AFFIDAVIT

STATE OF ILLINOIS

COUNTY OF COOK

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Debra J. Aron, who, being by me first duly sworn deposed and said that:

She is appearing as a witness before the Kentucky Public Service Commission in Case No. 2003-00379, Review of Federal Communications Commission's Triennial Review Order Regarding Unbundling Requirements for Individual Network Elements, and if present before the Commission and duly sworn, her rebuttal testimony would be set forth in the annexed testimony consisting of 42 pages and 1 exhibits.

Debra J. Aron

SWORN TO AND SUBSCRIBED BEFORE ME
THIS 22 DAY OF MARCH, 2004

Notary Public

Official Seal
Lesley Bates
Notary Public State of Illinois
My Commission Expires 08/25/07

EDITED VERSION

BELLSOUTH TELECOMMUNICATIONS, INC.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

DOCKET NO. 2003-00379

REBUTTAL TESTIMONY OF

DR. DEBRA J. ARON

Filed March 31, 2004

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND POSITION.

A. My name is Debra J. Aron. I am the Director of the Evanston office of LECG, and Adjunct Associate Professor at Northwestern University. My business address is 1603 Orrington Avenue, Suite 1500, Evanston, IL, 60201.

Q. ARE YOU THE SAME DEBRA J. ARON WHO FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My rebuttal testimony responds to the economic arguments made by Dr. Mark T. Bryant on behalf of MCI, Mr. Steven E. Turner on behalf of AT&T, Mr. Don J. Wood, also on behalf of AT&T, and Mr. Joseph Gillan on behalf of CompSouth. I am also submitting a revised Exhibit DJA-02, which lists all markets that pass the potential deployment analysis.

Q. ALL PARTIES HAVE DIRECTED THIS COMMISSION TO VARIOUS PORTIONS OF THE TRO AND TO THE RULES IN SUPPORT OF THEIR POSITIONS IN THEIR DIRECT TESTIMONY. WHAT IMPACT DOES THE D.C. CIRCUIT COURT'S ORDER HAVE ON THE USE OF THE TRO IN THIS PROCEEDING?

A. I'm not a lawyer, but it appears to me that the impact of the Court's opinion on the TRO and the rules is unclear. At the time of filing this testimony, my understanding is that the Court had vacated large portions of the rules in the TRO, but stayed the effective date of the opinion for at least sixty days. I understand that the TRO remains intact for now, but that the TRO and the rules must be viewed warily, especially in light of the Court's harsh condemnation of large portions of the TRO. Accordingly, I would like to reserve the right to supplement my testimony, as circumstances dictate, and as the situation becomes clearer.

II. RESPONSE TO DR. BRYANT

Q. PLEASE COMMENT ON DR. BRYANT'S ARGUMENT THAT THE SOCIAL COSTS OF FINDING NO IMPAIRMENT WHERE IMPAIRMENT EXISTS ARE GREATER THAN THE COSTS OF FINDING IMPAIRMENT WHERE NO IMPAIRMENT EXITS. (BRYANT DIRECT 20-21.)

A. This is an unsupported and, in my opinion, seriously misguided conjecture on the part of Dr. Bryant. Mr. Gillan makes similar arguments, so my comments here will apply to his testimony as well. The asymmetry between the effects of the two potential types of errors recited by Dr. Bryant is of a different type than claimed by Dr. Bryant. The asymmetry is in the *observability of the outcomes*. If the Kentucky Public Service Commission ("KYPSC" or "Commission") errs in finding impairment where none exists, the social costs are extremely difficult to measure, because the nature of the social cost is in the lost investment, innovation, and economic development that would have been forthcoming but remains unknown and unobserved. This, however, does not make these losses any less real nor less significant. In contrast, if the Commission errs in finding no impairment where impairment exists, the social cost is merely the foregone entry of carriers who would, in any event, rely entirely on the network of the incumbent (what the D.C. Court of Appeals, in *USTA v. FCC,* referred to as "synthetic" competition). The social cost, therefore, is likely to be relatively low, while the observed effect—that there will be fewer visible "competitors" in the market—would be relatively apparent. Hence, while the asymmetry of social costs would, if anything, favor erring on the side of finding no impairment, the political pressure clearly favors a

finding of impairment. Regulatory authorities should resist the temptation to succumb to short run incentives to behave myopically for purposes of preserving the *perception* of competition, and instead seek to engage in decision making that maximizes social welfare and will encourage *true* competition. By law, carriers are entitled to unbundled local switching where impairment exists, but this entitlement should not be confused with the social-welfare benefits of promoting facilities-based competition where such competition can be economic.

Q. PLEASE ELABORATE ON THE SOCIAL WELFARE COSTS OF AN ERRONEOUS FINDING OF IMPAIRMENT.

A. The FCC recognized that unbundling is "one of the most intrusive forms of economic regulation—and one of the most difficult to administer." (TRO ¶ 141.) This intrusive form of regulation diminishes the incentives for the facility owner to keep up or improve the property, as it must share the benefits of those investments with its competitors. (Breyer *Iowa Utilities*, TRO ¶ 64.) It also can damage the incentives of CLECs to invest in network infrastructure. There are, as well, significant administrative and social costs of managing a shared resource. (TRO ¶ 64.) Facilities-based competition reduces the need for administrative oversight and regulation and therefore better serves the Act's goal of reduced regulation.

Facilities-based competition also better serves the Act's goal of innovation. UNE-P-based CLECs are restricted in their ability to innovate because they cannot

innovate along the dimensions (that is, facilities) that are owned or controlled by the ILEC. In addition, the FCC found that facilities-based competition creates redundancy, which increases reliability and enhances national security. (TRO fn. 233.)

