning CLECs in a given market must be *non de minimus*. (The actual identification of a specific quantity or percentage that represents a *non de minimus* number is left to the states as part of their impairment assessment.)

CLECS MEETING THE TRIGGERS MUST BE SERVING (OR CAPABLE OF SERVING) THROUGHOUT THE MARKET, RATHER THAN CHERRY-PICKING

Q. Are there additional criteria laid out in the TRO that CLECs must meet before the competitive triggers are satisfied?

A. Yes. As mentioned above, the triggers are intended to provide evidence of the economic and technical feasibility of an entrant serving "the mass market." They

are not intended to provide evidence that an entrant could selectively cherry-pick portions of the mass market and ignore other portions. Therefore in order to demonstrate non-impairment based on actual deployment it is not enough to show that CLECs are serving *select portions* of the mass market. Rather, CLECs must be serving, or holding themselves out to serve, or at a minimum be capable of serving mass market customers *throughout* the market as it is defined.

Q. But didn't the FCC's September 17th Errata remove the requirement that trigger-meeting CLECs be capable of serving the entire market?

A. Yes it did, and that reveals an important distinction. Prior to the issuance of the September 17th Errata the trigger criteria included the requirements of operational readiness and willingness to provide service to *all* customers in the market, and the economic capability of serving the *entire* market. To do that would require the CLEC switches (either individually or in total) to be capable of serving *every* mass market customer. From an economic point of view such a requirement is ridiculous; it would result in wasteful excess capacity and it belies common sense. But there is a significant difference between 1) being capable of serving *every* mass market customer, and 2) being capable of offering service *throughout* the market. The first—serving every customer—would require the CLEC to duplicate the ILEC's capacity, and is clearly undesirable and unnecessary. But the second—serving throughout the market—allows the CLEC to limit itself to an efficient capacity (based on its overall market share) but it prevents the CLEC from ignoring large portions of the market.

For example, assume a hypothetical MSA is made up of six wire centers. Two of

the wire centers are centrally situated with fairly dense populations (i.e. downtown) and the remaining four are located on the perimeter and are more suburban. If a CLEC is collocated in the two central wire centers and serving mass market customers in the two central wire centers—but not in the suburban four—is the CLEC serving the mass market? Or is the CLEC merely serving a select subset of the mass market? Has the CLEC demonstrated, as described in TRO paragraph 501, the "technical and economic feasibility of serving the mass market"? Or simply the technical and economic feasibility of serving the high-density, low-cost portion of the mass market?

The TRO explicitly mentions situations where a CLEC is only serving, or only capable of serving, a portion of the market.[16] In those cases it is clear that the TRO does not conclude that serving a portion of the market constitutes serving the market. On the contrary, the TRO states that in such cases the Commission is permitted to consider re-defining the market.

Q. In a situation such as the one you've described above would it be Sprint's position that re-defining the market is the right thing to do?

A. Not in most cases, particularly if the market was defined according to the FCC's criteria to begin with. For example, in my hypothetical because the market is defined as an MSA the market represents a granular approach (smaller than an entire state), it represents an economic community of interest, it represents the point of view of an entrant in terms of advertising, etc., and it is broad enough not to limit economies of scale. The market is already defined correctly. So

[16] TRO footnotes 1537 and 1552.

redefining the market is not the correct action for the Commission to take. The correct action for the Commission to take is simply to not count that particular CLEC toward meeting the trigger. Because in truth the CLEC is not "serving the mass market", the CLEC is simply cherry-picking.

Q. Does the TRO make a specific reference to how much of a market a CLEC must serve, or be capable of serving, if it is to be considered doing more than just cherry-picking?

A. In discussing the wholesale triggers the TRO states that a carrier acquiring the use of non-ILEC switching actually counts as a separate, unaffiliated, self-provisioning provider—that is, counts toward meeting the self-provisioning triggers—only if it has the ability "to serve a substantial portion of the market."[17] This suggests that self-provisioning carriers should be capable of serving "a substantial portion" of the market. Obviously the term "substantial portion" is open to a large amount of interpretation, but the intent is plain: serving a "substantial portion" of a market is clearly the opposite of cherry-picking.

Q. How do the concepts of serving throughout the market, and being capable of serving a substantial portion of the market, relate to serving a non de minimus number of mass market customers?

A. They go hand in hand. For example, assume the market is defined as an MSA. If the Commission decides that the *non de minimus* portion of the mass market that CLECs must serve is 5%, ILECs cannot claim that the trigger is met if the CLECs have acquired the entire 5% in one wire center and ignored all of the other wire centers in the MSA. But if the ILEC shows that a 5% CLEC market share has

[17] TRO footnote 1551

been obtained by offering service throughout the market, and the ILEC shows that the CLEC is capable of providing service throughout the market or, at a minimum, a "substantial portion" of the market, then the CLEC is legitimately "serving the mass market" and meets the trigger.

From an economic and competitive standpoint the importance of this criterion cannot be overstated. If a CLEC is not even *capable* of serving large portions of a market there is no way that the CLEC demonstrates "the technical and economic feasibility of serving the mass market" as stated in the TRO. Allowing that CLEC to count toward meeting the trigger would result in the removal of local switching (and UNE-P) from areas in which a significant number of customers in the market truly have no other competitive alternative.

Q. How can the Commission determine the portion of a market that a CLEC is capable of serving?

A. Obviously if a CLEC is currently collocated in a wire center it is reasonable to believe that the CLEC is capable of serving the customers in that wire center. And if a CLEC is currently using EELs to actively serve customers in another wire center the CLEC is capable of serving customers in the other wire center. Beyond those specific wire centers, there would be no clear evidence that the CLEC is currently capable of serving other portions of the market. Evidence could be provided that a CLEC is *potentially* capable of serving more of the market, but that moves the discussion into the area of economic analysis of potential deployment, rather than competitive triggers measuring actual deployment.

CLECS MEETING THE TRIGGERS MUST BE ACTIVELY SERVING MASS MARKET CUSTOMERS AND LIKELY TO CONTINUE TO DO SO

Q. Are there any additional criteria contained in the TRO that CLECs must meet before the competitive triggers are satisfied?

A. Yes. Paragraphs 499 and 500, respectively, of the TRO require that the CLECs meeting the triggers must be "actively" serving mass market customers, and should be "likely to continue to do so." As stated in my discussion of market definition above, in many cases the mass market customers that a CLEC might currently serve are essentially by-products or residuals of serving the enterprise market. In other cases it is possible that they are by-products or residuals of now-discarded business plans: the CLEC entered the market at one point in time, encountered difficulty of some kind and then stopped actively pursuing mass market customers but has simply chosen not to cut off service to a few customers. In either case such customers are not evidence that the CLEC is actively serving the mass market and likely to continue to do so. In fact, such residual customers actually demonstrate the antithesis of what the triggers are intended to show. Returning to TRO paragraph 501, the triggers are intended to provide evidence of "the technical and economic feasibility of an entrant serving the mass market with its own switch..." Residual customers such as these are much more clearly evidence of the *infeasibility* of serving the mass market.

Q. So how can the Commission determine whether CLECs are actively serving the mass market and likely to continue to do so?

A. The Commission must look for evidence of *current* activities regarding the mass market: current marketing efforts, current advertising campaigns, current (or

recent) additions of new customers, and/or recent conversion of UNE-P customers to UNE-L.

Q. At this point could you please summarize the criteria contained in the TRO that CLECs must meet before competitive triggers are satisfied, as discussed in Issue 4a?

A. First, there is a difference between enterprise switches and mass market switches, and enterprise switches do not count toward meeting the triggers. Any CLEC switch in which the vast majority of the utilized capacity is dedicated to serving enterprise customers is an enterprise switch and cannot be included in a trigger analysis.

Second, the CLEC switches must be serving a *non de minimus* number of mass market customers in the market. This goes hand in hand with the criterion above.

Third, the CLEC must be serving, or holding itself out to serve, or capable of serving *throughout* the market, not just in highly-select portions of the market. If a CLEC is not serving a "substantial portion" of the market it is simply cherry-picking. And cherry-picking is not evidence of "the technical and economic feasibility of an entrant serving the mass market with its own switch" as stated in the TRO.

Fourth, the CLEC must be actively serving the mass market customers and likely to continue to do so. The CLEC cannot simply be serving the residuals of failed business plans or by-products of serving the enterprise market. The Commission must find evidence of current activity—marketing efforts, customer additions—to

know that the CLEC is *actively* serving and likely to continue.

WHOLESALE TRIGGERS (ISSUE 4B)

Q. Are there different criteria to be applied when analyzing impairment based on actual deployment in the case of wholesale local switching?

A. Yes. Similar to the situation with Issue 4A, for Issue 4B it is also crucial that the Commission understand that the identification process described in Issue 4B is no mere "counting exercise."

For example, before any wholesale provider can be counted toward meeting the trigger the TRO states that it must be "operationally ready and willing to provide wholesale service to all competitive providers in the designated market."[18] Because the FCC specifically chose the words "all competitive providers" as opposed to "any" or "some" competitive providers, the situation is created where the *capacity* of the wholesale provider will be a critical issue and must be carefully considered before the provider can be counted toward meeting a trigger.[19]

In addition, the TRO requires that wholesale provider must actively be providing voice service "used to serve the mass market." Therefore a wholesale provider would not (and does not) meet the trigger if the voice service it provides is used primarily to serve the enterprise market.

[18] TRO paragraph 499 as amended by September 17th Errata.
[19] We are assured that the choice of the words "all competitive providers" was a conscious decision on the part of the FCC because the same Errata that eliminated the need for self-provisioning triggers to be capable of serving "every" customer could have easily eliminated the need for wholesale providers to be operationally ready to serve "all" competitive providers, and it did not.

Finally, the TRO is clear that the intent of the wholesale triggers is to demonstrate that the market can support "multiple, competitive supply."[20] This should be the overriding theme used by the Florida Commission when evaluating wholesale triggers.

POTENTIAL DEPLOYMENT OF MASS MARKET LOCAL SWITCHING (ISSUES 5E AND 5F)

Q. As the Commission seeks to identify the markets addressed in Issue 5E—that is, the markets where it is (and is not) economic for CLECs to self-provision local switching—what are the primary factors that the Florida Commission should consider?

A. The TRO requires that an analysis of potential deployment take the form of a business case in which the potential costs of entering and serving the mass market without access to the ILEC's local switching are compared to the potential revenues.[21] In any business case the outcome is affected by a multitude of variables. But the TRO provides guidance on certain aspects of the business case that the Florida Commission can look to in eliminating some of the uncertainty.

For example, the TRO states that the analysis of potential entry is intended to provide evidence of "whether a competing carrier could economically serve the market without access to the incumbent's switch".[22] Consistent with the competitive trigger analysis, it is clear that an analysis of potential entry is not asking whether it is possible to serve *portions* of the market economically, or

[20] TRO paragraph 505
[21] TRO paragraph 517.
[22] TRO paragraph 517.

segments of the market economically, but rather if an entrant can serve "the market" economically. The TRO requires that the market must be defined in the same way for both the trigger analysis and the potential deployment analysis.[23] This provides continuity between the two analyses and underscores the fact that, just as in the case of the triggers, a potential deployment business case must not be a case study in cherry-picking. Instead it must demonstrate the economic feasibility of providing mass market service *throughout* the market. Just as it was in the case of competitive triggers, it is not enough to only show that a select portion of the market could be economically served. The economic analysis must show that the market itself could be economically served.

Because of this, assumptions regarding the geographic distribution of customers that are served in the business case are of vital importance. The customers must be distributed *throughout* the market. For example, if the business case assumes 5% CLEC penetration and the market is an MSA then that 5% must be found throughout the MSA, not conveniently clustered in a high-density portion of the MSA. The TRO contains a very useful passage on this issue in paragraph 520:

> We also note that parties to this proceeding have placed evidence in the record that economic impairment may be especially likely in wire centers below a specific line density. Before finding "no impairment" in a particular market, therefore, the state commission must consider whether entrants are likely to achieve sufficient volume of sales within each wire center, and in the entire area served by the entrant's switch, to obtain the scale economies needed to compete with the incumbent.

[23] TRO footnote 1540.

The passage is revealing because it requires the state commissions to consider each wire center within a market before finding no impairment in the market. And it indicates clearly that ignoring "wire centers below a specific line density" is not an acceptable path to finding "no impairment" in a market.

Q. Are there additional key factors that the Commission should consider as it examines analyses of potential deployment as part of Issue 5E?

A. Yes. Perhaps the most important factor is that the process of defining the market cannot be a part of the business case itself.

The reason for this is simple: If the process of defining the market is a part of the business case itself, the market could theoretically be redefined and redefined over and over again until some geographic unit is ultimately identified that will produce a positive result: a positive NPV or EVA. For example, assume the market is initially defined as a LATA. If the business case analysis fails to show a positive result using LATA the market could be redefined as a local calling area. If local calling area fails to show a positive result the market could be redefined as MSA. If the business case fails using MSA the market could be redefined as a select group of wire centers, and on and on. Ultimately some geographic area would be identified as a business case "winner."

The TRO is extremely clear that it does not envision an economic analysis based on such an iterative approach. In fact, the process laid out for states in the TRO logically precludes such a thing. First, there is no question that the market must be defined before a competitive trigger analysis can be conducted and concluded,

because there is no way to conclude a trigger analysis—that is, identify three self-provisioning or two wholesale CLECs "in a given market"[24]—if one does not know what the given market is! Second, the TRO states that upon concluding a trigger analysis, and obviously having identified the market, if the triggers are not satisfied "the state must conduct further analysis to determine whether *the market in question* is suitable for "multiple competitive supply""[25] (emphasis supplied). The reference to "further" analysis makes it clear that the potential deployment analysis comes *after* trigger analysis. And the phrase "the market in question" is obviously referring to the market that was defined and used in the trigger analysis. Finally, the wording found in paragraph 495 is completely unambiguous, "State commissions must first define the markets in which they will evaluate impairment..." The TRO does not allow for taking a geographic area and whittling it down bit by bit until a region can be found in which there is no impairment. The TRO directs states to first define the appropriate area that will serve as the basic unit of analysis for the subsequent impairment evaluation, then to conduct that impairment evaluation (triggers and, if necessary, economic analysis) using that unit of geography, and then to report the results.

CROSS-OVER POINT FOR MULTI-LINE DS-O MASS MARKET CUSTOMERS (ISSUE 5F)

Q. Issue 5f addresses the appropriate cut-off for multi-line DS-O customers that is discussed in the TRO in paragraph 497. What guidance does the TRO provide for determining the appropriate cut-off?

A. First, the TRO defined mass market customers as those customers that "are analog

[24] TRO paragraph 504.
[25] TRO paragraph 506.

voice customers that purchase only a limited number of POTS lines, and can be economically served via DS-0 loops."[26]

Second, the TRO recognized that, for certain customers, service providers are in a position to make a decision as to whether they will provide service using DS-0 or DS-1 facilities, based on the number of DS-0 loops needed to meet the customer's needs.[27] The FCC recognized that, for certain customers who require multiple DS-0s, service providers are able to achieve better economics by installing multiplexing equipment at the customer premise.[28] Identifying the quantity of DS-0 loops at which these economic benefits are realized—i.e., the cross-over point—will, in essence, create a line of demarcation between the mass market and the enterprise market.

Q. Does Sprint agree with the FCC's use of an economic cross-over point as a method for distinguishing between mass market and enterprise customers?

A. Yes. Sprint has always recognized that some businesses have telecommunications needs that are more similar to mass market residential customers than large business customers. Indeed, most if not all telecommunication providers address a segment of the business market with the same marketing techniques as they use for residential.

Q. Is there a simple example of the difference in marketing techniques between

[26] TRO paragraph 497.
[27] TRO paragraph 497 states, "At some point, customers taking sufficient number of multiple DS-0 loops could be served in a manner similar to that described above for enterprise customers – that is, voice services provided over one or several DS-1s"
[28] TRO footnote 1544 "The evidence in the record indicates that it may be viable to aggregate loops at a customer location and provide service at a DS-1 capacity or higher. Specifically, if a customer has enough lines to justify the expense of purchasing multiplexing equipment and a high-capacity line, it makes sense to aggregate the customer's loops..."

those that providers use to address mass market customers and those that providers use to address enterprise customers?

A. The complexity and the volume of service required by any given customer are two of the variables that determine which marketing methods have historically been successful in acquiring new customers. For example, mass media advertising is less effective than an extensive face-to-face sales visit would be for a business with very complicated communications needs. But for a smaller business with less complex needs, mass media advertising is often sufficient.

Q. Does Sprint agree with the FCC statements that service providers must make provisioning choices once they understand the customer's needs?

A. Certainly. The service needs of a business customer at a specific physical location determine the minimum facility capacity required to provide those services. Based on the customer's needs, the service provider determines the most efficient (i.e. least costly) facilities required to provide the services the customer desires. The provider is rewarded with higher profit margins by minimizing facility costs.

Q. Is an economic cross-over analysis the best way for a service provider to determine the most efficient, least-cost provisioning option?

A. Yes. The service provider needs will determine the most efficient method of serving the customer. Based on those service needs, the CLEC determines if it is cost effective to serve the customer with DS-0 loops or aggregate the service needs over a DS-1 loop facility at the customer premise. At some level of service need,

the provider is better off serving the business customer with a DS-1 facility instead of multiple DS-0s.

Q. Has Sprint developed an analysis of this cross-over?

A. Yes. The testimony of Sprint witness Mr. Kent Dickerson provides the calculations of the average economic cross-over point, the point at which a multi-line DS-0 customer is served more efficiently using a DS-1 capacity loop in the state of Florida. As shown in the testimony of Mr. Dickerson, Sprint estimates that up to 12 DS-0s at a customer's location, purchasing individual loops is more cost effective than purchasing a single DS-1.

Q. In the cross-over calculations contained in Mr. Dickerson's testimony Sprint produces a state-wide average cross-over point. Why does Sprint calculate a single, statewide average cross-over point, rather than a market-specific cross-over point or even an ILEC-specific cross-over point?

A. The realities of the way that marketing efforts are conducted lead Sprint to believe that a single statewide average cross-over point is more efficient and more useful. For example, if a telemarketer is pursuing sales opportunities among small businesses in Florida the telemarketer will require a single point of distinction that determines whether s/he is able to provide UNE-P based service to the customer or not. The telemarketer does not know whether the customer being called resides in one MSA or another, and quite possibly neither does the customer. Similarly, a direct-visit salesperson making sales visits throughout the Orlando MSA is unaware of the point at which s/he moves from one UNE zone to another. It is more efficient to have a single cross-over point that the salesperson can apply to all potential customers, rather than maintain a veritable roster of potential cross-

over points based on a potential customer's MSA, or market, or UNE zone, etc. Because Sprint's estimate is an average, the statewide cross-over will, on average, be efficient for serving customers throughout the state, even if it is slightly understated or overstated for any single customer.

Q. Does this conclude your testimony?

A. Yes it does.

Sprint-Florida/Sprint Communications LP
Docket No. 030851-TP
~~Filed: January 7, 2004~~ Revised February 13, 2004

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REBUTTAL TESTIMONY

OF

DR. BRIAN K. STAIHR

Introduction/Purpose

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

A. My name is Brian K. Staihr. I am employed by Sprint as Senior Regulatory Economist. My business address is 6450 Sprint Parkway, Overland Park, Kansas 66251.

Q. Are you the same Brian Staihr who filed direct testimony in this proceeding on December 4, 2003?

A. Yes I am.

Q. What is the purpose of your rebuttal testimony?

A. In my rebuttal testimony I respond to issues raised in the direct testimonies of BellSouth witnesses Dr. Christopher Pleatsikas (market definition), Ms. Pamela Tipton (competitive trigger analysis), Mr. James Stegeman (optimization in the BACE Model), Dr. Debra Aron (demand-side inputs in the BACE Model), and Dr. Randall Billingsley (weighted average cost of capital in the BACE Model).

Market Definition and Testimony of Dr. Christopher Pleatsikas

Q. In his testimony Dr. Pleatsikas advocates that the Commission should define the market (for purposes of analyzing impairment) as a specific UNE-zone in a specific

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component economic area (CEA). For example, UNE Zone 1 in the Orlando CEA is a separate market from UNE Zone 2 in the Orlando CEA, which in turn is a separate market from UNE Zone 2 in the Miami CEA. Please comment.

A. From an economic point of view, one portion of Dr. Pleatsikas' proposal is indeed logical: the subdivision of markets into geographically distinct areas (in his proposal, CEAs). This is reasonable because to do otherwise is to suggest that market forces—supply decisions, demand factors, price movements—in one part of the state affect entry and exit decisions in other parts of the state that may be hundreds of miles away. It is also reasonable because the FCC required that impairment analysis be conducted on a granular basis.

But on several other dimensions Dr. Pleatsikas' proposal is inappropriate and, in some cases, the reasons why his proposal is inappropriate are found in BellSouth's own testimony. For example, Dr. Pleatsikas' initial justification for using UNE zones is that he believes UNE zones reflect the locations of mass-market customers being served. His testimony states, "I understand that CLECs in Florida serve the greatest number of customers in the more urban UNE Zones 1 and 2 than in the more rural UNE Zone 3" (Pleatsikas Direct page 5). Although Dr. Pleatsikas provides no documentation to verify that statement, Sprint's own ILEC experience tends to support it. But Dr. Pleatsikas overlooks the fact that, in his own statement, the distinction is not between UNE zones but rather between urban areas (UNE zones 1 and 2) and rural areas (UNE zone 3). That urban/rural distinction is one of the key reasons why Sprint's proposed market definition (MSA) is a more accurate market definition, because in general MSAs are the more urban areas and non-

MSAs are the more rural areas. If Dr. Pleatsikas believes that actual customer locations are found more often in UNE Zones 1 and 2 than in UNE Zone 3 that fact could be viewed as justification for separating UNE Zones 1 and 2 *collectively* from UNE Zone 3, which is what an MSA-based definition tends to do. But his reference to customer location provides no justification for separating UNE Zone 1 from UNE Zone 2.

Next, Dr. Pleatsikas states that variation in cost is an important factor in determining where a CLEC can serve (Pleatsikas Direct page 5). Clearly loop costs vary for a competitor depending on which wire center the competitor is entering. But the question that must be asked is whether there is any evidence that this variation in loop costs, particularly between UNE Zones 1 and 2, actually has an effect on competitive entry. For example, according to BellSouth's BACE Model the Fort Lauderdale Zone 1 market is made up of nine wire centers. And according to data filed by BellSouth with the Commission there is competitive entry (and unbundled loops) in [redacted] of the nine.[1] In the Fort Lauderdale Zone 2 market there are also nine wire centers, and there is competitive entry (and unbundled loops) in [redacted]. And according to BellSouth's filing there are actually more CLECs competing in Fort Lauderdale Zone 2 than in Fort Lauderdale Zone 1. Furthermore, every competitor that has entered Fort Lauderdale Zone 1 has also entered Fort Lauderdale Zone 2. These facts, when examined, do not provide support for the notion that the higher loop costs in Zone 2 have an effect on entry, nor do they support the notion that competitors view Fort Lauderdale Zones 1 and 2

[1] See BellSouth response to Sprint interrogatories.

as distinct markets. But they very much support the notion that the more urban and suburban regions of Fort Lauderdale tend to be viewed as a single market, which is more in keeping with Sprint's proposed MSA-based market definition.

As mentioned above, Sprint agrees with Dr. Pleatsikas that it is reasonable to separate markets geographically. But his very justification for using a component economic area (CEA) as the unit of analysis is undermined by the proposal to split the CEA by UNE zone. Dr. Pleatsikas writes,

> CEAs were created to be economically meaningful in that they separate various parts of a state into different geographic markets based on economic factors (such as commuting patters and newspaper readership). Using the CEA creates a geographic area with a community of interest (Pleatsikas Direct page 8).

The same could be said for Sprint's proposed unit of geography, the MSA. But the BellSouth proposal to treat different portions of the CEA differently, based on UNE zones, essentially negates this community-of-interest aspect. Whereas using the MSA as the market maintains the community-of-interest aspect.

Lastly, Dr. Pleatsikas suggests that CEAs are preferable to MSAs because they encompass the entire land area of the state, and if MSAs were used then "parts of Florida would be excluded from consideration in any impairment test" (Pleatsikas Direct page 9). First, it is worth pointing out that BellSouth itself has excluded parts of Florida from consideration in this proceeding, as has Sprint. But more

importantly, Sprint's proposal to use MSAs is based on a rather common-sense point of view that if non-impairment can be found anywhere, and the FCC's national finding can be effectively rebutted anywhere, it would be in areas that fall within MSAs (as opposed to outside of MSAs) for the very reason that Dr. Pleatsikas points out in his testimony—most competition is in urban or suburban areas. Furthermore, the overwhelming majority of the wire centers that are served by BellSouth are found in MSAs. To the extent that some party might wish to put forth a non-MSA area for consideration of "no impairment," that party could certainly use RSA (rural service area) designation as the geographic unit. RSAs are well-established, and are often used by wireless companies for regulatory and licensing purposes.

Competitive Triggers and Testimony of Ms. Pamela A. Tipton

Q. BellSouth witness Ms. Pamela A. Tipton suggests in her direct testimony that the FCC's "trigger" criteria for mass market local switching is simply a counting exercise, and that if "there are three or more entities self-provisioning switching to mass market customers" then the triggers are met, regardless of other factors (Tipton Direct pages 4-5). Please comment.

A. It is certainly understandable that BellSouth, or any ILEC hoping to demonstrate non-impairment in a region, would prefer that the Commission treat the trigger analysis as a perfunctory counting exercise. But the Commission should evaluate Ms. Tipton's suggestion on two separate levels: First, if the trigger analysis were intended to be nothing more than a simple counting exercise then one must ask why

the FCC would delegate such a simple task to the states? Second, and more importantly, what are the impacts on competition in Florida of treating the trigger analysis in such a simplistic fashion? Both of these are discussed below.

In terms of analyzing impairment, it is clear that the FCC's position has been that evidence of actual deployment is a means to an end, rather than an end in and of itself. Paragraph 94 of the TRO states,

> As we examine the evidence of facilities deployment by competitive LECs in the specific UNE discussions, we will give it substantial weight, but we do not agree that we must find it conclusive or presumptive of a particular outcome *without additional information or analysis*".[2]

And the TRO goes on to affirm that, when analyzing impairment, state commissions are in the best position "to gather *and assess* the necessary information" and that states are in "the best position *to judge* whether the Act's extraordinary unbundling remedies should be applied."[3] It is for these reasons that the TRO delegated the task of analyzing impairment to the states. If Ms. Tipton was correct, and the trigger analysis was intended to be nothing more than a counting exercise, there would be no assessment or judgment required of the state commissions at all, and the very justification for turning the issue over to the states in the first place would be absent.[4]

[2] TRO paragraph 94, emphasis supplied.
[3] TRO paragraph 188, emphasis supplied.
[4] Another clear example of the TRO relying on state commissions' ability to assess and judge is found in the discussions of intermodal providers. Footnote 1549 states, "In deciding whether to include intermodal alternatives for purposes of these triggers, states should consider to what extent services provided over these intermodal alternatives are comparable in cost, quality and maturity to incumbent LEC services."

Q. You also suggested the Commission should consider the impacts on competition in Florida that would result from treating the trigger analysis as a perfunctory counting exercise. What are those impacts?

A. In my direct testimony I outlined the criteria that CLECs must meet before they can count toward meeting the triggers.[5] By ignoring these criteria, as Ms. Tipton seems to advocate, it is possible that the Commission would create a situation where competitive choices are actually eliminated in some Florida markets. Not only is this directly contrary to the Commission's stated goals in its recent rate rebalancing proceeding, it is contrary to the intent of the TRO itself. In its discussion of the impact of unbundling on competitive switch deployment the TRO clearly states that the FCC's approach "maintains appropriate incentives [for deployment] without *throwing away the competition that exists today*."[6]

Q. Exactly how would Ms. Tipton's suggestion throw away the competition that exists today?

A. Ms. Tipton suggests that the mere presence of three self-provisioning CLECs in a market is enough to satisfy the triggers and thereby remove unbundled mass market switching from the market, without regard to:

- *how many* mass market customers those carriers are actually serving,
- *how much* of the market those carriers are serving,
- how much of the market those carriers are *capable* of serving or willing to serve

[5] For example, trigger-meeting CLECs must be serving a non-de-minimus portion of the mass market, they must be offering service throughout a substantial portion of the market (as opposed to geographically cherry-picking), they must not be using enterprise switches, and they must be actively serving mass market customers and likely to continue to do so.

[6] TRO footnote 1365, emphasis supplied.

- how many customers in that market will *no longer have a choice* of carriers if unbundled local switching is removed.

For example, assume one of Ms. Tipton's proposed markets is made up of 10 wire centers. Using Ms. Tipton's suggestion, we could have a situation where three self-provisioning CLECs are all offering service in just a couple of wire centers in that market, and are not offering service—or even capable of offering service—to the other eight wire centers in the market. These CLECs do not constitute a viable alternate provider for the customers in those eight other wire centers, yet Ms. Tipton would advocate that unbundled switching be removed from the entire market because, as she sees it, the triggers had been met. In my example, the customers in the remaining eight wire centers will be deprived of competitive choice (such as service from a UNE-P based provider) but not because they had an alternative available; they are deprived of a competitive choice simply because someone else somewhere else in the market had an alternative. The effect of accepting Ms. Tipton's proposed approach would be to eliminate much of the competition that exists today in the mere hope that somehow or somewhere there might be competition tomorrow.

Q. Why is it reasonable for this Commission to be concerned with points you raised above, such as how many customers are being served or capable of being served, or how much of the market is capable of being served?

A. First, because this Commission just concluded a long and detailed proceeding regarding rebalancing rates for local service, and the very purpose of that proceeding was to encourage a more robust competitive environment for local

telephone service.[7] Throughout that proceeding the concept of more choices for more Florida residents was a constant theme.[8] Yet it appears that Ms. Tipton would have the Commission conclude that as long as a few customers in a given market have a choice—and maybe only one or two customers at that—then it is alright to eliminate competitive choices for the rest of the customers in that market. To throw away one viable form of competition when large numbers of local telephone customers may not have an alternative would be the antithesis of encouraging such a robust competitive environment.

Second, consider the following as an example: If, as stated in my direct testimony, there are three self-provisioning CLECs in a single wire center then there are *also* three self-provisioning CLECs—the same three CLECs—in the UNE-zone that contains that wire center. And there are also three self-provisioning CLECs—the same three CLECs—in the MSA that contains that wire center, and in the CEA that contains that wire center, and in the LATA that contains that wire center, and in the ILEC-serving-area that contains that wire center. If Ms. Tipton is correct, and it doesn't matter how much of a market is being served, the Commission could theoretically define the market as BellSouth's entire serving territory (which is less than the entire state and therefore meets the FCC's requirements) and subsequently remove unbundled local switching throughout the entire service area just because certain portions of the service area were served by CLECs. A situation could exist where unbundled switching would be eliminated in Miami just because there happened to be three self-provisioning CLECs in Jacksonville! Of course such a

[7] Docket Numbers 030867-TL, 030868-TL, 030869-TL.
[8] See, for example, Rebuttal Testimony of Dr. Aniruddha (Andy) Banerjee in Docket 030869-TL.

result would not take place (we would hope) for the logical reason that the existence of competition in Jacksonville does not in any way demonstrate the viability of competition in Miami. Similarly, the existence of competition in select, high-density portions of an MSA does not in any way demonstrate the viability of competition in other parts of the MSA. Therefore, it is logical for the Commission to consider how much of the market is being served before determining that it will remove competitive choices in that market.

Q. In her direct testimony, does BellSouth witness Tipton provide any evidence as to how much of the markets were being served by the self-provisioning CLECs identified?

A. Not on a market-by-market basis. Ms. Tipton's testimony does include the claim that, in total for BellSouth's serving territory, CLECs are serving "over 100,000 "mass market" customers" using their own switches (Tipton Direct page 3). But this claim is not supported in any way. Although it is not possible to know the exact number of mass market lines that exist in BellSouth's serving area, a reasonable estimate is 5.24 million.[9] This suggests that, based on Ms. Tipton's figure, CLECs are likely serving less than 2% of the mass market customers throughout Florida using their own switches.

Q. Is there evidence outside of Ms. Tipton's direct testimony, on a market-by-market basis, regarding *how much* of BellSouth's markets are served by self-provisioning CLECs?

[9] According to USAC BellSouth in Florida serves over 6,693,000 lines in Florida. Using nationwide data from the FCC we see that, on average, residential and small business lines (approximating the mass market) make up 78.3% of all ILEC lines. 6,693,000 * .783 = approximately 5,240,600 or 5.24 million.

A. There is indeed additional evidence, produced as a result of the Commission Staff's data requests, detailing the numbers of mass market customers served by the self-provisioning CLECs identified by Ms. Tipton in her testimony. This evidence is in various forms and in various stages of completeness, and so one must make careful assumptions when attempting to use the data to discern measures such as the extent of competition in a market. But with this caveat in mind, the data can be used to investigate issues such as whether the identified CLECs really do provide evidence of the technical and economic feasibility of an entrant serving the mass market, as Ms. Tipton has defined it.

For example, Ms. Tipton lists [redacted] as one of the self-provisioning CLECs that meets the trigger for BellSouth's Pensacola Zone 2 market. The Pensacola Zone 2 market is made up of six BellSouth wire centers. According to data filed with the Commission by [redacted], [redacted] does operate [redacted] switches that serve customers in BellSouth's territory. And one of those switches, identified in the LERG as [redacted], appears to provide various forms of service—overwhelmingly to larger business customers—in about [redacted] BellSouth wire centers including the six wire centers that make up Ms. Tipton's Pensacola Zone 2 market. The data provided by [redacted] did not identify how many customers the company actually had in *each* of the [redacted] wire centers; it only identified the total number of customers served by that switch. So the information provided by [redacted] does not confirm or deny the existence of mass market customers specifically in the Pensacola Zone 2 market. But the information is useful nonetheless because the data reveals that the total number of mass market customers—as defined by BellSouth—served by

[redacted] out of that switch is exactly [redacted] customers. And none of these customers are residential customers (this is addressed in more detail below). So at best, if those [redacted] customers happen to be located in the six wire centers that make up the Pensacola Zone 2 market, [redacted] is serving exactly [redacted] mass market customers in BellSouth's Pensacola Zone 2 market, and at worst it is serving zero. According to data provided by BellSouth there are over [redacted] mass market customers in the Pensacola Zone 2 market.[10] This suggests that, again as an absolute upper bound, [redacted] has achieved a market penetration of [redacted]

The reason this information is useful is because, as discussed in my direct testimony, the FCC was well aware that CLECs can manage to serve some mass market customers off of what are otherwise enterprise switches.[11] But this situation was not enough for the FCC to find an absence of impairment, and it appears that this is the exact situation we find with [redacted] in BellSouth's Pensacola Zone 2 market. [redacted] also provided data regarding the utilized capacity of the switch in question, as measured in voice-grade equivalents, and the data shows that less than [redacted] of the utilized capacity of this switch is used to serve mass market customers.