As noted by FCC Chairman Michael Powell in his Separate Statement to the TRO, facilities-based competitors can offer differentiated service, they can control more of their own costs thereby offering consumers real potential for lower prices, they are less dependent on the incumbent, and they provide vital redundancy of networks. (TRO Powell Separate Statement, page 3.) It is for these reasons, and perhaps others, that the FCC "disagree[s] that duplication of facilities is necessarily 'wasteful'" (TRO fn. 233.) and that "we disagree with commenters that argue that the Act contains a 'statutory mandate of equal treatment for all three options.'" (TRO fn. 233.) It is also for these reasons that the Congress did not create a general unbundling obligation, but instead provided a limitation in the form of the Section 251 requirements.

Q. DOES DR. BRYANT MISSTATE THE EFFECTS OF A FINDING OF NON-IMPAIRMENT WHEN HE CLAIMS THAT "UNE-P COMPETITION WILL BE TERMINATED, AND ALL CONSUMERS CURRENTLY SERVED BY UNE-P CLECS WILL BE FORCED TO MAKE A CHANGE IN THEIR TELEPHONE SERVICE: EITHER SWITCHING BACK TO THE ILEC,

SWITCHING TO A UNE-L CLEC, OR SWITCHING TO THEIR EXISTING CLEC'S NEW UNE-L FACILITIES"? (BRYANT DIRECT 16.)

A. Yes, this is an erroneous statement for several reasons. A finding of "non-impairment" does not necessarily terminate UNE-P competition, but rather terminates (over time) the ILEC's obligation to provide unbundled local switching at regulated prices. Incumbent carriers may continue to provide unbundled local switching on commercially agreeable terms, as determined by the actions of the marketplace. Moreover, a finding of non-impairment does not terminate competition, but rather shifts the focus of competition to UNE-L and bypass competition, which, as I discussed, and as the FCC agrees, provides for the potential of a more robust and vigorous form of competition than can UNE-P. Finally, a finding of non-impairment does not immediately "terminate" UNE-P, it merely begins a gradual phase-out process.

In addition, it is simply not true that the gradual switch from UNE-P to UNE-L in areas where there is no impairment "forces" consumers to make a change in their telephone service. The transition of customers from UNE-P to UNE-L is a service provider issue, not a consumer issue. Switching the service platform from the ILEC's switch to the CLEC's does not require the consumer to make any change at all. Certainly, there would be no injury to the CLEC's customer due to being served by the CLEC's switch rather than that of the ILEC.

Dr. Bryant may be envisioning instances in which a CLEC would rather exit the market than pursue the UNE-L opportunity. This is, of course, a possibility, particularly for CLECs with no particular comparative advantage or expertise with the deployment of actual telephone network facilities. Where CLECs are unimpaired, however, the exit of particular carriers who cannot survive if required to compete without regulatory favor creates opportunities for those who can. It would be poor public policy to perpetuate a defective regulatory policy (mandated unbundling where CLECs are not impaired) simply to sustain an artificial market structure.

Q. DR. BRYANT ARGUES THAT CLECS "HAVE MUCH TO GAIN BY LIMITING THEIR DEPENDENCE UPON THE INCUMBENT." (BRYANT DIRECT 22.) PLEASE COMMENT.

A. Dr. Bryant ignores the fact that CLECs have much to gain by depending on an incumbent that remains under the firm grip of regulation. A CLEC that has available to it UNE-P at regulated prices can defer making investments by using UNE-P even when there would be no impairment without it. Thus, rather than actually investing in bringing new, facilities-based technologies to the market place, UNE-P permits CLECs to defer investment in infrastructure. While such an approach may benefit the individual CLEC business plan, it delays the benefits that new technology brings to consumers.

Q. DR. BRYANT CLAIMS THAT THE ACT "DOES NOT GIVE PREFERENCE" TO THE THREE TYPES OF ENTRY VEHICLES (RESALE, UNE-BASED, AND FACILITIES-BASED) FOR WHICH IT PROVIDES. (BRYANT DIRECT 23.) IS THIS CORRECT?

A. No. In fact, that is not the issue. While one can argue that the law is agnostic about which form of entry a particular CLEC chooses, the law is perfectly clear that where CLECs are not impaired without access to any given unbundled network element, unbundling that network element is not required. Hence, where CLECs are not impaired without access to unbundled local switching, for example, the Act strictly disfavors—i.e., precludes—UNE-P based entry. This Authority is not being asked to make an impairment decision *despite* the Act's alleged neutrality over different entry vehicles, but precisely *because* the Act strictly favors facilities-based entry (or resale) where there is no impairment, to the point of requiring it. The Act's philosophy in that regard is the foundation of this proceeding.

Q. DR. BRYANT CLAIMS THAT THERE IS AN INCONSISTENCY IN BELLSOUTH'S POSITION, IN LIGHT OF THE ALLEGED FACT THAT ILECS ARE NOT BUILDING THEIR OWN LONG DISTANCE NETWORKS. (BRYANT DIRECT 24.) IS THERE AN INCONSISTENCY?

A. No, for two reasons. First, wholesale long-distance service is not an unbundled network element. Long-distance carriers need not offer wholesale service, nor

must they price it at TELRIC if they do offer it. Similarly, it may be the case that in markets where CLECs are not impaired without access to unbundled local switching, ILECs nevertheless may provide switching at market-determined prices, just as some long-distance carriers provide wholesale long-haul services at market-determined prices. Thus, a finding of no impairment actually introduces consistency for the use of local and long distance networks—both will be priced according to market forces.

Second, ILECs are in fact bringing new long distance capacity to the market, to the extent that they are not leasing capacity from the big three incumbents, but rather leasing capacity from newcomer wholesale providers such as Williams Communications.