Another way of examining the issue of "how much" of the market is served by the identified CLECs is to look at whether there are entire customer groups who are not being served. Specifically, it is worthwhile to examine whether the CLECs

[10] Data taken from BellSouth responses to Sprint's interrogatories.
[11] TRP paragraph 441.

identified by Ms. Tipton are limiting themselves to serving only the business portion of the mass market, and subsequently ignoring the residential market. The TRO is extremely clear that the mass market is made up of both residential and small business customers.[12] If the CLECs identified by Ms. Tipton subdivide the mass market and only offer service to business customers, then the Commission should seriously question whether the evidence presented adequately demonstrates the technical and economic feasibility of an entrant serving the mass market.

Q. Is there evidence that any of the CLECs identified by Ms. Tipton have, in fact, subdivided the mass market and are only serving business customers?

A. Yes. Turning again to the data provided in response to the Commission Staff's requests, we find that several companies have apparently subdivided the market and are only providing service to businesses. These include such companies as [redacted] (listed as a trigger-meeting CLEC in Fort Lauderdale, Miami, Jacksonville and West Palm Beach), [redacted] (listed as a trigger-meeting CLEC in Fort Lauderdale, Miami and West Palm Beach), [redacted] (listed as a trigger-meeting CLEC in Fort Lauderdale and Jacksonville), and [redacted] (listed as a trigger-meeting CLEC in Daytona Beach and Pensacola).

It is certainly not surprising that many of BellSouth's proposed CLECs limit their service offerings to the business market. As the TRO itself indicates, business customers "usually pay higher retail rates, and may be more likely to purchase additional services such as multiple lines, vertical features, data services and yellow

[12] TRO paragraph 127.

page listings" and therefore tend to be, all else held equal, more profitable to serve.[13] But a CLEC that subdivides the mass market, refuses to serve residential customers, and only serves select business customers should not be viewed by this Commission as evidence of the technical and economic feasibility of an entrant serving the mass market with its own switch. In fact, BellSouth itself—perhaps unintentionally—agrees with and supports this point of view by virtue of the way it conducted its potential deployment analysis filed in this proceeding.

Q. How does BellSouth's potential deployment analysis support the notion that selectively serving a limited number of business customers is not evidence of the technical and economic feasibility of an entrant serving the mass market with its own switch?

A. If BellSouth believed unconditionally that selectively serving only business customers was enough to demonstrate the feasibility of serving the mass market, then BellSouth would have conducted its potential deployment analyses in that manner, because it is extremely likely that BellSouth could have produced even *more* markets that were profitable—based on their assumptions—if they limited their take rate to business customers only. The reason they could do this is because of the way in which BellSouth models the cost of serving the mass market, which is to essentially leverage off of the enterprise market. But BellSouth did not conduct their potential deployment analysis in that fashion (business customers only); instead they assumed that both residential and business customers were served.

[13] TRO footnote 432.

It is worth noting that in the TRO, the descriptions of the *intent* of the trigger analysis and the *intent* of the potential deployment analysis are extremely consistent. As stated above, the triggers are intended to provide evidence of "the technical and economic feasibility of an entrant serving the mass market with its own switch".[14] The potential deployment analysis is intended to show "whether a competing carrier could economically serve the market without access to the incumbent's switch".[15] And, as the TRO also states, "the market" is the same in both cases. If BellSouth believes that serving "the market" is more than selectively serving a handful of business customers (as it clearly does in its potential deployment analysis) it must also believe that for its trigger analysis.

Q. Aside from the question of "how much" of a market is actually being served, did Ms. Tipton provide evidence in her testimony as to how much of the market the proposed CLECs are even capable of serving?

A. No. But again, there is additional evidence that can be gleaned from the data provided to the Commission Staff to help address this issue. For example, BellSouth lists [redacted] as a trigger-meeting CLEC in the Jacksonville Zone 2 market. As defined by BellSouth, the Jacksonville Zone 2 market consists of seventeen wire centers. But according to information filed by [redacted] with Commission staff, [redacted] provides service in only [redacted] of the seventeen wire centers. Similarly BellSouth lists [redacted] as a trigger-meeting CLEC in the same Jacksonville Zone 2 market, but according to data that [redacted] provided to the Commission, [redacted] does not provide

[14] TRO paragraph 501.
[15] TRO paragraph 517.

service in *any* of the seventeen wire centers that make up the Jacksonville Zone 2 market.

Q. Based on the testimony of Ms. Tipton, and the data provided to the Commission Staff, should we conclude at this time that BellSouth has met the triggers in the markets identified in Ms. Tipton's testimony?

A. No. The data provided to Commission Staff raises far more questions than it answers regarding whether the companies identified by Ms. Tipton demonstrate the technical and economic feasibility of an entrant serving the market with its own switch. In some cases ([redacted] and Jacksonville Zone 2) the entrant does not appear to be serving the market at all. In other cases ([redacted] and Pensacola Zone 2) the entrant is serving such a miniscule portion of the market ([redacted], if that much) that this says nothing about the feasibility of serving the market. In still other cases ([redacted] in Fort Lauderdale) the entrant has subdivided the market and is serving only the business portion. For the Commission to conclude that barriers to entry in the mass market have been overcome, based on such questionable evidence, would be a mistake.

Optimization in the BellSouth Analysis of Competitive Entry (BACE) Model and the Testimony of Mr. James Stegeman

Q. In the testimony of BellSouth witness Mr. James Stegeman, he describes the various forms of optimization that take place in the BACE Model. Please comment on these optimization procedures.

A. Mr. Stegeman explains in his testimony that there are six different ways that the BACE Model optimizes (or chooses among alternatives) in order to eliminate activities that "yield a negative net present value" (Stegeman Direct page 51). Some of these optimization procedures have to do with network planning (for example, the model chooses between co-locating and using EELs in a particular wire center), and Sprint believes such optimization routines are appropriate. But some of the other optimization procedures involve a choice of whether or not to serve a particular type of customer, or a particular area. In essence, they allow the entrant to *ignore* significant portions of the market. While these choices are sometimes made by firms when conducting business cases, they are contrary to the FCC's guidance in the TRO in terms of analyzing potential deployment.

The TRO states that, when analyzing potential deployment, a geographic area should be defined as the market and then, if triggers are not satisfied, the state should analyze potential deployment in "the market in question."[16] Assume the market in question is UNE Zone 2 in the Miami CEA. What must be determined in the potential deployment analysis is whether entry is economic for that market. But the optimization routines in the BACE Model—particularly the routines that allow the entrant to essentially ignore unprofitable areas—have the effect of negating the market definition itself. These routines create a situation where, if the question is: "Can an entrant economically serve UNE Zone 2 in the Miami CEA?" the model answers, "Yes, if the entrant ignores half of the wire centers in that market." While such an answer might guide an entrant to opt for geographically cherry-picking the

[16] TRO paragraph 506.

portions of Zone 2 Miami it wishes to serve, it does not demonstrate the economic feasibility of serving the market, which was defined as the entire zone.

In the following section, I describe adjustments made to various demand-side inputs in the BACE Model, and describe the results the model produces when the input values are changed. In the course of producing these results, Sprint ran the BACE Model with the following optimization routines turned off: the routine that would eliminate unprofitable wire centers (#3 in Stegeman Direct, page 51), the routine that would eliminate all unprofitable mass market customers (#4 in Stegeman Direct, page 51), and the routine that would eliminate unprofitable markets (#5 in Stegeman Direct, page 51). This prevents the model from ignoring large portions of the defined market, and this is consistent with the concept of determining whether a CLEC is capable of economically serving a market, as opposed to economically serving select portions of a market. (It is also consistent with the definition of market as it is used in the trigger analysis of actual deployment.) However, because CLECs can and do tailor their product offerings, it was reasonable to run the model in such a way that assumed the CLEC would attempt to attract the more profitable customers throughout the entire market. To achieve this, Sprint eliminated the lowest quintile of residential customers (as described in the testimony of BellSouth witness Dr. Debra Aron). The result of all of these changes was, in fact, a *higher* overall net present value for BellSouth's markets than the net present value produced by BellSouth's runs of the BACE Model. This result can be seen in Attachment KWD-6 (Revised 2/12/04) to the revised rebuttal testimony of Sprint witness Mr. Kent Dickerson, by comparing

Scenario 1 and Scenario 2 in that attachment. Scenario 1 contains the BACE Model results when the model is run as filed by BellSouth, with the results simply aggregated to an MSA level, a net present value of approximately $308~~320~~ million. Scenario 2 contains the BACE Model results with the above-mentioned changes made, a net present value of approximately $317.7~~331.9~~ million. This adjusted result serves as the foundation, or "base run" for all inputs changes discussed below and discussed in the revised rebuttal testimony of Sprint witness Dickerson.

Demand-Side Inputs to the BellSouth BACE Model and Testimony of Dr. Debra Aron

Q. In her direct testimony, BellSouth witness Dr. Debra Aron indicates that she provided a number of the inputs that were used in the BellSouth BACE Model. Have you reviewed some of these inputs?

A. Yes. My review primarily focused on a few key inputs that tend to represent the "demand" side of the business case. (The testimony of Sprint witness Mr. Kent Dickerson addresses some of the key inputs on the "supply" side of the business case.) These "demand-side" variables include inputs that reflect market share, pricing, price movements over time, and other variables that are not cost-related.

Q. In a business case how important are these "demand-side" variables?

A. They are *extremely* important; in fact, they can easily make or break any business case or opportunity analysis. And unfortunately, they are extremely difficult to

estimate with any high-level of precision because they are fundamentally different from cost-side variables; demand-side variables are variables over which the company has very little control, or often *no* control. Therefore, it is absolutely necessary that the assumptions and support that are used to justify any demand-side variables are accurate, reliable, and applicable to the situation at hand.

Q. Can you give a simple example of the difficulty involved in accurately estimating a demand-side variable?

A. Certainly. Consider a seemingly straightforward variable such as market share. In order to accurately determine the market share that a new entrant can expect to receive in a market (any market, not necessarily telephone), an economist working on the business case would need to…

- First, estimate the overall size of the market prior to entry.
- Second, estimate the growth of the market over the time horizon being modeled by the entrant.
- Third, determine whether the entrant's market share will more likely be the result of increasing the overall market, or taking away market share from existing firms, or a combination of both. This, of course, may depend on…
    - The degree of substitutability between the entrant's product and the existing firm's product.
    - The existence of any pent up demand for an alternative product or provider.
    - The ability of the entrant to successfully differentiate its product from the existing products, which may take the form of…
        - Price differentiation

- Product bundling differentiation
- Perceived quality differentiation
- Product characteristic differentiation

- Fourth, determine the existing firm's expected response to the entrant's attempts to obtain market share. This could take the form of...
  - Competitive pricing
  - Introduction of new bundling or service offers
  - Changes to product characteristics
- Fifth, evaluate the market-specific factors what will affect both the entrant's ability to gain share and the incumbent's ability to win it back. (For example, it may be that the likelihood of customers switching providers is inversely related to the average age of the population, and the market in question may have a higher-than-average proportion of persons over 60.)
- Sixth, repeat the entire process now assuming that the market will be shared by one or more additional entrants.

Obviously the process described above is complex, time-consuming, and research-intensive. But, as stated above, the demand-side variables (such as market share) are extremely important to the outcome of any business case. So it is absolutely necessary to at least attempt to put a structured process behind such numbers as market share in any business case.

Q. Does Dr. Aron's testimony suggest that she relied on such a structured process to arrive at her demand-side variables?

A. No. For example, Dr. Aron advocates (and the BACE Model uses) an end-of-the-time-horizon market share of 15 percent. This figure does not appear to be the result of an investigation into the demand characteristics of the markets being modeled. In fact, the total support offered for the 15 percent market share figure can be summarized as follows:

1. CLECs in Florida, in aggregate, have attained 15% market share in 35 of BellSouth's wire centers (Aron Direct page 25).
2. Cable TV providers have achieved penetration rates for telephony that are higher than 15% (Aron Direct page 26).
3. A CLEC in New York state (AT&T) attained 15% market share (Aron Direct page 27).

I do not doubt the accuracy of these findings, but a quick examination of these facts illustrates that they provide no real support at all for using a 15 percent market share in the BACE Model's business case of an entrant serving the mass market. For example:

Point #1, *"CLECs in Florida, in aggregate, have attained 15% market share in 35 of BellSouth's wire centers."* The problem with using this fact as support is that the BACE model does not model "CLECs in aggregate." It models a single entrant. The fact that multiple CLECs may have, in aggregate, achieved this market share in some places does not suggest that each and every CLEC, or even any one CLEC, could achieve it. For example, BellSouth witness Tipton's testimony identifies eleven (11) CLECs in the Fort Lauderdale Zone 2 market.

Since it is a mathematical impossibility for each of these eleven CLECs to attain 15% market share we must assume that Dr. Aron is not suggesting that any or every CLEC can gain 15% market share. Perhaps her reference (to the aggregate CLEC market share) is meant to suggest that there is 15% market share *available* to the CLEC being modeled. If so, the 15% penetration rate in the BACE Model must assume that the specific entrant being modeled is the *only* CLEC in the market, and that it successfully captures the entire market that is available to CLECs. But it is unclear whether Dr. Aron's assumption is that the other CLECs (such as those listed in Ms. Tipton's testimony) exited the market, or that they never entered the market. And there is no explanation or support provided for such an assumption. Nor is there support for why apparently one CLEC in the BACE Model can attain a market share that it takes multiple CLECs to attain in the real world. While there is nothing wrong with making such assumptions, they must be justified in some way, and this has not been done.

Furthermore, with regard to this reference ("CLECs in Florida, in aggregate, have attained 15% market share in 35 of BellSouth's wire centers") it is unclear whether this 15% in 35 wire centers is limited to mass market customers. It is a well-established fact that the majority of CLEC lines in Florida are used to serve large business customers, not mass market customers. So it is equally likely that the majority of the 15% are also lines serving large business customers. This would, in

turn, suggest a mass-market penetration well below 15%, providing no justification for the 15% input to the BACE Model.[17]

Point #2, *Cable TV providers have achieved penetration rates for telephony that are higher than 15%.* The entrant modeled in the BACE Model is not a cable television provider. The entrant being modeled uses the incumbent's loops. The model does not include either the costs or the revenues associated with the provision of cable television. The TRO is extremely clear that cable television providers have unique advantages in the marketplace, advantages that are not available to other entrants. The TRO states that cable television companies, "because of their unique economic circumstances of first-mover advantages and scope economies, have access to the customer that other competitive carriers lack."[18] As a result, a market share attained by a cable company is not representative at all of the market share that could be obtained by the entrant in the BACE Model. In fact, Dr. Aron's reference to the cable television provider could actually work against her 15% market share assumption. She states that "of the 9.9 million that can obtain cable telephone service, 2.6 million (or 26.2 percent) have selected it" (Aron page 26). Since the entrant being modeled in the BACE Model is clearly not a cable television company, if we assume that there is competition from the cable company this simply means there is less of the market left over for non-cable based providers. Referring back to Point #1 above ("CLECs in Florida,

[17] For example, assume the mass market accounts for 75% of all lines and the enterprise market accounts for the remaining 25%. In a representative wire center of 100 lines (where 75 lines are mass market and 25 are enterprise) a CLEC that has 15% overall penetration has 15 lines in total. If the majority of those 15 lines are enterprise (for example, 8 are enterprise and 7 are mass market) this means the CLEC penetration of the enterprise market is 8/25 or 32%, and the CLEC penetration of the mass market is 7/75 or 9.3%.
[18] TRO paragraph 310.

in aggregate, have attained 15% market share in 35 of BellSouth's wire centers"), if it takes multiple CLECs to attain 15% market share in the absence of cable telephony (as is the case in Florida today), how likely is it that the single CLEC modeled in the BACE Model would achieve 15% market share if cable telephony is likely to become available?

Point #3, *A CLEC in New York state (AT&T) attained 15% market share.* It is a fact that AT&T maintains a unique position in the telecom industry with regard to customer recognition and brand awareness. Indeed, it is well-known among marketing groups that more than a decade after divestiture many local service customers reported (erroneously) that their local service was still provided by AT&T. Dr. Aron's reference to AT&T's New York market share suggests that any new entrant, even one without the ability to leverage this level of recognition and brand awareness, should be able to achieve a similar market share. There is no reason to believe this is so. In fact, the FCC's Local Competition report indicates that there are 26 CLECs in New York state and these 26 companies have a collective market share of 28%.[19] If AT&T accounts for 15% market share, this means the other 25 CLECs collectively serve 13% of the market, and each has, on average, well under 1% market share.

In summary, Dr. Aron's market penetration figure is simply without support. First, it is not the result of a structured process (as outlined above). Second, it disregards market realities such as the existence of other CLECs. Third, it ignores very

[19] Local Competition Report, released December 22, 2003, available at www.fcc.gov.

important questions, such as what is the reason that the CLEC is able to attain such a market share? And fourth, the references that are provided for support have no applicability at all to the situation being modeled in the BACE Model. As stated above, support for demand-side input values, such as market penetration, is extremely important because these inputs have a dramatic effect on the outcome of the business case.

Q. Can you provide an example of the effect that demand-side assumptions can have on a business case?

A. Yes. As shown in an attachment to the revised rebuttal testimony of Sprint witness Mr. Kent Dickerson, if Dr. Aron's unsupported market share figure of 15% is replaced in BellSouth's BACE Model with an estimated market penetration of 10%, and no other changes are made to the model, the net present value of the new entrant's business case for BellSouth's markets falls by nearly ~~nearly~~ 50%, from approximately $318~~332~~ million to slightly over~~less than~~ $163~~174~~ million (Scenario 2 and Scenario 3 in Attachment KWD-6 (Revised 2/12/04).)

Q. Is there a reason to believe that 10% is a more realistic penetration rate than Dr. Aron's proposed figure of 15%?

A. Yes, in fact 10% represents an extremely *generous* upper bound for one entrant's market share. To see why, recall that in the previous pages I presented an example of the steps that are required to estimate market penetration in a structured manner. One of the key determinants included in that example was an understanding the number of competitors in the market (a fact that does not appear to be considered in

Dr. Aron's proposal). According to the testimony of BellSouth witness Tipton, the average number of competitors in BellSouth's Florida markets (for which no impairment is claimed) is slightly over six (6). And according to the FCC's Local Competition Report, in the state of Florida, in zip codes where competition exists, the average number of CLECs in a given zip code is between seven and eight (7.5).[20] Because the BellSouth figure obviously excludes non-facilities-based CLECs, we can conservatively assume that, statewide, Florida markets that have competition have approximately seven competitors on average.[21] Dr. Aron has provided no argument as to why the entrant modeled in the BACE Model should have a higher (or lower) market penetration than any other entrant.[22] So we are left with the question as to how the market will ultimately be divided between an incumbent and many (on average, seven) entrants. Considering this question in two different ways we see, in both cases, that a market share of less than 10% per entrant is much more likely than Dr. Aron's proposed 15%.

First, if we look to the long distance industry as one model, we find a market that operated as a monopoly until competition developed, both from other carriers using their own competing facilities (other IXCs) and from other carriers (BOCs) using leased facilities. One would be hard-pressed to identify a more competitive market than the long-distance calling market, yet more than seventeen years after

[20] See FCC Local Competition Report, released December 23, 2003, available at www.fcc.gov.
[21] There are arguments to be made on both sides as to whether that number is expected to increase or decrease over time. According to the FCC the number has increased (from 6 to 7.5) since the Local Competition Report for 2002. For purposes of discussion, it will remain unchanged.
[22] Except, of course, a cable telephony provider whose market share would be higher due to the advantages discussed earlier.

divestiture we find that, according to FCC data, the original monopoly player (AT&T) still retained over 35% market share.[23] The time horizon of the BACE Model is 10 years. If we assume in the local market that the incumbent will retain at least 35% market share for 10 years (an extremely reasonable assumption given that Florida incumbents have retained nearly 87% market share since the passage of the 1996 Telecom Act) there would be, at the absolute most, no more than 65% of the market left that was available to all CLECs. Again, no argument exists as to why the entrant modeled in the BACE Model would achieve a higher market share than any other entrant. This suggests than any entrant would see, on average, a market share of less than [(65%)/(7)] or 9.3%.

A much more likely scenario would follow the suggestion raised by Dr. Aron that cable telephony would become a significant player in this market. Recall that Dr. Aron's testimony stated that approximately 26.2% of households opted for cable telephony, where it was available, in far less than ten years. If we assume that cable telephony enters the market even halfway through our 10 year time horizon, and also assume that 90% of households are passed by cable in any market, we could conservatively estimate that 26.2% of 90% of households, or 23.5%, would opt for cable telephony by the end of the time horizon. If we also assume that the incumbent LEC has managed to retain its 35% market share (again a very conservative assumption) we would find only 41.5% of the market available to other entrants (100% - (35% + 23.5%) = 41.5%). 41.5% divided between 6

[23] See FCC Long Distance Telecommunications Industry Report, released May 14, 2003, available at www.fcc.gov.

entrants (one of the original seven being the cable provider) produces, on average, 6.9% market share per entrant.

It should be noted that neither of these discussions is intended to substitute for the type of accurate, in-depth process that should be used to arrive at a market share estimate for use in a business case. They are only offered as alternative frames of reference. As stated above, it appears that Dr. Aron did not rely on a structured, market-specific process to obtain her 15% estimate. And the slight evidence that was offered in support of that figure was, upon examination, inapplicable to the situation being modeled by the BACE Model. These two examples above are simply offered as support that, in the absence of a structured process for estimating market share, Dr. Aron's 15% input to the BACE Model is significantly overstated.

Q. Are there other demand-side inputs, proposed by Dr. Aron, that are also inappropriate or without support?

A. Yes. Another key demand-side input is what Dr. Aron refers to as the "p-value" or rate of climb. This is, in simple terms, the variable that determines how quickly the entrant achieves its market share. Dr. Aron has advocated, and Bellsouth uses, a p-value of 50% for residential customers. This means, again in simplest terms, that the entrant achieves half of its total market share in a single year, the first year. And it assumes that, by the end of the second year, the entrant has achieved 3/4ths of its total market share.

Q. Is the "p-value" similar to the market share estimate in the sense that it has a significant impact on the outcome of the BACE Model as run by Bellsouth?

A. Absolutely. For example, the "p-value" can take on different values in the BACE Model, from 50% to 25%. As stated above, a 50% "p-value" means that the entrant achieves half of its total market share in the first year. A 25% "p-value" means that the entrant achieves one-fourth of its total market share the first year. BellSouth has run the BACE Model with a "p-value" of 50% for residential customers. If this is changed to 25% the outcome of the model is dramatically affected. As shown in an attachment to the revised rebuttal testimony of Sprint witness Mr. Kent Dickerson, changing the "p-value" to 25% causes the net present value of the new entrant's business case for BellSouth's markets to fall by nearly 30%, from approximately $318~~332~~ million to approximately~~less than~~ $227~~238~~ million (Scenario 2 and Scenario 4 in Attachment KWD-6 (Revised 2/12/04)~~.~~). It is important to note that changing the "p-value" in this way does not change the *number* of customers the entrant acquires; it only changes *how quickly* the entrant acquires them. A simple change in the speed of acquisition can affect the outcome of the business case by nearly 30%. This is just one more example of how important the demand-side variables are to any business case, and why they must be well-supported and applicable.

Q. What support does Dr. Aron provide for the "p-value" of 50%?

A. None. In discussing the "p-value" Dr. Aron does make reference to an article by economist Richard Caves, in which Dr. Caves states that "the size of a typical, successful entrant (when plotted against time) increases more rapidly when the firm

is young and small, and tends to level off (the growth rate decreases) as the firm becomes older and larger" (Aron Direct page 25). This reference should be addressed on two different levels.

First, this description (faster growth in early years, slower growth in later years) describes only the general shape of the penetration curve (as Dr. Aron acknowledges). It does not justify a particular "p-value", because both a 50% p-value and a 25% p-value will produce a curve with the same general shape: each will produce a curve that depicts faster growth in early years and slower growth in later years. The only difference is that the slope is less steep in the case of the 25% value, and the curve has a longer tail.

Second, the article that Dr. Aron references is indeed discussing what successful entrants do: Successful entrants (in all industries) find a way to grow faster in early years and then the growth tapers off in later years. If an industry is characterized by a large amount of up-front or fixed costs, as telecom is, the affect that this has on the likelihood of success is obvious: The more customers you can manage to acquire more quickly, the better off you'll be because you can cover those up-front costs more quickly. But by using this approach, Dr. Aron has effectively stacked the deck. Essentially she is suggesting, "This is what the CLEC needs to do in order to succeed, so let's assume the CLEC does it." And, to no great surprise, the CLEC succeeds! By assuming the CLEC only takes 1 year to acquire half of its total 10-year market share, the entrant is virtually guaranteed success. But as I stated in earlier pages, demand-side variables are variables over which the company

has little control. The question is whether there is any evidence that CLECs can acquire half of their overall market share in their first year of operation.

Q. Does real-world data offer any support for Dr. Aron's proposed p-value of 50%?

A. No. According to data from the FCC's Local Competition Report 2003, actual CLEC entry into the mass market (residential and small business customers) does not support the notion that CLECs can acquire half of their market share in the first year. The table below lists, on a national scale, the market share that CLECs obtained in the mass market (residential/small business) over a four year period.

CLEC Market Share in the Mass Market

December 1999	December 2000	December 2001	December 2002	June 2003*
2.4%	4.5%	6.6%	10.2%	12.0%

*most recent data available

There is no reason to assume that the 12% depicted in the table above represents an upper-bound, or final figure, on CLEC market share in the mass market. But even if it did, it is clear that CLECs did not come close to achieving half of that figure in the first year of competition. That is why, in the absence of a thorough, structured process for estimating the growth rate of CLEC market share, Dr. Aron's proposed 50% "p-value" must be rejected and a more reasonable figure, such as the alternative 25%, should be considered.[24]

Q. Are there any other demand-side variables utilized by BellSouth that do not withstand scrutiny?

[24] In all likelihood a "p-value" of even 25% is excessively optimistic, based on the same FCC data. But 25% is the lowest option available to enter as an input into the BACE Model.

A. Yes. Perhaps the most interesting of all are the assumptions made regarding the prices of bundles that BellSouth uses in its BACE Model. The BACE Model basically establishes a three–tiered bundle offer for residential customers. The customer can get an unlimited local and long distance service for $57.72 (ResBundleB). The customer can add voicemail and line maintenance for an increased price of $62.50 (ResBundleA). Or the customer can add DSL to that package for a total of $100.09 (ResBundleC).[25] These bundles are the primary products the entrant is projected to sell in zones 1 and 2, and they produce the revenue yield the CLEC is expected to realize on these customers. But the interesting facts are 1) these prices do not reflect the prevailing market prices that we actually see in a competitive environment, and 2) these price points are not projected to change over the entire 10-year time horizon of the model. As a result, the revenues that the CLEC is expected to earn are overstated.

Q. Why do you believe the bundle prices that BellSouth uses in the model do not reflect the prevailing market price levels seen in reality?

A. The $57.72 price for ResBundleB appears to reflect a $49.99 unlimited calling plan charge to the customer, the prevailing $6.50 subscriber line charge and a reasonable addition for terminating access charges assessed in toll carriers terminating to the LEC's end user. This is the lowest-priced bundle and therefore it must represent a lower-bound for the prevailing bundle price in the market. Yet Attachments BKS-1 and BKS-2 show win-back offers that BellSouth has actually extended to its residential customers in October and November of 2003. In the offer shown in

[25] The prices listed are Zone 1 and 2 prices. The model also has these same bundles of services available in the Zone areas 3 and 4, at slightly different prices. (ResBundleA3 $68.23, ResBundleB3 $55.76 and ResBundleC3 at $102.09)

Attachment BKS-1, the customer can purchase a $49.99 plan, which we believe to be consistent with the BACE Model's ResBundleB. However, in BellSouth's win-back the customer also gets free voice mail, and their local service connection fee ($42.50) is waived, and the customer gets a one-time payment of $75 cash back. Assuming an average customer life of 24 months, the monthly savings to the customer (or the reduction in prevailing price) is approximately $9.68.[26] That $9.68 value represents a 16.8% decrease on the prices that BellSouth uses in the BACE model for equivalent service. Similarly, the offer in Exhibit B provides $100 cash back and waives the local service connection charge.

Now, the BACE model does contain a table called the CLEC Baseline Price Discount table. A 10% initial discount is loaded in the table, but it appears to be applied only to portions of the bundles that are discussed above. The local line charges (Installation, Regcharges, and Subscription) are discounted in the bundle, but the other parts of the bundle (Access Charges and Toll) do not appear to be discounted. Because of the closed nature of the model, it is not clear how much the ResBundleB price of $57.72 is affected by this table. But a 10% discount on only portions of the bundle of services will not come close to matching the 16.8% reductions built into BellSouth's win-back offers. Clearly, in order for the CLEC to really compete with the incumbent, the discount would have to, at a minimum, be equal. But in BellSouth's runs of the BACE Model it is not. The prices in the BACE Model actually overstate the prices that would prevail—and do prevail—in a competitive market. As a result, the revenues assumed in the model are overstated.

[26] Voicemail value is assumed to be the difference in the price between ResBundleA and ResBundleB ($62.50 - $57.72 = $4.78). The cash back ($75) and waived local service connection charge ($42.50) total $117.50 or $4.90 per month for 24 months.

Q. How would the continued development of competition over a 10-year time horizon affect the prices of these bundles?

A. As competition increases over the BACE Model's 10-year time horizon the prices for bundles will move closer toward costs, and the ability of the incumbent to control prices in the market will continue to decrease. Bundles such as the ones described above (and in the model) will continue to be offered, and the level of discount necessary to win the customer's business initially (for the entrant), or win the customer back and retain the customer (for the incumbent) will increase. The market will put downward pressure on prices, and this downward pressure will be exacerbated by the development of VoIP-type service offerings, as well as wireless substitution.

Q. Is this market dynamic reflected in BellSouth's runs of the model?

A. No. The BACE Model has a table called the Bundle Price Curves table, which allows the prices of the bundles to be changed (reduced) yearly over the 10-year period. For BellSouth's runs of the model the table has not been populated, indicating no downward pressure on prices at all.

Q. How much downward pressure should be reflected in the BACE Model?

A. Barring market failures, effective competition often drives the price of goods toward their economic costs. In the case of BellSouth in Florida we have estimates that the economic cost of providing basic local service to residential

customers is well below $30.[27] Even adding to this the costs associated with long-distance service, we would expect to see significant downward pressure from a starting point of approximately $50 (BellSouth's win-back offer price).

Q. Is it reasonable to assume the small business portion of the mass market will also experience price pressure over the 10 year period of the model?

A. Absolutely. The small business market is at least as competitive as the residential market today. Margins on local business services tend to be higher than on residential service, consequently the opportunities for CLECs are greater in the small business market than the residential market. This suggests that the prevailing pricing environment will include discounts from the CLEC and win-back and retention efforts from the ILEC that will produce at least the same level of downward pricing pressure that will develop in the residential market.

Q. So to summarize, the outcome produced by the BACE Model in its current form is the result of overstating the prices (compared to what BellSouth is actually offering in a competitive environment today) and ignoring any downward pressure on pricing over the 10-year time horizon?

A. That is correct.

Q. If the prices in the model are adjusted to account for these two factors, is the effect on the model's results as dramatic as we have seen from other demand-side variables?

[27] The FCC's forward-looking cost model HCPM produces cost estimates that support this statement.

A. Adjusting for these two factors produces changes that are even *more* dramatic. Sprint re-ran the BACE Model and incorporated two changes: 1) Adjusted the model's prices so they would more accurately reflect actual market prices by replacing the 10% CLEC discount on bundles (discussed above) with a ten dollar discount that approximated the $9.68 monthly savings that BellSouth is offering customers in its win-back efforts (also discussed above). 2) Incorporated an extremely conservative price decrease of 1.5% per year for the bundled offerings in the model. In an even more conservative step, Sprint only applied this price decrease to select portions of the bundles, since certain other portions already operate in a fully mature competitive market. The result of these two simple changes was to cause the NPV of the entrant's business case to fall by slightly more than ~~nearly 70~~50%. As Attachment KWD-6 (Revised 2/12/04) shows in Scenario 2 and Scenario 5, the net present value dropped from nearly $~~332~~318 million to slightly over $149~~101~~ million.

Q. Is there a particular justification for a 1.5% annual price decrease to represent competitive pressure on pricing?

A. A 1.5% yearly price reduction on a bundle of services is an extremely *conservative* estimate for price changes in a competitive market. In fact, if the prices reflected nothing except average increases in productivity, which would normally be passed through to end-users in a competitive market, the price decreases would be larger than 1.5% per year.[28] As an alternative, by way of a benchmark, we can examine

[28] According to the Bureau of Labor Statistics the average yearly increase in total business productivity nationwide was between 2% and 2.5% per year over both the past 10 years and the past 20 years. The average yearly increase in total non-farm business productivity nationwide was *also* between 2% and 2.5% per year over both the past 10 years and the past 20 years. www.bls.gov.

price changes in competitive telecommunications markets such as wireless calling or toll calling. According to FCC data the average price of one minute of long distance calling fell from $0.15 in 1993 to $0.08 in 2001, a 47% decrease over eight years.[29] And additional FCC data reveal that the average amount spent per minute of wireless calling fell from $0.47 in 1994 to $0.11 in 2002, a 77% decrease over eight years.[30] By comparison, a 1.5% annual price decrease over a ten-year time horizon amounts to no more than a 15% cumulative price decrease, by any measure a conservative effect.

Q. Please summarize your discussion of the demand-side inputs used in the BellSouth BACE Model.

A. As stated above, achieving accuracy with regard to demand-side inputs is extremely important to any business case because these inputs can affect the outcome of the business case in dramatic ways. Ideally, demand-side inputs such as market share estimates and growth rates should be produced as the result of a structured process that is well-researched and well-supported. Based on her testimony it appears that Dr. Aron engaged in no such process. Alternately, demand-side inputs at a minimum should be applicable to the situation being modeled, supported with evidence, and reflective of marketplace realities. The market share proposed by Dr. Aron is not supported by fact and does not reflect the marketplace realties of, for example, an average of seven competitive entrants per market in Florida. The growth rate ("p-value") proposed by Dr. Aron is not supported in any way and makes assumptions—half of the total market share being captured in the first

[29] FCC 2003 Reference Book on Rates, Price Indices & Household Expenditure for Telephone Service. Available at www.fcc.gov.
[30] 2003 Trends in Telephone Service, available at www.fcc.gov.

year—that are unrealistic and self-serving. The price figures used in the BellSouth runs of the BACE Model are not reflective of real-world pricing or real world competitive dynamics. Sprint has re-run the BACE Model using values for these variables that are appropriate and supported by real-world conditions. The result, when combined with cost-side inputs supported in the testimony of Mr. Kent Dickerson, produces the real-world result of an uneconomic business case for mass market service using UNE-L.