Q. DOES DR. BRYANT OFFER AN ANALYTICAL TOOL TO ASESS IMPAIRMENT? (BRYANT DIRECT 1-2.)

A. Dr. Bryant sponsors a model, or "analytic tool," upon which he relies to make recommendations to the Commission as to the geographic markets in which he believes CLECs are impaired without access to unbundled local switching. His model, however, is flawed in a number of critical respects, rendering his conclusions irrelevant to an assessment of impairment.

Q. DR. ARON, FROM YOUR PERSEPECTIVE AS AN ECONOMIST, PLEASE DESCRIBE THE PROBLEMS WITH DR. BRYANT'S ANALYTICAL MODEL.

A. First, Dr. Bryant's uses an improper framework for analyzing potential deployment and therefore impairment. Moreover, even within the context of the analysis itself, Dr. Bryant makes several assumptions that do not reflect the potential of a reasonably efficient CLEC. In particular, based on the extensive research I have performed on these issues, I conclude that Dr. Bryant's assumptions regarding prices, customer acquisition costs, churn, bad debt, DSL penetration, and DSL prices do not reflect the opportunities available to an efficient CLEC.

Q. WHAT DO YOU MEAN WHEN YOU SAY THAT DR. BRYANT'S ANALYSIS USES "AN IMPROPER FRAMEWORK"?

A. The FCC explains in great detail what it believes is the economically appropriate framework for evaluating potential deployment of a reasonably efficient CLEC. The FCC is clear that an impairment analysis should be based on a business case analysis ("[S]tates should perform a business case analysis of providing local exchange service" (TRO fn.1581)). Based on my many years of experience as a business school professor, as well as my general knowledge as a professional economist, I can say that a proper and standard business case analysis for a startup firm would model the costs and revenues per period (typically, per year) over

several years and then calculate the discounted present value of the cost and revenue flows. Explicitly modeling the business over a period of time is important in modeling new entry in particular, because entry typically requires start-up costs that are incurred right away but only recovered over time. That is, revenues tend to increase over time, so that there is a mismatch between the timing of revenues and the timing of costs. If one fails to model the costs and revenues over time, one cannot readily capture the fact that many costs are incurred immediately, but revenues that may justify those costs may start small and increase over time. A static model that, for example, considers only the first year or two of operation would tend to overstate costs and understate revenues, concluding that the enterprise is not profitable, when in fact it may be if the discounted present value of future revenues and costs are accounted for. Dr. Bryant admitted in discovery in Florida that a company's business plan can have negative net revenue in the early years and nevertheless have a positive net present value ("NPV") over a specified period of time. (See MCI Response to BellSouth Florida Interrogatory 3-150.) Alternatively, a model that compares only the long run "steady state" costs and revenues would tend to ignore the up-front costs of entry. A proper business case analysis accounts for all these effects by explicitly modeling the costs and revenues over time and calculating a discounted present value of the firm. A snapshot or static business model that considers only a single (or "typical") period of costs and revenues is not likely to be a valid and robust business case from which reliable conclusions can be drawn.

The approach adopted by Dr. Bryant suffers from this fundamental structural defect. Dr. Bryant's impairment tool is based on a model developed by the National Regulatory Research Institute ("NRRI"). The NRRI model is a single-period or static spreadsheet that appends revenue estimates to an annualized costing model. Dr. Bryant admitted in discovery that he did not perform a time series analysis with respect to the use of his impairment tool. (MCI Response to BellSouth Florida Interrogatory 3-163.) This approach therefore fails to conform to the business case (net present value) methodology that would properly assess the viability of a business and that the FCC unequivocally requires. It would therefore be inappropriate to use Dr. Bryant's model to decide issues raised by the TRO.

Q. ARE YOU AWARE OF ANY OTHER STRUCTURAL DEFECTS WITH DR. BRYANT'S MODEL?

A. Yes. Dr. Bryant's model ignores the ability of the CLEC to serve medium and large business customers. (See MCI Response to BellSouth Florida Interrogatory 3-175) Ignoring this market segment violates the principles of sound business case analysis, and is contrary to the explicit guidance provided by the FCC ("The state must also consider the revenues a competitor is likely to obtain from using its facilities for providing data and long distance services and from serving business customers" (TRO ¶ 519)). It is contrary to the principles of sound business case analysis because the ability of a CLEC to serve the enterprise market affects its ability to share the costs of a switch, transport, collocation and other items across

market segments. As the FCC observes, this potential to share costs is a form of scale economies (considering revenues from business customers "will therefore take into account the scale and scope economies available to carriers using existing facilities to provide a variety of services to all customers that are likely to be served by an efficient entrant." (TRO fn. 1585)). A rational CLEC will consider the ability to leverage these potential scale economies as part of its business case analysis. While it may not be economic for a CLEC to invest in a switch to serve only the enterprise and small business market, it may well be economic to invest in a switch to serve these customer segments along with the enterprise market. The correct standard for assessing whether it is economic to serve the mass market via UNE-L is to determine whether serving the mass market provides positive NPV to a hypothetical CLEC that also has the possibility of serving the enterprise market. Ignoring this possibility deprives the CLEC of legitimate scale economies and could therefore lead to a conclusion of impairment when there is no impairment. This further reinforces my conclusion that Dr. Bryant's modeling approach fails to meet the FCC's standards and so its results can be given no weight in determining impairment.

Q. ARE THERE ANY OTHER ASPECTS OF DR. BRYANT'S MODEL ON WHICH YOU CAN COMMENT?

A. Yes. It is clear that Dr. Bryant has offered unsupported and unreasonable inputs that drive his results. These include his inputs for revenues, penetration, bad debt, customer acquisition costs, and customer churn.

Q. DR. BRYANT BEGINS HIS DISCUSSION OF THE "PROCESS [HE USED] TO ESTIMATE REVENUE" RELEVANT TO A CLEC CONSIDERING POTENTIAL DEPLOYMENT WITH ASSERTIONS THAT FUTURE REVENUES WILL FOLLOW A DECLINING PATH OVER TIME. (BRYANT DIRECT 77-79.) WHAT IS THE RELEVANCE OF THIS DISCUSSION?

A. There is none, insofar as Dr. Bryant clarified in discovery (in Florida) that he does not use these estimates. (See MCI Response to BellSouth Florida Interrogatory 3-145.) However, I will describe the inconsistencies and flaws in his approach because in his testimony, Dr. Bryant claims that prices may decrease by 11 to 20 percent over time. (Bryant Direct 84.)

Dr. Bryant says that he begins his revenue analysis with the ILEC's existing rates. (Bryant Direct 79.) He then claims that prices will decline 11 to 20 percent from that level over time as a result of competition. (Bryant Direct 84.) This conclusion is deficient in a number of respects, but the main deficiency is that it violates the requirements of the FCC's potential deployment analysis. The FCC requires that states evaluate potential deployment business cases *using the existing level of*

prices and revenues. The FCC concludes that it "expect[s] states to consider prices and revenues prevailing at the time of their analyses." (TRO fn. 1588.) The FCC thereby concludes that existing prices and revenues are reasonable proxies for likely prices and revenues after competitive entry and will result in a more administrable standard.

Q. PLEASE DESCRIBE ANY OTHER DEFICIENCIES WITH DR. BRYANT'S ANALYSIS OF PROJECTED PRICE TRENDS.

A. Dr. Bryant produced his analysis in discovery (in Florida). Upon review of that document, I note that his analysis, while ignoring any potential for innovation that could increase demand or provide new services (and other deficiencies), he assumes that CLECs will, in aggregate, achieve *over a 21 percent market share in the first year*, and achieve *over 47 percent of the market by year ten*. (MCI Response to BellSouth Florida Interrogatory 3-144, page 12.) In contrast, Dr. Bryant claims that his impairment model will assume that an efficient CLEC will have a market share of 5 percent. (Bryant Direct 87.) If Dr. Bryant believes that an efficient CLEC could not achieve a market share above 5 percent, it is disingenuous to quote results to the Commission about price trends that he predicts only on the assumption that CLECs will capture nearly half the market.

Q. IF DR. BRYANT DOES NOT INCORPORATE THE PRICE TREND ASSUMPTIONS INTO HIS MODEL, WHAT IS THE BASIS FOR HIS REVENUE ASSUMPTIONS?

A. Dr. Bryant claims that his model uses data on residential revenue that he obtained from TNS Telecoms that is based on subscriber surveys. (Bryant Direct 88.) He also says that his business revenue is "based on the calculation of the differential between the bundled price for residential and business services sold by MCI in Kentucky." (Bryant Direct 88.)

Q. PLEASE COMMENT ON THE USE OF THE SURVEY DATA AS A BENCHMARK FOR DR. BRYANT'S PRICE ASSUMPTION. (BRYANT DIRECT 88.)

A. Dr. Bryant claims that he uses the average spending per household for each wire center. Although he does not identify these amounts, in his model he uses, on average, *** *** for residence and *** *** for businesses. In my direct testimony, I demonstrated that CLECs currently cream skim the better customers primarily by avoiding the lowest spend residential quintile and the lowest spend SOHO tercile. Avoiding the lowest spend categories can substantially increase the average spend of those actually served by the CLEC. (For example, if terciles produce average spending levels of $10, $40, and $70, the average overall spending level is $40, but the average of the top two terciles (i.e.,

eliminating the lowest tercile) is about a third higher: $55.) Second, and somewhat related, is that the averages produced by the bill harvest survey may not reflect what CLECs are charging, or what an efficient CLEC may charge, but instead, may reflect average spend of an ILEC customer. I have found Dr. Bryant's TNS Telecoms data to be biased low in Florida and Georgia.

In fact, this appears to be the case here, since Dr. Bryant's estimate is shown to be deficient by MCI's own data submitted in discovery. In responding to Bellsouth's Request for Information No. 1-26 in Kentucky, MCI claimed that its residential per-customer revenue for "qualifying" service in Kentucky was ***[redacted]***. This is ***[redacted]*** the residential per-customer revenue figure used by Dr. Bryant, and the "Integrated" figure is ***[redacted]*** the business per-customer revenue figure used by Dr. Bryant. While MCI's own revenue numbers are not determinative of the revenue potential of an efficient CLEC, it is unreasonable to suppose that the efficient CLEC, executing the most efficient business model, would not be able to at least replicate MCI's experience. This demonstrates that Dr. Bryant's figure cannot be that of an efficient CLEC, executing the most efficient business model, and using the advantages available to it, as the TRO requires.

Q. DOES THE BACE MODEL USE THE ILEC'S EXISTING LEVEL OF PRICES AND REVENUES?

A. No, it adjusts them downward. The BACE model uses the ILEC's prices as a "starting point," as advocated by Dr. Bryant, (Bryant Direct 79) and then the BACE model assumes that when CLEC customers purchase services *à la carte*, they pay 90 percent (i.e., a 10 percent discount from the ILEC prices) for the local services of what they would pay if purchasing the same services from the ILEC. This adjustment is not applied as a price trend, but as a once-and-for-all (constant in each period) 10 percent cut. Hence, the BACE model incorporates a "CLEC discount" from ILEC rates. For bundled services, the BACE model assumes that CLECs offer a number of bundle types, the prices of which are based on the actual prices of the relevant bundles actually offered by CLECs in Kentucky. The model assumes, consistent with the direction provided by the FCC, that these prices do not change over time.