Weighted Average Cost of Capital and Dr. Randall Billingsley

Q. On page 3, lines 13 – 18 of his Direct Testimony Dr. Billingsley states that he obtained his proposed cost of capital using an average of two separate analyses of two separate groups, the firms that make up the Standard & Poor's Composite 500 Index ("S&P 500") and a representative sample of CLECs. Is this a reasonable approach?

A. No, not when the firm being modeled is a new-entrant CLEC. The firms that make up the S&P 500 and the sample of CLECs are simply not comparable in terms of the factors that affect investors' expected returns on capital. Thus, a simple mathematical average of the cost components of these two non-comparable groups does not produce a meaningful result, and certainly not a reasonable estimate of the cost of capital to a new entrant CLEC. Because investors' expected returns are functions of risk, the only justification for averaging the two groups would be if the entrant reflected investment risk that was, for some reason, somewhere between the S&P and CLECs in general.

Q. Historically, how do CLECs and ILECs compare with the firms in the S&P in terms of perceived risk

A. In general, ILECs offer slightly less risk than the S&P as a whole, and both ILECs and the S&P offer significantly less risk than CLECs. As Dr. Billingsley illustrated in his testimony, both the "beta" and the estimated cost of equity are significantly higher for CLECs than for the firms in the S&P 500.[31] This suggests that the perceived risk, on the part of an investor, is higher as well for CLECs.

Q. If the perceived risk for an investor is higher for a CLEC than for an ILEC shouldn't the expected return (in the form of a weighted average cost of capital, or WACC) be higher as well?

A. Yes. To suggest otherwise would be to suggest that a fundamental tenet of capital market theory is incorrect.

Q. Has the FCC recently approved a specific WACC for an ILEC?

A. Yes. In Dr. Billingsley's testimony he discusses the most recent cost of capital figure that the FCC has approved for an ILEC in the Verizon Virginia arbitration case.[32] In that case the FCC supported a weighted average cost of capital for the ILEC of 13.07%. For comparison, the WACC proposed in this proceeding by Dr. Billingsley for the CLEC modeled in the BACE Model is 13.09%.

[31] Dr. Billingsley presents a BARRA beta of 1.66 for CLECs and an estimated cost of equity of 20.78 for CLECs on page 24 of his testimony, compared to a beta of 1 for the S&P 500 and an estimated cost of equity of 14.31 for the S&P 500.

[32] In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia, Inc. and for Expedited Arbitration, CC Docket No. 00-218, and In the Matter of AT&T Communications of Virginia, Inc., Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia, Inc., Cc Docket No. 00-251, Memorandum Opinion and Order released August 29, 2003.

Q. If the FCC supported a WACC of 13.07% for an ILEC, and ILECs represent significantly less risk to investors than CLECs, how realistic is the WACC of 13.09% that Dr. Billingsley supports for use in the BACE Model?

A. It is not realistic, and it is not appropriate. By combining CLEC results with the results that represent the firms in the S&P 500 Dr. Billingsley artificially reduces the WACC.

Q. What would serve as a more realistic WACC for the CLEC modeled in the BACE Model?

A. If we examine the CLEC-specific information in Dr. Billingsley's testimony we find that CLECs have a cost of equity of approximately 20.78% (Billingsley page 24) and a cost of debt of 9.92% (Billingsley page 26). If we use these two, and apply Dr. Billingsley's proposed capital structure of 58.5% debt and 41.5% equity, we achieve a weighted average cost of capital of approximately 14.43%.

Q. Why would you not use the CLEC-specific capital structure proposed by Dr. Billingsley?

A. Because the CLEC-specific capital structure proposed by Dr. Billingsley is based on data reflecting amounts of CLEC debt and equity for existing firms that do not represent a new entrant in today's market. In particular, the relative amount of debt proposed by Dr. Billingsley (roughly 87%) is obviously inappropriate, because many of the very firms represented in Dr. Billingsley's Exhibit RSB-3 had significantly lower relative percentages of debt when they entered the market. An

appropriate capital structure, with relatively less debt, produces a more appropriate WACC of 14.43%.

Q. A weighted average cost of capital of 14.43% is indeed higher than the FCC's recent ILEC WACC of 13.07%. Does this then represent an appropriate WACC for a new entrant CLEC in the BACE Model?

A. Not necessarily, according to previous data filed by Dr. Billingsley before this Commission. In the recent UNE docket (Docket No. 990649-TP) Dr. Billingsley advocated a WACC for an ILEC in the range of 14.66% to 15.34%.[33] Although there may be reason to believe that the overall cost of capital has fallen slightly since that time, it is unlikely that the cost of capital for a start-up CLEC would be less than the upper bound of the range that Dr. Billingsley proposed for the ILEC in the UNE docket. In fact, if that were the case, it could be said that investors believe there is less risk investing in a CLEC today than in investing in an ILEC during the time of the UNE docket. Therefore a more appropriate weighted average cost of capital for the start-up CLEC in the BACE Model would be the top end of Dr. Billingsley's ILEC WACC, or 15.34%.

Q. Have you re-run the BACE Model using this more appropriate WACC?

A. Yes. The effect of adjusting the WACC to a more appropriate level is to reduce the net present value approximately 332%. This can be seen in Attachment KWD-6 (Revised 2/12/04) (attached to the revised rebuttal testimony of Sprint witness Dickerson) by comparing Scenario 2 with Scenario 6. As the table shows,

[33] See Order No. PSC-01-1181-FOF-TP in Docket No. 990649-TP.

adjusting the weighted average cost of capital reduces the net present value from approximately $~~332~~318 million to approximately $~~224~~213 million.

Q. Does this conclude your rebuttal testimony?

A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION

SURREBUTTAL TESTIMONY OF

DR. BRIAN K. STAIHR

January 28, 2004

INTRODUCTION

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

A. My name is Brian K. Staihr. I am employed by Sprint as Senior Regulatory Economist. My business address is 6450 Sprint Parkway, Overland Park, Kansas 66251.

Q. Are you the same Brian Staihr who filed direct testimony in this proceeding on December 4, 2003 and rebuttal testimony in this proceeding on January 7, 2004?

A. Yes I am.

Q. What is the purpose of your surrebuttal testimony?

A. In my surrebuttal testimony I respond to issues raised in the rebuttal testimonies of BellSouth witnesses Dr. Christopher Pleatsikas (market definition) and Mr. John Ruscilli (competitive trigger analysis).

Market Definition and Dr. Christopher Pleatsikas

Q. In his rebuttal testimony Dr. Pleatsikas responds to Sprint's position that when the Commission is defining a market, the Commission should consider that "serving the market" is more than serving only "portions" of the market. Dr. Pleatsikas

suggests that the "extent or magnitude" of current service is not determinative for market definition purposes as a matter of economics. Does the TRO agree with Dr. Pleatsikas?

A. The TRO clearly discusses the issue of "how much" of a market competitors are serving and does so in terms of "defining" and "establishing" the market. Footnote 1552 states that where competitors are "...currently serving, or capable of serving, only part of the market, the state commission may choose to consider defining that portion of the market as a separate market for purposes of its analysis."[1] So although Dr. Pleatsikas may not consider this issue relevant "as a matter of economics" it is clear the FCC considers it relevant as a matter of the economics of regulation.

Q. In his testimony Dr. Pleatsikas mentions that it is reasonable to expect CLECs to "focus their network resources on particular customer types or geographic areas." Do you disagree?

A. In terms of strategic decisions that any firm might make, I do not disagree with Dr. Pleatsikas. As BellSouth's own data and testimony describe, CLEC do in fact target both areas and groups. But that is not the question being addressed in this proceeding, nor is it the question raised in my testimony. The actual question is this: If a CLEC is serving only a portion of a market, does this fact provide any evidence regarding the rest of the market? And does it provide evidence regarding the market as a whole? Not surprisingly, Dr. Pleatsikas answers this question to the affirmative in his rebuttal testimony when he writes, "If a CLEC

[1] TRO footnote 1552. A similar sentiment is found in footnote 1537 that discusses "establishing" markets.

serves one part of that market area using its own... switching, one can generally infer that the CLEC, if efficient, economically could serve another part" (Pleatsikas Rebuttal page 18).

Q. Is Dr. Pleatsikas' statement correct?

A. No. In fact, it is much more probable that exactly the opposite situation exists: If a CLEC is serving a part of a market but ignoring another part it is most likely because the CLEC *cannot* serve the other part of the market economically. This is particularly true in the case of the mass market. When a CLEC enters a market such as an MSA with its own switch many of the entrance costs do not vary with the number of wire centers served; for example, a television ad is broadcast to the entire metro area, not just the select wire centers where the CLEC is collocated. As a result, the CLEC has an incentive to spread such costs over as wide an area as possible. That is, the CLEC has a reason to enter every part of the market that is can enter economically. So if it has not entered a portion of the market it is more likely that it is not economic to do so.

Furthermore, even if Dr. Pleatsikas was correct (which he is not), his inference has no applicability whatsoever to the analysis of actual deployment. The competitive triggers are intended to serve as an analysis of whether actual deployment provides evidence that rebuts the national finding of impairment. The fact that a CLEC is serving in one wire center provides no evidence that the CLEC can or cannot serve in another wire center. If Dr. Pleatsikas wishes to

argue that the CLEC *could* serve a neighboring wire center, then that is precisely the type of argument that the potential deployment analysis is intended to address.

Competitive Trigger Analysis and Mr. John A. Ruscilli

Q. In his rebuttal testimony Mr. Ruscilli takes exception to some of your arguments regarding the difference between an enterprise switch and a mass market switch and claims that "this contention is simply a distraction that the Commission should reject" (Ruscilli Rebuttal page 26). Please comment.

A. It is not surprising that Mr. Ruscilli would try to characterize this issue as a "distraction." In doing so, he attempts to dismiss certain facts from consideration that lie at the very heart of the FCC's nationwide finding that impairment exists with regard to mass market local switching. He claims that "there is no distinction between a so-called "enterprise" and "mass-market" switch" (Ruscilli Rebuttal page 26).

Q. Is his claim correct?

A. Not according to the TRO. In footnote 1300 the FCC discusses potential deployment analysis and writes, "We make clear that evidence of *enterprise switch* deployment must be given "substantial weight" and the existence of a single competitively deployed *mass market switch* must be given "particularly substantial weight"" (emphasis supplied). If there was no distinction between what the FCC considers an enterprise switch and a mass market switch one would

have to question why the FCC refers to them as two different things. In fact, the same distinction between the two is also found in footnote 1561.[2]

Mr. Ruscilli's testimony next suggests that when the TRO discusses "enterprise switches"[3] or "switches serving the enterprise market"[4] it is discussing switches that are used *exclusively* to serve enterprise customers. He writes, "...the FCC has precluded the use of switches that serve *only* the enterprise market for from qualifying for the trigger analysis" (Ruscilli Rebuttal page 27, emphasis in original).

Q. Is Mr. Ruscilli's interpretation correct?

A. No. At no point in the TRO does the FCC describe an enterprise switch as a switch that is *used exclusively* to serve enterprise customers. In fact, in the same paragraph that Mr. Ruscilli cites in his testimony, TRO paragraph 441, the FCC states, "competitors using their own switches are currently serving extremely few mass market customers, through enterprise switches or otherwise." This statement makes it clear that mass market customers are served through enterprise switches, and having a few mass market customers on an enterprise switch does not magically turn the enterprise switch into something else; it is still an enterprise switch even if it is not used exclusively to serve enterprise customers. Furthermore, in paragraph 437 the TRO discusses the deployment of switches to serve large business customers, and in footnote 1338 to that paragraph the TRO

[2] "...we require the states to give evidence of a single competitively deployed *mass market switch* "particularly substantial weight" and evidence of *enterprise switch* deployment "substantial weight"..." TRO footnote 1561, emphasis supplied.
[3] TRO footnote 1354
[4] TRO paragraph 508

describes many of these switches as being used "almost exclusively to provide service to large businesses."[5] This suggests that small portions of these same switches may be (or are) used to serve mass market customers. Yet this occurrence—the act of serving a few mass market customers off of what is otherwise a switch deployed to serve enterprise customers—was obviously insufficient for the FCC to find no impairment in terms of mass market local switching.

Q. Mr. Ruscilli suggests, on page 27, that Sprint would exclude as trigger candidates switches that serve both mass market customers and enterprise customers ("It is ludicrous to exclude as triggers candidates switches that serve both markets". (Ruscilli Rebuttal page 27 lines 24-25)) Is his characterization of Sprint's position correct?

A. Not at all. Just as the TRO does not suggest that an enterprise switch only serves enterprise customers, nor does it suggest that a mass market switch can only serve mass market customers. Mr. Ruscilli is correct when he states that carriers will (and do) use switches to serve both types of customers. But as stated above and in my direct testimony, the FCC makes a clear distinction between enterprise switches and mass market switches, and between switches *deployed* to serve large enterprise customers and switches *deployed* to serve mass market customers. And, to refer to an example from my rebuttal testimony, if 99.93% of the utilized capacity of a switch is used to serve enterprise customers—as is the case for one of BellSouth's purported trigger-meeting CLEC switches—then it would be

[5] TRO footnote 1338, emphasis supplied.

difficult for anyone to consider that as anything other than an enterprise switch.[6] Such a switch does not and *should* not count toward meeting the trigger, and for good reason: such a switch says nothing about an entrant's ability to come into an area and serve *the mass market* in that area.

Q. Mr. Ruscilli also suggests that it would be "absurd" to examine the utilized capacity of the switch to determine if it should be considered an enterprise switch or a mass market switch (Ruscilli Rebuttal page 28). Can you comment on his remark?

A. Interestingly, when Mr. Ruscilli makes that remark in his testimony he fails to provide a single word of explanation as to *why* he feels it would be "absurd" to examine utilized switch capacity. With due respect, what could truly be considered "absurd" is the concept—apparently advocated by Mr. Ruscilli—that a switch that is used overwhelmingly to serve large business customers, and serves perhaps a handful of mass market customers, somehow provides evidence that there is no impairment in terms of an entrant serving the mass market.

This last point is most apparent when one considers the *source* of the FCC's national finding of impairment: the cut-over process.[7] In discussing the economic and operational barriers that are caused by the cut-over process the TRO is extremely clear that the issue of *volume of transactions* plays a key role their analysis.[8] Simply put, the problems created by the cut-over process, which <u>are</u> the

[6] Utilized capacity measured in voice grade equivalents, see Stahr Rebuttal page 12.
[7] TRO paragraph 459.
[8] TRO paragraph 468.

source of impairment, are exacerbated in cases of significant volume (or potential significant volume).

As stated in my direct testimony, BellSouth has put forth a purported trigger-meeting CLEC that is serving (at most) exactly seven (7) mass market customers in a market. For Mr. Ruscilli and BellSouth to suggest that this switch demonstrates that the causes of impairment (the cut-over process and associated volume issues) have been overcome, when the total volume of transactions on the switch is *seven* mass market customers, is, to use Mr. Ruscilli's term, "absurd."

Q. In his rebuttal testimony Mr. Ruscilli also takes issue with the criteria that trigger-meeting CLECs should be serving a non-de-minimis portion of the market, and on page 22 he states that this criteria "is not supported by the TRO". Please comment.

A. It is obvious from his testimony that Mr. Ruscilli would prefer that the Commission conduct its analysis of actual deployment by simply counting to three, and never bother to consider *why* it is counting to three. As stated in the TRO, the trigger analysis is intended to demonstrate the technical and economic feasibility of an entrant serving the mass market with its own switch. If Mr. Ruscilli believes that a miniscule market share demonstrates this feasibility then we must ask why BellSouth required a 15% market share *obtained by a single CLEC* in order to demonstrate the economic feasibility of serving these same markets with its BACE cost model. We must also ask why BellSouth used a 5% market share, again *obtained by a single CLEC*, to demonstrate economic

feasibility in its filings before the FCC, and even then only found feasibility in larger wire centers.[9] If BellSouth truly believes a CLEC using an enterprise switch, and leveraging that switch to serve seven mass market customers, demonstrates the economic and technical feasibility of serving the mass market then why did they not conduct their potential deployment analysis that way? Doing so would have worked to their advantage, because it is extremely likely that many more markets would have demonstrated profitability. Furthermore, evidence of actual deployment (in the form of triggers) is intended to show that, in the area being examined, the FCC's national finding of impairment is not applicable. Therefore, at a minimum, the volumes of service that the purported trigger-meeting CLEC is currently providing must demonstrate that it has overcome the cut-over problem which forms the basis for the nationwide finding.

Simply put, Mr. Ruscilli would have the Commission decide that if a CLEC is serving any mass market customers—even one or two mass market customers—anywhere in a market then the FCC's trigger criteria is satisfied. But such a finding does not provide any evidence regarding whether the cut-over problem has been overcome, and it does not provide any evidence of the economic feasibility of serving the mass market.