Q. WHAT DOES DR. BRYANT ASSUME ABOUT CUSTOMER ACQUISITION COSTS? (BRYANT DIRECT 88.)

A. Dr. Bryant assumes that the efficient CLEC will spend $130 per line to acquire a customer, whether that is a residential or business customer.

Q. WHAT EVIDENCE DOES DR. BRYANT PROVIDE IN SUPPORT OF THIS ASSUMPTION?

A. Dr. Bryant himself presents no justification in his testimony. (Bryant Direct 88.) However, in response to BellSouth's Florida Interrogatory 3-153, Dr. Bryant simply offers that this is "the default value used by Dr. Gabel in the NRRI model."

I would like to have the opportunity to determine how Dr. Gabel arrived at his figure, because it is not evident based on the response provided to Florida Interrogatory 3-153. The figures presented in this response include, first, a CLEC (Z-Tel) whose customer acquisition costs are claimed to be between $80 and $100. This experience is some $30 to $50 less than the $130 used by Dr. Gabel (and, derivatively, by Dr. Bryant). Dr. Bryant does not explain whether or how he incorporates that experience into his estimate. I will note, however, that my recommendation ($95 for residential customers) is in the range of costs estimated for Z-Tel that Dr. Bryant claims in his discovery response. If an *actual* CLEC can attain these levels, it would seem that this is an important datum regarding what an *efficient* CLEC might attain. I am also aware that Z-Tel's Chief Executive Officer, Gregory Smith, estimated Z-Tel's fourth quarter 2001 customer acquisition costs to be about $60 per gross addition. This information is summarized on Exhibit DJA-06.

The figures presented by Dr. Bryant in response to discovery also include the customer acquisition costs of a cable-TV company that offers voice telephony in some areas of the country and several examples of wireless service providers. However, Dr. Bryant does not demonstrate how he derives his recommended $130

from any figure, or combination of figures, in the response, or how one might adjust the wireless (and possibly cable TV) figures to account for interindustry differences, such as the fact that many wireless carriers provide and program the handset "free" to new customers, or that they sign up customers to term contracts (and therefore can justify spending more to acquire customers).

Q. HOLDING ASIDE THE FACT THAT DR. BRYANT'S CUSTOMER ACQUISITION COST ESTIMATE IS UNSUPPORTED, IS HIS ASSUMPTION NEVERTHELESS A REASONABLE ONE?

A. No, it is unreasonably high for a residential line according to the data I have seen. As I explained and fully documented in my direct testimony, several CLECs have reported customer acquisition costs far below the number advocated by Dr. Bryant, and I have seen no published estimates that reach the $130 level. For example, Talk America, a CLEC that markets primarily to mass-market customers, is estimated to spend on the order of $80 per customer acquisition. (See Vik Grover, "Raising Numbers Again," Kaufman Bros. Equity Research (KBRO Kaufman Bros. L.P.), April 30, 2003, p. 1. See, also, Excerpt from The Wall Street Transcript, "Company Interview: Gabriel Battista, Talk America Holdings, Inc." May 2003, p. 5.) Management at Z-Tel, another CLEC that markets primarily to mass-market customers, claims that it is trying to reduce customer acquisition costs to $50. (See James J. Linnehan, "Z-Tel Technologies, Inc.: Still Chugging Along," Thomas Weisel Partners Merchant Banking, August 13, 2001, p. 3.) While Z-Tel's

customer acquisition costs have been estimated to be higher, the most recent estimate that I have seen is from Z-Tel itself. Gregory Smith, Z-Tel's Chairman and Chief Executive Officer, said that Z-Tel's customer acquisition costs are trending down and, as of the fourth quarter of 2001, were $60 per gross addition. (Gregory Smith, CEO and Chairman of Z-Tel, Transcript by Fair Disclosure Financial Network, February 28, 2002, p. 5.)

Indeed, according to Banc of America Securities, even AT&T's customer acquisition costs are somewhat less than Dr. Bryant's estimate, and are expected to drop 50 percent over the next five years. (David W. Barden, "AT&T Corporation: A Case for Consumer Services," Banc of America Securities—United States Equity Research, April 30, 2003, pp. 17, 20.) That same Banc of America report also notes that wireless churn is on the order of 2.6 percent per month, which implies that the average customer stays with the wireless company for about 27 months, not the 12 months that Dr. Bryant assumes for his CLEC. None of these estimates for actual CLECs exceeds or even meets Dr. Bryant's recommendation for an efficient CLEC.

Finally, as I discussed in my direct testimony, the experiences of actual CLECs may not be indicative of what an efficient CLEC could accomplish. I described that UNE-P-based firms have the incentive to spend inefficiently high amounts to acquire customers. The reason is that having UNE-P available where there is no impairment provides CLECs with an opportunity to save on network investments,

but these savings are dissipated in competition for new customers. The bottom line is that an estimate of customer acquisition costs, such as Dr. Bryant's, that exceeds the customer acquisition costs observed for UNE-P-based firms is, in and of itself, evidence of the unreasonableness of the estimate for an efficient UNE-L-based CLEC.

Q. PLEASE COMMENT ON DR. BRYANT'S ESTIMATE OF "CHURN."

A. In his testimony, Dr. Bryant says, "customer life is twelve months." (Bryant Direct 88.) Dr. Bryant also claims to evaluate the impact on impairment of using different customer lives between 8 and 16 months.