Sprint Switch in Orlando Market

[9] See Attachment to Letter of Mr. Glenn T. Reynolds, BellSouth Ex Parte filing in CC Docket No. 01-338, 96-98, 97-147 January 21, 2003.

Q. In BellSouth's testimony that was filed on 12/4/03 a Sprint switch is listed as one of the trigger-meeting CLEC switches for the Orlando market? Does this switch meet the criteria to be included as a trigger-meeting CLEC switch?

A. No it does not. Despite Mr. Ruscilli's claims to the contrary, the switch identified by BellSouth does not count toward meeting the competitive triggers because it is a switch that was deployed to serve enterprise customers (as referred to in the TRO), and the vast majority of the utilized capacity of the switch is used to serve enterprise customers. Furthermore, this switch does not provide service to any residential customers in the Orlando market at all.

Q. Does this conclude your surrebuttal testimony?

A. Yes it does.

CHAIRMAN BAEZ: Next I have Witness Dickerson.

MS. MASTERTON: Okay. First, Mr. Dickerson had direct testimony filed on December 4th consisting of 6 pages with corrections filed on February 23rd; revised rebuttal testimony filed on February 16th, consisting of 26 pages; and revised surrebuttal testimony filed on February 16th, consisting of 11 pages. And I was going to separate the testimony of Kent Dickerson and then the testimony that he filed jointly with Christy Londerholm, but I can do that right now if you want me to.

CHAIRMAN BAEZ: Let me see, because I'm working off of --

MS. MASTERTON: That was new. It was filed on the 23rd.

CHAIRMAN BAEZ: Okay. Let's take them separately. Let's show the direct, revised rebuttal, and revised surrebuttal of Kent Dickerson moved into the record as those read. Let's go through his exhibits.

MS. MASTERTON: Okay. I will first identify the nonconfidential exhibits. KWD-1, KWD-2, KWD-3, Revised Exhibit KWD-6, KWD-9, KWD-10, and KWD-11. Those are public.

CHAIRMAN BAEZ: Let me see if I have these right. I have KWD-1 through 3, Revised 6, 9, 10, and 11.

MS. MASTERTON: Correct.

CHAIRMAN BAEZ: Show those marked as Composite

Exhibit 107.

(Composite Exhibit 107 marked for identification.)

MS. MASTERTON: And then for confidential exhibits, he had KWD-4, 5, 7, 8, Revised KWD-12, and KWD-13.

CHAIRMAN BAEZ: Show Dickerson Exhibits KWD-4, 5, 7, 8, Revised 12, and 13 as Composite Exhibit 107-B.

(Composite Exhibit 107-B marked for identification.)

MS. MASTERTON: And the last thing I had was the supplemental testimony of Kent W. Dickerson and Christy V. Londerholm filed on February 20th with corrections filed on February 23rd.

CHAIRMAN BAEZ: Show the supplemental -- I'm sorry, what was that?

MS. MASTERTON: Supplemental testimony of Kent W. Dickerson and Christy V. Londerholm

CHAIRMAN BAEZ: Supplemental of Dickerson and Londerholm?

MS. MASTERTON: Yes.

CHAIRMAN BAEZ: Okay. As revised admitted into the record as though read. Do they have exhibits?

MS. MASTERTON: No. There was KWD-13. But I did want to say there were corrections that I filed publicly and then there were corrections that were filed to a confidential portion that were filed separately, and both of those should be included.

CHAIRMAN BAEZ: Okay. Let the record reflect. Thank you.

MS. MASTERTON: That's it.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

KENT W. DICKERSON

Q. Please state your name, business address, employer and current position.

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

Q. Please summarize your qualifications and work experience.

A. I received a Bachelor of Science degree from the University of Missouri - Kansas City in 1981 with a major in Accounting. In 1984, I passed the national exam and am a Certified Public Accountant in the State of Missouri.

From 1981 to 1983, I was employed as a Corporate Income Tax Auditor II for the Missouri Department of Revenue. From 1983 to 1985, I worked for Kansas Power and Light (now Western Resources) in the Tax and Internal Audit areas. I joined United Telephone Midwest Group in September, 1985 as a Staff Accountant in the Carrier Access Billing area. Thereafter, I moved through a progression of positions within the Toll Administration and General Accounting areas of the Finance Department.

In 1987, I was promoted into the Carrier and Regulatory Services group as a Separations/ Settlement Administrator performing Federal and Intrastate access/toll pool settlement, reporting and revenue budgeting functions. I was promoted to Manager - Pricing in June, 1989 where I performed FCC regulatory reporting and filing functions related to the United Telephone - Midwest Group Interstate Access revenue streams. In 1991, I was promoted to Senior Manager - Revenue Planning for United Telephone - Midwest Group. While serving in this position, my responsibilities consisted of numerous FCC regulatory reporting and costing functions. In 1994, I accepted a position within the Intrastate Regulatory operations of Sprint/United Telephone Company of Missouri where my responsibilities included regulatory compliance, tariff filings, and earnings analysis for the Missouri company's intrastate operations. Since December 1994, I have set-up and directed a work group which performs cost of service studies for retail services, wholesale unbundled network elements cost studies, and state and federal Universal Service Fund cost studies. Over the last seven years, I have been charged with developing and implementing cost study methods which conform with Total Service Long Run Incremental Cost ("TSLRIC") and Total Element Long Run Incremental Cost ("TELRIC") methodologies. I am responsible for written and oral testimony, serving on industry work groups, and participating in technical conferences related to TSLRIC/TELRIC costing methodology, filing of studies within 18 individual states that comprise Sprint's Local Telephone Division (LTD) and providing cost expertise to Sprint's participation in regulatory cost dockets outside of the LTD territories.

Q. Have you previously testified before state regulatory commissions?

A. Yes. I have testified before the Florida, Nevada, North Carolina, Texas, Kansas, Missouri, Georgia, and Wyoming regulatory commissions regarding TSLRIC/TELRIC cost matters.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to support Sprint witness Dr. Brian Staihr's response to issue 5f, which states, "For each market, what is the appropriate cut-off for multiline DS-0 customers (where it is more economic to serve a multiline customer with a DS-1 loop)?" My testimony provides the calculations used to determine the economic crossover between provisioning DS-0 (voice grade) loops and DS-1 loops.

Q. Has Sprint developed an economic crossover analysis?

A. Yes. Exhibit KWD-1, attached to my testimony, calculates the average economic crossover a competitive local exchange carrier (CLEC) would experience in serving the an analog customer in the territories of the three largest incumbent local exchange carriers (ILEC) within the state of Florida based on the number of analog voice lines used by the customer.

Q. What is the appropriate cut-off for multiline DS-0 customers (where it is more economic to serve a multiline customer with a DS-1 loop)?

A. The model results indicate that up to 12 DS-0s at a customer's location, purchasing individual loops is more cost effective than purchasing single DS-1.

Q. What are the cost components in the economic cost crossover model for the provision of service over a DS-1 facility?

A. Our model includes the monthly recurring charges of the unbundled network element DS-1 loops, the unbundled network element non-recurring charges for DS-1 loops, and the monthly costs of a channel bank installed at the customer's premises used to multiplex multiple voice channels onto a DS-1 loop facility.

Q. What are the cost components in the economic cost crossover model for the provision of service over a DS-0 facility?

A. The model includes the monthly recurring charges of the unbundled network element DS-0 loops and the non-recurring charges for unbundled network element DS-0 loops. The non-recurring charges reflect the charges for the initial DS-0 loop and each additional loop ordered.

Q. What are the sources of unbundled network element prices for the monthly recurring services and the non-recurring services?

A. All unbundled network element prices are Florida Commission approved from Docket No. 990649-TP. Order No. PSC-02-1311-FOF-TP was used for BellSouth's UNE prices, Order No. PSC-02-1574-FOF-TP was used for Verizon's UNE prices, and Order No. PSC-03-0058-FOF-TP was used for Sprint's UNE prices.

Q. What is the source of the access line data used to determine the weighted average UNE prices?

A. The access line data are from the HCPM adjusted with USAC lines in service. HCPM provided lines by wirecenter as of 2000. For each company in the study, the difference between the lines in HCPM and lines in USAC was applied to the

wirecenter level line counts to determine a more current estimate of access lines for the studied ILECs.

Q. What additional variables are included in the calculations?

A. A weighted average cost of capital input is used for amortizing the non-recurring charges. The weighted average cost of capital is the same 12.26 percent that was supported by Dr. Staihr in Docket No. 990649-TP.

Q. How are the non-recurring unbundled network element costs treated in the economic crossover analysis?

A. The non-recurring unbundled network element charges for establishing DS-0 or DS-1 services are amortized over a 24 month period using Sprint's weighted cost of capital. For our modeling, we have assumed a 24 month average customer life.

Q. How is the monthly cost of the channel bank at a DS-1 customer premises calculated?

A. The monthly cost of the equipment is calculated by dividing the total material cost of the over the life of the asset, accounting for Sprint's cost of capital, nine year depreciation life, income tax, maintenance, and sales tax of 7 percent.

Material prices reflect the size of the channel bank and cards that would be installed at a customer premises capable of multiplexing one DS-1 into DS-0s. The material was amortized using Sprint's annual cost factors from Docket No. 990649B-TP (except for the cost of capital which was changed to 12.26 percent as previously described). Labor related to the installation of the customer premises

channel bank was amortized over 24 months.

Q. How are these cost components used to calculate a state-wide average crossover between unbundled DS-0 and DS-1 loops?

A. The model calculates the UNE provisioning costs of both DS-0 and DS-1 facilities as described above for each central office in the state of Florida served by the largest LECs (Bellsouth, Verizon, and Sprint). A weighted average cost for each MRC and NRC is computed by multiplying the central office specific result by the percentage of access lines in that central office. The weighted average cost of a DS-1 loop is then divided by the weighted average cost of a DS-0 loop.

Q. What is the economic crossover result produced in the model.

A. The model results indicate that up to 12 DS-0s at a customer's location, purchasing individual loops is more cost effective than purchasing a single DS-1. Above 12 DS-0s, the DS-1 becomes the more cost effective means of providing service to the customer.

Q. Does this conclude your testimony?

A. Yes.

SPRINT-FLORIDA/SPRINT COMMUNICATIONS LP
DOCKET NO. 030851-TP
~~FILED: January 7, 2004~~ Revised February 13, 2004

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

REBUTTAL TESTIMONY

OF

KENT W. DICKERSON

Q. Please state your name, business address, employer and current position.

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

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

A. Yes.

Q. What is the purpose of your Rebuttal Testimony?

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

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Q. Please describe how your testimony is organized?

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

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

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

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

SPRINT'S ANALYSIS OF BELLSOUTH'S COMPETITIVE ENTRY (BACE) MODEL

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

A. Yes, I have.

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

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

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

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

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

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

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

Process (P-Process)

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

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

Quantity Process (Q-Process)

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

[1] The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 30.
[2] Direct Testimony of Debra Aron, December 4, 2003, page 23.
[3] The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 32.
[4] The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 33.

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

Revenue Process (R-Process)

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

Operations and Network Process (ON-Process)

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

[5] Direct Testimony of James W. Stegeman, December 4, 2003, pages 36-39.
[6] The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 35.

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

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

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

[7] The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 54.
[8] The BellSouth Analysis of Competitive Entry Model-Methodology Manual, page 55.

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

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

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

Q. Has the BACE Model benefited from any previous public review and scrutiny?

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

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

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

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

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

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

BACE Model Collocation Costs are in Error

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

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

Q. Looking first at Exhibit KWD-4 "Summary of Collocation Build Out NPV Differences", please explain your analysis and conclusion.

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

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

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

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

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

A. Yes. I have prepared Exhibit KWD-5 which computes the annual DC power consumption charges a CLEC would pay to BellSouth. Exhibit KWD-5 computes the 10 year NPV of DC Power consumption charges based on DC power quantities necessary to serve the DSO CLEC line demand assumed in BellSouth's filing. Based on conversation with BellSouth Witness James W. Stegeman, I learned the BellSouth DC power cost estimates assume a cost based on 60 amps of DC power for every collocation site. Page 2 of 2 of Exhibit KWD-5 shows that 1,056 DS0 lines can be served with 60 amps of DC Power. BellSouth's use of a single 60 amp DC Power assumption for every wire center results in 82% of

CLEC collocation sites having inadequate DC Power and associated understated costs. This is caused by the BellSouth modeled DS0 line demand for 82% of all CLEC collocation sites exceeding 1,056 lines (which is all that can be served with BellSouth's assumed 60 amps of DC Power). Comparing Sprint's externally computed NPV of DC power costs to that of the BACE model shows the dramatic 198% understatement of BellSouth's estimated DC power costs. I would note that the actual understatement of BellSouth's cost estimate exceeds the amount on this schedule as Sprint's DC power requirement reflects only the power required to serve the DSO line demand in BellSouth's filing. The additional DC power required to serve DS1 and DSL CLEC demand is not included in Sprint's DC power requirements and would increase the amount of understatement in BellSouth's cost estimate.

BACE Model Expense Estimates

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

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

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

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

A. No.

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

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

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

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

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

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

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

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

BACE Model Inputs

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

A. No. BellSouth's lack of reasonable access to numerous tables integral to the BACE Model results precludes a full and complete examination and validation of key model inputs. Additionally, Dr. Aron's testimony offers scant factual support and analysis for numerous critical model inputs, leaving BellSouth's case substantially unsupported. Thus, Sprint's review of inputs reflects a best effort under the circumstances of an overall unworkable lack of access to the BACE model itself and near total absence of data allegedly used to develop the model's inputs and assumptions. Sprint has completed nine distinct model adjustments and one cumulative run which I present as Exhibit KWD – 6 (Revised 2/12/04) to this testimony.

Q. Please describe Exhibit KWD-6 (Revised 2/12/04).

A. Exhibit KWD-6 (Revised 2/12/04) provides the ten year cumulative Net Present Value (NPV) of cash flows for the Mass Market customer segment for 10 distinct BACE Model scenarios. Scenario 1 of Exhibit KWD-6 (Revised 2/12/04) starts with the 10 year cumulative NPV of cash flows for Mass Market customers from BellSouth's BACE model filing with no modifications other than to group the

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

Q. Please describe Sprint Scenario 7 "Sprint Base Case: Adjust Purchasing Power".

A. Page 26 of the BACE Methodology Manual contains a brief description of a key model input factor titled "PurchasePower", described as follows, "To the extent that a CLEC has the same purchasing power as BellSouth, the ***PurchasingPower*** factor should be set to 100 (e.g. the CLECs PurchasePower as a percentage of BellSouth's Purchasing Power) … CLECs with less purchasing power may have a ***PurchasePower*** factor greater than 100." Scenario 7 in Exhibit KWD-6 (Revised 2/12/04) reflects the effect of changing the PurchasePower factor input from the 100 used in BellSouth's base case filing to a factor of 125. The 125 in effect recommends a CLEC vendor cost equal to $1.25 for every dollar BellSouth would

pay for the same equipment. The effect of this single input adjustment in Scenario 7 overlaid upon Sprint's base case Scenario 2 is to reduce cumulative NPV of cash flows by $41,689,824~~42,293,051~~.

Q. Why do you believe this adjustment is appropriate?

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

Q. Please describe Scenario 8 "Sprint Base Case: Adjust Sales Expense" of Exhibit KWD-6 (Revised 2/12/04).

A. Scenario 8 reflects the effect of increasing the sales expenses contained in BellSouth's base case to a level consistent with Sprint's actual CLEC experience.

The actual sales expense input corrections to BellSouth's understated values are shown in Exhibit KWD-7 to this testimony. The effect of Scenario 8 on the Sprint Base Case Scenario 2 is to reduce cumulative NPV of cash flows by ~~$138,265,222~~138,362,683.

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

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

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

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

As explained below, Sprint has calculated the cost of sales for customer acquisition and entered the corrected inputs in the BACE model. Separate inputs have been created for residential, SOHO, small business (SME/A), medium business (SME/B), and large business (SME/C) customers to match the five BACE model input requirements. (See Exhibit KWD-7 for corrected customer sales acquisition cost inputs used in the BACE model).

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

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

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

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

10,000 United Mileage Plus airline miles) and then are continuously rewarded for monthly usage (i.e. airline miles for monthly dollars spent). The upfront and ongoing reward expenses are sales acquisition costs that actually increase per customer gross add costs as the base of affinity customers grows. This extensive experience had been used to calculate a sales and marketing cost per gross add for each customer size segmentation utilized in the BACE model.

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

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

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

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

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

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

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

Q. Please explain Scenario 9 of Exhibit KWD-6 (Revised 2/12/04).

A. Scenario 9 of Exhibit KWD-6 (Revised 2/12/04) reflects the effect of setting the BACE model "CLEC Study Properties" value of "IncludeTerminalValue" to N (for No). BellSouth's base case filing reflects the "IncludeTerminalValue" set to Y (for Yes) and is described at page 56 of the BACE Model Methodology Manual as follows: "By setting the ***CLEC Study Properties*** value of ***IncludeTerminalValue*** to 'Y' the model will include the net book value of the assets into the NPV value. This NPV addition is based on a 10-year discount

value (i.e., at the end of the 10th year, not midyear of the 10th year)." The effect of setting the "IncludeTerminalValue" to N in Sprint Scenario 9 reduces the cumulative NPV of Sprint's base case Scenario 2 by ~~$28,013,836~~27,241,356.