I have several comments about Dr. Bryant's churn assumption. First, I find it entirely implausible on its face that an efficient CLEC would spend $130 per line to acquire a customer that is expected to stay with the CLEC for only 12 months. Such a CLEC would have to collect nearly $11 per month just to recover its customer acquisition costs from its customers. In contrast, for example, Talk America, a UNE-P-based CLEC that serves the mass market, had monthly churn estimated at 4.1 percent (which implies that at the end of about 17 months, the CLEC will have lost about half of the customers that the CLEC had signed up at the beginning of that period) and customer acquisition costs of $80. (Vik Grover, "Talk America Holdings, Inc, Kaufman Brothers, April 30, 2003, p. 1.) This means that Talk America would have to collect approximately $4.70 per month

over the life of its average customer to recoup its customer acquisition costs, or less than half of the monthly necessary recoupment implied by Dr. Bryant's churn and customer acquisition cost proposals.

Dr. Bryant argues that his assumption is based on the "recent experience of MCI" (Bryant Direct 88) and in discovery in Florida, he claims that this assumption is based on undocumented "interviews with MCI personnel." (MCI Response to BellSouth Florida Interrogatory 3-153 E.) Of course, even aside from the lack of documentation for this assumption, MCI cannot be the relevant standard because no effort has been made to demonstrate that MCI represents an efficient CLEC. Moreover, MCI's "recent experience" is not likely to reflect a long run equilibrium level of churn (as opposed to a start-up level of churn). This is particularly important because the NRRI model that Dr. Bryant claims to use is a one-period "static" model, so his churn level is presumably expected to apply in a long-run equilibrium, not for the initial experience of a relatively new entrant in to the market.

Second, Dr. Bryant's estimate of churn also suffers from insufficient granularity. Dr. Bryant assumes that all types of customers will have the same average tenure with the CLEC. As the FCC noted in its TRO, business customers are less averse to signing term contracts (TRO ¶ 452), so although my 4 percent per month churn rate is reasonable for residential customers, one would expect that business customers would have lower churn rates. In light of the availability of contracting,

especially for business customers, it is unreasonable to assume that the entire customer base of an efficient CLEC would turn over its entire base of customers every 12 months.

Finally, as I noted, Dr. Bryant claims that this assumption is based on his undocumented "interviews" of MCI personnel. While the specific results of a particular CLEC's business likely do not reflect the potential of an efficient CLEC, it nevertheless appears self-serving that Dr. Bryant relied on MCI for churn, but that he did not rely on MCI for other input items such as revenues. Moreover, in BellSouth Florida Interrogatory 3-160, Dr. Bryant was given the opportunity to explain why he chose Dr. Gabel's cost estimates in some instances and why he interviewed MCI personnel in other instances, but he offered no explanation.

Q. PLEASE COMMENT ON DR. BRYANT'S ASSUMPTION REGARDING BAD DEBT.

A. Dr. Bryant assumes that the efficient CLEC will experience bad debt of 5 percent of revenue (based, as I noted, entirely on undocumented "interviews" with MCI personnel). (MCI Response to BellSouth Florida Interrogatory 3-157.) This proportion is some 3 *times* the average historical bad debt experience of the RBOCs and is not representative of what one might reasonably expect an efficient CLEC to experience.

Managing bad debt is important because failure to pay for service exerts a double whammy: it is both a loss of revenues that falls to the bottom line, and it implies that the CLEC incurred costs to provide service that was never paid for. Thus, it is very important for firms to manage bad debt, and it is unreasonable to incorporate as part of an "impairment" analysis the assumption that a CLEC might fail to properly manage this very important cost with reasonable efficiency. If anything, CLECs should be able to avoid high-risk customers simply by refusing to serve them.

As one indicator of bad debt, I examined CLECs for which I could find uncollectibles percentages for either (or both) 2001 and 2002, one of which (2001) was a recession year. From 74 observations of CLECs and ILECs, I determined that the median ratio of bad debt to revenues was about 2.9 percent. The median is an indicator of central tendency. The measure indicates that there are as many observations above 2.9 percent as there are below 2.9 percent. This is an extremely conservative indicator of the bad debt rate that an efficient CLEC should be able to attain. Indeed, one might argue that an *efficient* CLEC's rate of bad debt should be in one of the lower quintiles or deciles. Nevertheless, the actual (median) experience of the sample is substantially below Dr. Bryant's proposal, and more in line with the 2.75 percent that I recommend.

Q. PLEASE COMMENT ON DR. BRYANT'S ASSUMPTIONS REGARDING DSL PENETRATION RATES.

A. The effective proportions of CLEC business and CLEC residence customers that ultimately subscribe to DSL, as computed from Dr. Bryant's model, are about 2.5 percent for businesses and about 4.0 percent for residences. These effective penetration rates are too low to account for the customer targeting and bundling in which an efficient CLEC can engage.

Such targeting appears to be occurring with real-world CLECs. According to computations that I made based on DSL penetration data from Cahners In-Stat and on overall line penetration data from the FCC (for approximately the same period of 2001), CLECs (including IXCs) served about 15 percent of DSL lines, while according to the FCC, CLECs accounted for about 9 percent of total lines. This indicates *an above-average propensity for CLEC voice customers to subscribe to DSL*. BellSouth proprietary data regarding DSL penetration for its smaller business customers, which I reviewed, showed that as of August 2003, there was penetration ***[redacted]***.

Moreover, Cahners In-Stat suggests that DSL revenues will increase by 54 percent per year through 2005. (Cahners In-Stat, "U.S. Residential DSL Market Continues to Grow," October 2001, p. 2.) The robust growth potential applies to small businesses as well. As long ago as 1999, firms with 1-4 telephone lines, 47.8

percent had access to the Internet through dial up or high-speed means. (U.S. Small Business DSL Services Market Assessment and Forecast, 1998-2003, International Data Corporation, October 1, 1999, p. 12) This represents a growing opportunity for CLECs to market broadband services. Thus, Dr. Bryant's anemic penetration estimate simply does not reflect the current and future potential for these data services.

Q. DOES DR. BRYANT UNDERPRICE THE ASSUMED DSL SERVICES?

A. Yes. Dr. Bryant's assumption with regard to the revenues that an efficient CLEC reasonably could obtain from its residential customers is too low. Dr. Bryant assumes that residences pay $35 extra per month for DSL service from his modeled CLEC. On its own, this amount is on the low side relative to other market prices for DSL service that I have obtained. Moreover, this amount would appear to ignore other features and "add ons" that the CLEC could offer to its residential DSL subscribers that would increase per-customer revenues. For example, regular DSL packages (whose download speeds are about 1.5 mbps) are available to residential customers for about $40 to $50 from a variety of carriers in Kentucky (including Covad TeleSurfer PLUS Residential, BellSouth DSL FastAccess, and AT&T DSL). And, as I noted, the efficient CLEC would obtain additional revenues from features and "add ons" to its DSL offerings. For example, BellSouth offers a home networking option ($10.00), a parental controls/firewall ($6.95), web remote access ($4.95), and a static IP address, which may be of interest to "gamers"

and SOHO businesses using virtual private networks ($14.95). While not all DSL customers will take some or all of these options, some customers will take one or more. The ability to sell customers additional, useful features increases the revenue opportunity, and, I understand, actual revenue, from DSL service. Accordingly, Dr. Bryant's residential revenue estimate for DSL services is too low, since it appears to ignore the possibility of these or other, vertical revenue opportunities associated with DSL service.

Dr. Bryant's assumption that SOHO customers will pay $50 for DSL services is likewise too low. For example, SOHO customers can obtain DSL packages from Earthlink and Covad for about $65 in Kentucky (EarthLink High Speed Home Office Package and Covad TeleSoho.) As I noted, Dr. Bryant also ignores additional features, such as the static IP addresses (used for VPN), that can provide the CLEC with additional revenue opportunities.

Hence, my recommendation of $47 for *à la carte* residential and SOHO business customers for the BACE model is both reasonable and conservative. In contrast, Dr. Bryant's proposal is unreasonably low and is not reflective of revenues available in the market, as is required by the TRO. I would note that the BACE model also incorporates DSL in packages and applies prices for those packages based on the bundle prices currently available from CLECs in the market. Dr. Bryant does not explicitly incorporate bundles into his model at all.

Q. DO YOU AGREE WITH DR. BRYANT'S ASSUMPTIONS REGARDING OVERALL PENETRATION?

A. No. Dr. Bryant assumes a static CLEC market share of 5 percent. (Bryant Direct p.87.) While a penetration rate of 5 percent may be reasonable for a growing CLEC early in its life, it is not appropriate as an ultimate penetration rate. Nevertheless, there is no way of knowing in MCI's model whether one should interpret the 5 percent as the "average" penetration over an (unspecified) period of time, whether it is a "steady state" ultimate penetration (and the penetration rates leading up to it are ignored), whether it is the assumed penetration in the first or second year of operation, or some other interpretation.

A new CLEC may start with a penetration of zero, and will increase its penetration over time. (Indeed, an efficient CLEC may start with a higher penetration rate if it has existing UNE-P customers.) To be conservative, the BACE model explicitly assumes that a CLEC starts with no customers and grows toward its ultimate penetration of 15 percent (though never quite achieves it) over a ten-year period. Dr. Bryant's penetration assumption could be consistent with many ultimate penetration rates, including my recommended 15 percent penetration rate achieved over a period of time, but these dynamics are entirely unspecified in the NRRI approach. What is clear is that 5 percent is unreasonably low as an estimate of the ultimate penetration rate for an efficient CLEC.

There are a number of reasons that Dr. Bryant's 5 percent market share estimate is unreasonable as an ultimate penetration rate. First, as I explained in my direct testimony, it has already been demonstrated that CLECs can achieve significantly higher rates of penetration. AT&T has achieved 15 percent in New York, and Cox Communications has achieved 19 percent penetration of the telephone-ready homes in its geographic footprint around the nation, and 53 percent of its existing cable TV customers in its Orange County (California) footprint.

Moreover, Dr. Bryant himself explains that UNE-L based providers will be more aggressive in expanding their market shares than would UNE-P providers. As Dr. Bryant explains, facilities-based CLECs are "under pressure to recover sunk costs by increasing volume." (Bryant Direct 81.) Aside from "sunk cost" concerns, facilities investments create some scale economies, which induce efficient CLECs to increase volume to leverage those economies of scale. Indeed, increasing its customer base allows the CLEC to exploit the efficiencies available to a facilities-based provider. Hence, an efficient facilities-based provider will necessarily operate at a scale that exploits its scale economies in equilibrium.

Finally, in order to appropriately interpret the 15 percent penetration assumption, it is useful to recall that the market share numbers reported in many public venues (including the FCC reports) are at the level of large geographic areas such as an entire state. A carrier that has, say, a 2 percent market share in a state would have a far higher share in the specific geographic markets in which it operates. A carrier

that has a 5 percent share in a metropolitan area would also have a much higher market share in its geographic market if it served only part of that metropolitan area. The penetration rate of the BACE model applies only to the penetration of the narrowly defined geographic markets in which it operates, not to the average penetration of an entire state or MSA (which would obviously be lower as a consequence of the markets which the CLEC does not serve).