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

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

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

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

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

Q. Please describe Scenario 10 "Sprint Base Case: Adjust Bad Debt" of Exhibit KWD-6 (Revised 2/12/04).

A. Scenario 10 "Sprint Base Case: Adjust Bad Debt" reflects the quantification of replacing the Bad Debt assumption of [redacted] of revenues for all years contained in BellSouth's filing with a conservative level of Bad Debt more consistent with Sprint's actual CLEC and Long Distance experience. More specifically, Sprint's Scenario 10 uses a Bad Debt expense factor of 10% for year 1 improving to 6% for year 2 and 5% for years 3 through 10. These Sprint proposed values assume substantial improvement in the actual bad debt expense experienced by Sprint's Mass Market CLEC ventures to date. The effect of Scenario 10 using Sprint's more realistic Bad Debt estimate is to reduce the NPV of cash flows from Sprint's base case Scenario 2 by $~~$54,577,350~~53,434,146.

Q. Please describe Scenario 11 "Sprint Scenarios 2 – 10 Cumulative Changes".

A. Sprint Scenario 11 reflects the cumulative effect of including all of Sprint's corrections to BellSouth's base case (Scenarios 2 through 10) in a single run. The cumulative NPV of cash flows resulting from these corrections is a negative $~~$133,625,579~~136,455,897, which is a reduction of $~~$453,711,979~~444,422,035 from the BellSouth base case scenario. I would emphasize this cumulative result

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

Despite the significant areas which I was unable to correct in BellSouth's filing, Exhibit KWD-6 (Revised 2/12/04) nonetheless supports the opposite conclusion asserted by BellSouth witness Dr. Aron. Rather, Exhibit KWD-6 (Revised 2/12/04) demonstrates the unworkable economics of a CLEC serving Mass Market customers using self-provisioned switches from day one of market entry. As discussed in Dr. Staihr's testimony, this substantial cumulative negative NPV of cash flow values is consistent with real world CLEC results evidenced over the seven, going on eight, years since the passage of the 1996 Telecommunications Act.

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

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

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

Q. Does this conclude your rebuttal testimony?

A. Yes.

[9] Direct Testimony of Randall Billingsley, December 4, 2003, p. 3.
[10] Direct Testimony of Randall Billingsley, December 4, 2003, p. 10.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

SURREBUTTAL TESTIMONY

OF

KENT W. DICKERSON

INTRODUCTION

Q. Please state your name, business address, employer and current position.

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

Q. Are you the same Kent W. Dickerson who filed Direct and Rebuttal Testimony in this case for Sprint?

A. Yes.

Q. What is the purpose of your Surrebuttal Testimony?

A. The purpose of my Surrebuttal Testimony is to provide additional evidence and discussion regarding errors contained within BellSouth's potential deployment case. Specifically, I will further highlight problems with BellSouth's BACE model (Model) inputs and potential deployment case relative to CLEC collocation costs, General and Administrative (G&A) expense estimates, and Customer Acquisition Costs. I will also provide and discuss four straightforward sensitivity analyses of the BACE model which demonstrate its results to be illogical and

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unreliable, thus rendering BellSouth's claims of non-impairment based on potential deployment lacking credible evidence or support.

BACE Model Errors – Collocation

Q. In your rebuttal testimony you presented an analysis of Sprint's externally computed collocation build-out costs to those estimated by the BACE model (See Exhibit KWD-4). Has Sprint's discovery requests to BellSouth resulted in any evidence from BellSouth which could explain the dramatic understatement of collocation build-out cost demonstrated by Exhibit KWD-4 (554%)?

A. No. In fact BellSouth's response to Sprint's Fifth Set of Interrogatories, No. 15 (See Exhibit KWD-9), provides further evidence that the BACE model cost estimates severely understate a CLEC's cost to establishing collocations within BellSouth central offices. I would first point out that BellSouth's response admits that the BACE model collocation build-out cost calculations cannot be seen as follows:

Sprint Request

"e. Where in the model can calculations of such engineering costs be viewed?

BellSouth Response

"e. The calculations cannot be viewed within the BACE Model."

This same Sprint Interrogatory No. 15 requested that BellSouth identify if the BACE model accounted for CLEC engineering costs for DC power cables, cross connect cables and collocation equipment and, if so, where in the Model it was located. BellSouth's response claims these necessary CLEC collocation costs are

buried in "In-Plant Factors" derived from BellSouth's internal cost records while, at the same time, admitting none of their claim can be viewed and thus verified by an external party such as Commission Staff or Sprint.

Q. Do you believe BellSouth's claim that "In-Plant Factors" derived from BellSouth's internal cost records and then buried somewhere in the BACE Model's invisible calculations, provides adequate assurance these costs have been properly estimated and included in the estimate of CLEC collocation build-out costs?

A. No, for several reasons. The first and most obvious reason I do not accept BellSouth's claim is because of the extreme understatement (554%) of CLEC collocation build-out costs demonstrated in Exhibit KWD-4 of my rebuttal testimony. Construction costs of DC Power cables are an integral part of a CLEC collocation build-out costs and, while it is convenient for BellSouth to offer unsubstantiated claims that these costs are, in some fashion, buried in "In-Plant Factors" contained elsewhere in the BACE Model, this explanation does not stand up to a simple test of logic. As stated above, CLECs' construction costs of DC Power cables are integral to the "build-out" costs of CLEC collocation space and yet BellSouth now claims these costs are not logically intended to be captured in their understated BACE model ColloBuildOut calculations. Rather, BellSouth asks the Commission and all other parties including Sprint to accept, without evidence, that these costs are buried in factors and unseen calculations contained elsewhere in the "private" BACE Model. This is, at a minimum, an extremely illogical approach to estimating CLEC costs of constructing DC Power cables as part of collocation build-outs.

BellSouth's assurance is also implausible given the fact that BellSouth does not perform the engineering and construction of DC power and Cross-connect cables on behalf of CLECs. Instead, BellSouth requires CLECs to bear these costs directly via the CLECs contracting this work themselves using BellSouth approved contractors. Therefore, "In-Plant Factors" derived from BellSouth's internal records would not reflect a CLEC's construction costs (which were never incurred by BellSouth) and thus never reflected in BellSouth's internal accounting records.

Q. Ignoring for the moment the fact that BellSouth's internally derived "In-Plant Factors" do not include CLEC's collocation construction costs (which are never borne by BellSouth), does BellSouth's assurance otherwise make sense?

A. No, it does not. Starting at the bottom of page 40 of the BACE Model Methodology Manual, the following explanation is provided:

"ApplyLoadings (Network Cost table only)"

"The Yes/No flag indicates whether BACE should apply the InPlant and Loadings factors from the InPlantAndLoadings table to the cost record. Possible entries include Y or N. Typically, costs that are capital expenditures represents material only and will require the application of InPlant and Loading factors and have ApplyLoadings set to "Y". "

The ApplyLoadings indicator for all ColloEquipment items contained in BellSouth's filing (including Cross-Connect cabling, which was a subject of Sprint Interrogatory No. 15) was set to "N" thus rendering BellSouth's claim

unquestionably false. Even if their "In-Plant Factors" could somehow be accepted to include CLEC costs never incurred by BellSouth, the fact that BellSouth's filing did not apply those factors to CLEC collocation equipment proves BellSouth's filing excludes these substantial and necessary costs. This omission of CLEC collocation build-out costs understates each CLEC collocation within the BACE Model and renders the EELs vs. Collocation "Optimization" unreliable as well. Ultimately, this substantial cost omission renders BellSouth's cumulative NPV figures and their associated claims of CLEC non-impairment inaccurate and unreliable as well.

BellSouth Potential Deployment Errors – G&A Expenses

Q. In your rebuttal testimony you expressed concern with BellSouth's use of a linear factor relationship to revenues in order to estimate what Dr. Aron described as CLEC General and Administrative expenses. Do you have further evidence to offer on this subject?

A. Yes. Attached as Exhibit KWD-10 to this testimony is Sprint's Third Set of Interrogatories, No. 6 and BellSouth's corresponding response. Starting at the top of page 2 of 3 and continuing on to page 3, it is immediately evident that Dr. Aron has erroneously classified numerous FCC Part 32 investment related expense accounts as "G&A expenses". Obvious errors in Dr. Aron's G&A expense groupings include her inclusion of Network Support expense (Accounts 6110 – 6116), General Support expense (Accounts 6120 – 6124), Provisioning (Account 6512), Network Operations expense (Accounts 6530 – 6535) and Customer Services expense (Accounts 6620 – 6623). Even a casual examination of the FCC

Part 32 account structure instructs that these expense accounts are not General and Administrative expenses as Dr. Aron asserts, but rather are costs associated with either investment related activities (Accounts 6110 - 6116, 6120 - 6124, 6512, and 6530 - 6535), or customer related activities (Accounts 6620 -6623). These errors in Dr. Aron's "expense mapping" are compounded through her use of a linear factor relationship of 28.4% of revenues (15% for long distance revenues) to estimate these expenses. Investment related expenses such as Network Support, General Support and Network Operations cannot be perfectly managed in lock step with revenues as Dr. Aron's approach argues. Further, varying levels of customer churn will directly affect customer service expenses while having a much lower impact, or potentially no impact, on revenues. These additional errors in BellSouth's CLEC expense estimation process provide yet another demonstration that BellSouth's BACE Model NPVs are inaccurate and unreliable for purposes of examining CLEC non-impairment in Mass Market Switch self-provisioning.

BellSouth Potential Deployment Errors – Residential Customer Acquisition Costs

Q. In your rebuttal testimony, you discussed your concerns with BellSouth's proposed values for estimating CLEC customer acquisition costs. Have you performed additional research in this area?

A. Yes. As part of her testimony, Dr. Aron presented an Exhibit DJA-06 which presented some figures alleged to be CLEC mass market customer acquisition costs. In Sprint's First Request for Production of Documents (POD), Item No. 21 Sprint requested, and received from BellSouth, the external documentation

referenced in Exhibit DJA-06 enabling me to now comment further on this area of concern.

Q. According to Exhibit DJA-06, Z-Tel's customer acquisition target cost is $50 and Z-Tel's actual cost is $60-$70. Do you agree with these figures?

A. No. The actual quote from the DJA-06 referenced source document (POD Item No. 21), the Thomas Weisel Partners report on Z-Tel Technologies (Exhibit KWD-11) states,

"Z-Tel is making an increased effort to lower its customer acquisition costs to below $50 from **roughly $100-$120 excluding TV advertisements**..." (Emphasis added.)

Q. Are Z-Tel's customer acquisition costs representative of those that would be incurred by a CLEC building market share, as BellSouth's BACE Model filing purports to model?

A. No. Dr. Aron fails to mention that Z-Tel was reporting a loss of 40,000 customers and a 6% decline in revenue for that current quarterly period. This loss followed a loss of 80,000 customers for the previous quarter. This cumulative loss of 120,000 customers on a starting base of 380,000 customers is a negative growth rate of (31%) for just a six-month period. This does not represent the extremely fast growing CLEC depicted in BellSouth's BACE Model filing. As noted above, the Z-Tel actual costs exclude mass market television advertising which is also inconsistent with the CLEC market penetration assumed in BellSouth's BACE Model filing.

Q. According to Exhibit No. DJA-06, Talk America's residential customer acquisition cost is $80. Do you agree with this number?

A. No. Documentation in Talk America's Form 10-K filed with the SEC for the fiscal year ended December 31, 2002, indicates a much higher cost. Talk America's Form 10-K indicates the company incurred $27.1 million in sales and marketing expenses during 2002 while adding 154,000 new bundled (local and long distance) customers. This would compute to an average customer acquisition cost of $175 per customer ($27,100,000 / 154,000) or more than double the $80 figure used by Dr. Aron.

BACE Model Calculation Errors

Q. Have you performed any further analysis which evidences errors in the BACE Model calculations?

A. Yes. In Exhibit KWD-12 (Revised 2/10/04) to this testimony, I provide the Commission with four straightforward sensitivity analyses, which demonstrate the BACE Model's internal workings and resulting NPVs to be illogical and unreliable. I will now explain each of these.

In Exhibit KWD-12 (Revised 2/10/04) , I present key BACE Model results pulled from the BACE Model output reports, NetIncome-Total (lines 7-19 of Exhibit KWD-12 (Revised 2/10/04)) and CEA UneZone Reports (lines 23-34 of Exhibit KWD-12 (Revised 2/10/04)). Columns D-G represents four distinct BACE Model sensitivity analyses which demonstrate extreme problems with the BACE Model NPV results.

Q. Please describe Column D of Exhibit KWD-12 (Revised 2/10/04).

A. Column D of Exhibit KWD-12 (Revised 2/10/04) presents the results of running the BACE Model with the cumulative input changes contained and described in Exhibit KWD-6 (Revised 2/12/04), Sprint Scenario 11 titled "Scenarios 2-10 Cumulative Changes", with one exception, that being the use of BellSouth's filed values for customer acquisition costs as shown on rows 38-42 of Column D. This BACE Model run produced a negative Pre-Tax NPV for Mass Market of (~~$16,197,393~~25,161,287) (1a) and a positive Pre-Tax NPV for Enterprise of ~~$47,486,823~~43,993,504 (2a). Yet the BACE Model's after-tax NPV for Mass Market is a positive ~~$17,280,924~~54,424,268 (1b) and a negative after-tax NPV for Enterprise of (~~$50,663,472~~95,158,656) (2b)! While it is proper to consider the positive NPV impacts of reduced income taxes associated with a pre-tax negative NPV for Mass Market, it is not conceivably possible for this to reverse the pre-tax negative NPV to a positive after-tax NPV. Conversely, it is not possible for income taxes to reduce the Enterprise NPV from a positive pre-tax value to a negative after-tax value. Yet those are the results produced by the BACE Model! While the BACE Model calculations cannot be traced within the model, it is obvious that the Model's estimated Tax NPVs and after-tax NPVs for both Mass Market and Enterprise are grossly in error.

Q. Please describe Column E of Exhibit KWD-12 (Revised 2/10/04).

A. Column E of Exhibit KWD-12 (Revised 2/10/04) presents the results of running the BACE Model with the inputs used to generate Column D, except that Column E uses the increased sales cost input values as shown on rows 38-42 of Column E

(versus the lower BellSouth values used in Column D). Please note this single input value modification increases sales costs for both Mass Market and Enterprise. (This single change can be verified by comparing the values on rows 7-13 in the respective columns and noting that they remain constant but for Sales Expenses on Row 11 as described for each column.) Yet this single value change, which increases sales costs for all customers including Enterprise, drives the after-tax NPV for Enterprise from a negative ($95,158,656~~50,663,472~~) (2b) to a positive $8,144,280~~13,268,463~~ (2c)! It defies logic to suggest than an increase in sales costs would drive the NPV results of serving Enterprise customers from negative to positive and yet that is the erroneous result the BACE Model yields.

Q. Please describe Column F of KWD-12 (Revised 2/10/04).

A. Column F starts with Column E and reduces only the sales cost for Enterprise customers as shown in rows 39-43 of Column F versus the same in Column E. Once again the BACE Model produces extremely anomalous results. Under this scenario, the BACE Model results depict that it is somehow possible to increase the losses for negative after-tax NPV Mass Market from (~~$133,625,579~~136,455,897) (1c) to ($200,876,950~~227,115,584~~) (1d), when no changes were made to Mass Market input values and in fact, a sales cost reduction for Enterprise was the only input value altered!

Q. Please describe Column G of KWD-12 (Revised 2/10/04).

A. Column G simply reverses the sensitivity performed in Column F and reduces the sales cost input values for Mass Market from the levels used in Column E, while holding the values for Enterprise customers in Column G constant to Column E.

This BACE Model run yields effectively the same error described for Column F above. Although the Enterprise customer sales costs are held constant and the Mass Market customer sales costs are reduced, the BACE Model results from this run increased~~reduced~~ the after-tax NPV for Enterprise customers from ~~a positive~~ $8,144,280~~13,268,463~~ (2c) to ~~a negative~~ ($66,137,652~~76,855,450~~) (2d).

These straight forward sensitivity analyses presented in Exhibit KWD-12 (Revised 2/10/04) demonstrate the BACE Model NPV results to be fatally flawed and unsuitable for the conclusions asserted by BellSouth.

Q. Does this conclude your Surrebuttal testimony?

A. Yes.

REDACTED

BEFORE THE PUBLIC SERVICE COMMISSION

SUPPLEMENTAL TESTIMONY AND EXHIBITS

OF

KENT W. DICKERSON AND CHRISTY LONDERHOLM

Introduction and Summary

Q. Mr. Dickerson, please state your name, business address, employer and current position.

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

Q. Mr. Dickerson, did you previously file Direct, Rebuttal, and Surrebuttal Testimony in this proceeding?

A. Yes, I did.

Q. Ms. Londerholm, please state your name, business address, employer and current position.

A. My name is Christy V. Londerholm. My business address is 6450 Sprint Parkway, Overland Park, KS 66251. I am employed as Manager - Network Costing for the Sprint/United Management Company.

Q. Ms. Londerholm, please discuss your educational background.

A. I received a Bachelor of Science degree in Mathematics from the University of Missouri-Kansas City in 1990. I am currently working towards a Master of Finance from Webster University-Kansas City.

Q. Ms. Londerholm, please describe your work experience.

A. I began my career with Sprint in 1998 as a Project Manager in the Customer Service Organization's Decision Support group. In this role, I worked directly with Sprint's financial reporting and operational systems. My responsibilities included projects associated with Outside Plant Engineering and Construction, Labor, Installation and Repair metrics, and General Accounting.

In 2002, I was promoted to my present position. In my current role, I am responsible for developing and maintaining all macros necessary to process Sprint's Costing Models. I am responsible for enhancing and assisting in the development of each module within these Models. I facilitate the processing and analyze the results for Sprint's TELRIC, TSLRIC, Switched Access, Reciprocal Compensation, and Basic Service Cost Studies. I perform analyses on external models presented to Sprint, such as the BACE model.

Q. Ms. Londerholm, have you previously presented testimony before any regulatory commission?

A. No, I have not.

Q. What is the purpose of your joint Supplemental Surrebuttal Testimony?

A. On January 13, 2004, Sprint filed a Motion To Compel seeking open, electronic access to the calculation code of the BellSouth BACE Model. On January 20, 2004, BellSouth objected to Sprint's discovery request and responded that Sprint did not need such access to verify the BACE Model.

On February 16, 2004, the Commission issued an Order ("February 16th Order) requiring BellSouth to make the calculation code available to Sprint at a BellSouth location. Specifically, the Commission stated:

> In this instance, neither Sprint nor our own staff has been able to audit or otherwise verify the integrity of the BACE model. I therefore order BellSouth to:
>
> 1. Make the most recent version of the BACE model available to Sprint and our staff by close of the business day on February 18, 2004, at BellSouth's office in Tallahassee, Florida;

The purpose of this Supplemental Surrebuttal Testimony is to provide the results of Sprint's analyses of the open version of the new BACE Model and new inputs, including the identification of additional concerns, and to identify with greater specificity and further confirm previously identified areas of concern. Sprint did not have access to this model version until after its rebuttal and surrebuttal testimony had already been filed.

February 17 – 20th On-Site Review of the BACE Model

Q. Has the February 17 – 20th on-site review enabled Sprint to fully review the BellSouth BACE Model?

A. No. It is, unfortunately, too little, much too late. BellSouth filed its first version of the BACE Model on December 4, 2003. Eighty-nine (89) data tables were not viewable (see Exhibit CVL-1). The second version of the BACE Model was filed on January 21, 2003 with supplemental direct testimony. Twenty (20) data tables remained inaccessible from view. BellSouth filed its third set of Model inputs on January 28, 2004 with surrebuttal testimony. Throughout this entire process, in addition to the missing tables and the late filings of changes to the Model, BellSouth denied Sprint and all other external users open, electronic access to the calculation code. As a result of the February 16th Order, Sprint representatives were given open, electronic access to the BACE Model on February 17, 2004.

Thus, 10 1/2 weeks expired before Sprint had access to an open, visible version of the Model. Open access was ordered just one week prior to the beginning of the hearings, and after all written testimony and discovery cycles had been concluded, leaving Sprint insufficient means to pursue and present any possible analyses and conclusions made after reviewing the open, visible version of the model.

Q. Is one week sufficient time to review the BACE Model?

A. No, this timeframe is entirely inadequate. The BACE Model is a very complex model. It is not reasonable to expect validation of the BACE Model's voluminous calculations when Sprint did not have electronic access to the calculation until February 17, 2004, and then in a limited fashion at a BellSouth location.

Q. Were there restrictions placed on Sprint at the BellSouth location?

A. Yes. BellSouth minimized the usefulness of this last-minute access to an open version of the BACE Model. For example,

- The three Sprint representatives were limited to a single computer. They did not have sole access to this computer, but had to coordinate access to it with the Commission Staff.
- Each scenario run requires 45 minutes, during which time the three Sprint representatives were required to wait before another scenario could be processed.
- BellSouth explicitly denied Sprint administrator rights, which prevented Sprint from saving any of its scenario runs for later analysis.
- Sprint did not have access to a printer.

Q. Was all of the BACE Model source code made available to Sprint at the BellSouth location during the February 17 – 20th review?

A. No. The BACE.exe and BACEu.exe source code were not provided by BellSouth.

Q. What is the function of this missing source code within the BACE Model?

A. The BACE Model consists of three core executable programs:

- BACE.exe, which from our understanding controls the user interface,
- BACEe.exe, which performs cost calculations, and
- BACEu.exe, which from our understanding performs table utility functions.

Two of these three programs were not available at the BellSouth location for Sprint's review.

Q. Did this hinder Sprint's analysis?

A. Yes. Without access to the missing source code, Sprint did not have the ability to step through the calculations. As a result, Sprint had to spend most of one morning simply making modifications to the available code. While this modification allowed Sprint to step through the calculations, it was a waste of Sprint's limited time, and further limited Sprint's ability to perform sensitivity analyses.

Additional Analyses of the BellSouth BACE Model

Q. Has the on-site February 17 – 20th review revealed any additional areas of concern?

A. Yes. Despite the time-limited and otherwise restricted access Sprint was provided to the open Model, Sprint has performed additional analyses and identified concerns in the following areas:

- BACE Model switch investment is understated,
- BACE Model DLC (Digital Loop Carrier) investment is understated,
- BACE Model OSS (Operating Support Systems) Costs are understated, and
- BACE Model Network and General Support Assets are understated.

Q. Have any other significant events occurred since Sprint's January 28, 2004 surrebuttal testimony was filed which have allowed Sprint to perform additional analyses of the BACE Model?

A. Yes. First, BellSouth filed a "corrected" version 2.2 of the BACE Model on January 22, 2004. This was less than one week prior to the January 28, 2004 surrebuttal testimony filing date, which did not allow Sprint time to analyze this corrected version.

Second, BellSouth served Sprint with a BACE Model Demonstration version, populated with mock inputs, on January 23, 2004. Again, this was less than one week prior to the surrebuttal testimony filing date.

Third, it was not until January 29, 2004 that Sprint was aware that a printable version of the BACE Model source code, in Adobe Acrobat.pdf format, was available at the BellSouth website. Sprint was not notified of its existence,

and only became aware of it as a result of a self-initiated check of the CostQuest website.

Fourth, after the February 16, 2004 Commission Order, BellSouth finally allowed Sprint access to an open, electronic version of the BACE Model at a BellSouth location.

A. Switching Investment

Q. Has Sprint analyzed the Switching investments generated by the "corrected" January 22, 2004 version of the BACE Model?

A. Yes. This analysis is summarized on Exhibit KWD-13. Row 10 represents annual investment in switching equipment from the BellSouth "corrected" January 22, 2004 filing. Row 11 shows that the average investment per line over years 2 – 10 ranges from *** $[redacted] to $[redacted] ***. Row 13 shows that Sprint's average switching investment per line is *** $[redacted] *** as approved in Docket No. 990649-TP. Thus the BACE Model understates switching investment in years 2 – 10 by a range of *** [redacted]% to [redacted]% *** (Row 14).

Q. Is this reasonable?

A. No. The BACE Model switching investment per line for a start-up CLEC is severely understated even when compared to a mid-sized ILEC such as Sprint. A start-up CLEC without Sprint's economies of scale intuitively would have even higher per line costs.

Specifically, the CLEC modeled by the BACE Model has one switch per LATA. The CLEC has *** [redacted] *** switches in Florida, while BellSouth has *** [redacted] *** switches. The overwhelming volume of BellSouth's *** [redacted]*** switches compared to the CLEC's *** [redacted] *** clearly suggests BellSouth's use of their internal vendor cost to estimate the CLEC's cost is not reasonable.

B. DLC Investment

Q. Has Sprint analyzed the DLC (Digital Loop Carrier) investments generated by the "corrected" January 22, 2004 version of the BACE Model?

A. Yes. This analysis is also summarized on Exhibit KWD-13. Row 21 represents annual investment in DLC equipment from the BellSouth "corrected" January 22, 2004 filing. Row 22 shows that the average investment per line over the ten years ranges from *** $[redacted] to $[redacted] ***. Row 24 shows that Sprint's Commission-approved average DLC investment per line was *** $[redacted] *** in Docket No. 990649-TP. Thus the BACE Model understates DLC investment by a range of *** [redacted]% to [redacted]% *** over the ten year period (Row 25).

Q. Is the BACE Model DLC investment per line reasonable?

A. No. The BACE Model DLC investment per line for a start-up CLEC is severely understated even when compared to a mid-sized ILEC such as

Sprint. A start-up CLEC without Sprint's economies of scale would have even higher per line costs.

Specifically, the CLEC modeled by the BACE Model has approximately *** [redacted] *** DLCs in Florida, while BellSouth has approximately 4,200 DLCs. (Sprint – Florida has approximately 1,500 DLCs. Since BellSouth – Florida has about 2.8 times the number of switched access lines in Florida as Sprint, a reasonable estimate of the number of BellSouth DLCs is approximately 4,200.) Thus the dramatically larger number of DLCs in BellSouth's network versus the start-up CLEC modeled in the BACE Model again shows BellSouth's use of their internal vendor cost to be unreasonable.

C. Operating Support System (OSS) Costs

Q. Has your on-site review of the BACE Model resulted in any other material understatements?

A. Yes. The outcome of the on-site review of the BACE Model indicates that costs related to both Operating Support Systems (OSS) and Network and General Support Assets are also severely understated.

Q. Please explain the understatement of Operating Support Systems (OSS) costs.

A. As defined by the BACE Model, the cost element labeled "OSSStartup" theoretically captures the cost of all ordering, billing, and network-related systems required by any provider to supply local telephone service. The BACE Model calculates its total cost for OSS by multiplying the input value of *** $[redacted] *** by the BSTAsPctOfScopeOfOperations factor of *** [redacted] *** (which according to the BACE Model Methodology Manual "accounts for the relative size of the CLECs national scope of operations as compared to the BellSouth operating territory within the state"), resulting in a final OSS input value of *** $[redacted] ***.

These OSS systems are assumed to have a *** [redacted]-year *** life in the BACE Model. Therefore, the *** $[redacted] *** investment is made in both Year 1 and *** Year [redacted] ***, for a total OSS investment of *** $[redacted] *** over the 10-year analysis period. In comparison, Sprint/United Management Company had over *** $[redacted] *** in capitalized software on its books as of year-end 2003, of which over half (or *** $[redacted] ***) was attributable solely to Sprint's ILEC operations. Included in this total was *** $[redacted] *** in capitalized software additions that Sprint ILEC booked in 2003 alone, not to mention the over *** $[redacted] *** in expensed software enhancements recorded in 2003. The *** $[redacted] *** in capital additions made in 2003 by Sprint (a 100-year old company with existing OSS systems) by themselves exceed the 10-year total additions generated by the BACE Model for a hypothetical CLEC starting with no embedded OSS.

To illustrate the point in another way, the amount of capitalized software on Sprint's books is approximately 41 times greater than the amount predicted by the BACE Model for a new CLEC. By any measure, the *** [redacted] *** for OSS costs as shown in the BACE Model is severely understated, particularly considering that there is limited scalability in provisioning OSS systems (i.e., the same basic OSS must be in place for the first customer as for the millionth customer).

D. Network and General Support Assets

Q. Have you reviewed the BACE Model estimates of Network/General Support Asset capital costs?

A. Yes. Within the BACE Model, the cost element labeled "CapitalRelatedtoG&A" is apparently intended to capture the cost of Network and General Support assets (e.g., Vehicles, Work Equipment, Buildings, and Office Equipment) utilized by the CLEC. The BACE Model calculates its total investment for these Support Assets by multiplying the input value of *** [redacted] (or [redacted]) *** by the amount of revenue in each year to determine the resulting total investment (not capital additions) in each year. In other words, the Support Asset balance grows (or declines) in lock-step with revenue growth.

However, similar to the testimony related to the G&A Expense calculation in the BACE Model, it is unrealistic to calculate Support Asset investment based

on Revenue trends. Setting that point aside for the moment, the amounts calculated by the BACE Model do not bear any reasonable relationship to reality.

The BACE Model shows an investment in Support Assets of *** $[redacted] *** in Year 1, *** $[redacted] *** in Year 2, and *** $[redacted] *** in Year 3, with a growth to *** $[redacted] *** in Year 10, with an access lines served count of roughly *** [redacted] *** in Year 10. In comparison, Sprint-Florida had over *** $[redacted] *** in Network and General Support Assets on its books as of year-end 2002, which is approximately 18 times greater than the Year 10 asset amount produced by the BACE Model, even though Sprint-Florida's Access Line count of 2,200,000 is only *** [redacted] times *** the CLEC's Year 10 access line count. Again, by any measure, the ultimate *** $[redacted] *** in Support Asset investment as shown in the BACE Model is dramatically understated, as are the Year 1 through Year 9 amounts.

Summary

Q. Please summarize your Supplemental Surrebuttal Testimony.

A. Sprint's last-minute on-site review of the BellSouth BACE Model was insufficient to allow an adequate review of all areas of such a complex model.

Sprint's additional analysis has identified that switch investment, DLC investment, OSS costs, and network and general support assets are all

significantly understated. It is clear that BellSouth's excessively optimistic NPVs are unrealistic and wrong.

Q. Do you believe an adequate amount of time to review and analyze the BACE Model would reveal additional areas of concern?

A. Yes, I do. However, the numerous and significant errors, omissions, and understatements already identified provide sufficient evidence that BellSouth has failed to demonstrate that CLECs may economically serve the mass market without unbundled access to BellSouth's switches. For this reason, the Commission should reject BellSouth's potential deployment case.

Q. Does this conclude your Supplemental Surrebuttal Testimony?

A. Yes, it does.

Docket No. 030851-TP

Corrections to the Rebuttal Testimony of Kent W. Dickerson (page and line numbers are to the original testimony)

On pages 16, lines 17, 19, 20 and 22
On page 17, line 21
On page 18, line 22
On page 22, lines 16 & 17
On page 24, line 8
On page 25, lines 9 & 10

after "Exhibit KWD-6" insert (Rev. 2/12/04).

And

On page 18, line 2, replace $42,293,051 with $41,689,824.
On page 19, line 3, replace $138,265,222 with $138,362,683.
On page 23, line 3, replace $28,013,836 with $27,241,356.
On page 24, line 18, replace $54,577,350 with $53,434,146.
On page 24, line 24 replace $133,625,579 with $136,455,897 and replace $453,711,979 with $444,422,035.

Corrections to the Surrebuttal Testimony of Kent W. Dickerson (page and line numbers are to the original testimony)

On page 8, lines 15, 20, 21 & 22
On page 9, lines 2, 20 & 21
On page page 10, lines 10 & 19
On page 11, line 4

After "Exhibit KWD-12" insert (Rev. 12/10/04)

And

On page 9, line 3, after "Exhibit KWD-6" insert (Rev. 12/12/04)

And

On page 9, line 7, replace $16,197,393 with $25,161,287
On page 9, line 8, replace $47,486,823 with $25,161,287
On page 9, line 9, replace $17,280,924 with $54,424,268
On page 9, line 10, replace $50,663,472 with $54,424,268
On page 10, line 5, replace ($50,663, 472) with ($95,158,656)
On page 10, line 5, replace $13,268,463 with $8,144,280
On page 10, line 15, replace ($133,625,579) with ($136,455,897)

On page 10, line 16, replace ($227,115,584) with ($200,876,950)
On page 11, line , delete the word "reduced" and replace it with the word "increased"
On page 11, line 1, delete the words "a positive"
On page 11, line 2, delete $13,268,463 and replace with $8,144,280
On page 11, line 2, delete "a negative ($76,855,450)" and replace it with $66,137,652.

Corrections to Rebuttal Testimony Dr. Brian K. Staihr (page and line numbers are to the original testimony)

On page 19, line 2
On page 26, line 16,
On page 30, line 12,
On page 37, line 12,
On page 42, line 20,

after "Exhibit KWD-6" insert (Rev. 2/12/04)

And

On page 19, line 6, delete $320 and insert $308
On page 19, line 8, delete $331.9 and insert $317.7
On page 26, line 15, delete $332 and insert $318 and delete the words "less than" and insert "slightly over" and delete $174 and insert $163.
On page 30, lines 11 & 12 delete $332 and insert $318; delete the words "less than" and delete $238 and insert $227
On page 37, line 11, delete the words "nearly 70%" and insert "slightly more than 50%"
On page 37, line 13, delete $332 and insert $318 and delete $101 and insert $149.
On page 42, line 20, delete 32% and insert 33%
On page 43, line 1, delete $332 and insert $318
On page 43, line 2, delete $224 and insert $213.

Docket No. 030851-TP Sprint's Corrections to Pre-filed Testimony

Corrections to the Direct Testimony of Kent Dickerson

On page 3, line 21, strike "12" and insert "11:"
On page 6, line 14, strike "12" and insert "11"
On page 6, lines 16, strike "12" and insert "11"

Corrections to the Supplemental Testimony of Kent W. Dickerson and Christy Londerholm

On page 1, line 4 after "Christy" insert "V."
On page 3, line 18, strike "Surrebuttal"
On page 4, line 7, strike "(see Exhibit CVL-1)"
On page 13, line 19, strike "Surrebuttal"
On page 14, line 12, strike "Surrebuttal"

Corrections to the Direct Testimony of Dr. Brian K. Staihr

On page 29, line 8, strike "12" and insert "11"

(Transcript continues in sequence with Volume 20.)

STATE OF FLORIDA)

: CERTIFICATE OF REPORTER

COUNTY OF LEON)

I, JANE FAUROT, RPR, Chief, Office of Hearing Reporter Services, FPSC Division of Commission Clerk and Administrative Services, 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' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 1st day of March, 2004.

JANE FAUROT, RPR
Chief, Office of Hearing Reporter Services
FPSC Division of Commission Clerk and
Administrative Services
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