For example, suppose a particular MSA has three zones, each with equal numbers of customers. If a CLEC operates only in zone 1 and obtains 15 percent of the market there, then it would be calculated to have 5 percent of the MSA. Looked at differently, if carriers are observed to obtain 5 percent of an MSA, they may well be capturing a far higher percentage of the subset of the market in which they operate.

III. RESPONSE TO MR. TURNER

Q. WHAT COMMENTS DO YOU HAVE ON MR. TURNER'S TESTIMONY?

A. The main comment I have is that Mr. Turner's approach, as it stands, is useless to address the FCC's definition of impairment. Mr. Turner's theory of impairment was considered and explicitly rejected by the FCC. Mr. Turner's approach does not address the question of whether an efficient CLEC economically could enter a market without access to a particular unbundled element (which is the essence of

the FCC's impairment definition, e.g., see TRO ¶ 84), and so it provides no economically useful information to the Commission, and should be disregarded.

Q. WHAT DO YOU MEAN THAT MR. TURNER'S APPROACH DOES NOT ADDRESS "IMPAIRMENT"?

A. Mr. Turner's theory of impairment is that CLECs are impaired because (he claims) they have higher costs than does the ILEC. (Turner Direct 4-5.) His impairment analysis computes the supposed cost disadvantages, relative to the ILEC, faced by a CLEC that seeks to self-provision switching to serve mass-market customers. (Turner Direct 5-7.) Cost disparities, however, are not determinative of whether entry is "economic," which is the basis of the FCC's definition of impairment. Costs are relevant only within the context of a well-defined business case analysis that evaluates whether entry by an efficient CLEC is economic, and whether CLECs incur costs that are not incurred by ILECs is not determinative of impairment. In fact, as the FCC recognized (TRO ¶ 112), entry by an efficient CLEC may be "economic" without access to the unbundled element even when the CLEC suffers from a cost disadvantages. In real markets (as well as in many standard economic models of competition), firms with different costs coexist in competition with one another, and such competition is sustainable and viable for the firms. A sound business case analysis considers not just costs, but also the revenues that an efficient CLEC reasonably could attract and, as I mentioned, any countervailing advantages that the CLEC might enjoy, such as the ability to target

geographic areas or customers within those areas, and "second-mover" advantages such as the ability to create a lower-cost network topography or use more flexible or powerful switches. An approach that seeks only to demonstrate a cost disadvantage cannot determine whether competitive entry is "economic" and so does not address the essential issue of the FCC's impairment definition.

As I noted, approaches such as Mr. Turner's, which focus on absolute cost disadvantages, were reviewed and rejected by the FCC during the Triennial Review proceeding. The FCC concluded, "We reject the proposal to find impairment whenever entrants would suffer from a substantial cost disadvantage (such as five percent), regardless of whether entry is still possible." (TRO ¶ 112.) The FCC requires that "cost factors listed should not be considered in isolation, but only in the context of a broad business case analysis that examines all likely potential costs and revenues." (TRO fn. 1581. See, also fn. 1497.) The FCC specifically directs states "not [to] focus on whether competitors operate under a cost disadvantage. [Rather,] [s]tate commissions should determine if entry is economic by conducting a business case analysis for an efficient entrant." (TRO fn. 1579.) The FCC also correctly noted that a cost disadvantage standard, such as Mr. Turner's, would focus on maximizing entry to the detriment of the other goals of the Act, such as innovation, deployment of new technologies, and reduced regulation. (TRO ¶ 112.)

The Supreme Court also rejected the theory that demonstrating a cost disadvantage is sufficient to prove impairment. The Court explained that a CLEC that was able

to operate profitably without access to an unbundled element could not argue that it was impaired on the grounds that it would be even more profitable with access to the element. (*AT&T* et al. *v. Iowa* et al. 13-14.) Nor can a CLEC claim impairment by noting that its costs would increase in the absence of access to the UNE. (*AT&T* et al. *v. Iowa* et al. 14) Indeed, Mr. Turner's comments are based on an approach that expressly is rejected as unreasonable by the Court. As a result, the FCC's rules were vacated by the Court, and the FCC, in the TRO, established an impairment test based on the economics of entry, not on cost differentials or cost increases.

Mr. Turner admits that his analysis is not determinative of whether a CLEC has an economic business case in any geographic market, and that he has not performed any analysis to determine whether it could have a positive business case. Specifically, in discovery in Florida, where Mr. Turner sponsored the same analysis, Mr. Turner responded with an unqualified "no" to the following question: "Has any analysis, study, or evaluation been conducted by, on behalf, or at the direction of AT&T to determine whether a CLEC providing a qualifying service via the UNE-L can make a positive return on investment in any wire center or combination of wire centers? If the answer to this Interrogatory is in the affirmative, identify all documents referring or relating to such analysis, study or evaluation." (AT&T Response to BellSouth Florida Interrogatory 4-162.)

Q. IS IT LEGITIMATE TO CONSIDER THE COSTS OF AN EFFICIENT CLEC?

A. Yes, it is, if these costs are considered in the proper analytical framework. As the FCC explained (TRO ¶ 77), this framework is a fully developed, "net present value" business case that considers revenues, as well as costs, and countervailing advantages that the CLEC might enjoy. A business case evaluates the CLECs' costs relative to its revenues, not relative to the ILEC's costs. Mr. Turner's analysis is in no way a business case and therefore is not helpful to the Commission.

IV. RESPONSE TO MR. WOOD

Q. SHOULD THE COMMISSION REJECT MR. WOOD'S PROPOSAL TO REPUDIATE THE USE OF AN ECONOMIC IMPAIRMENT ANALYSIS TO IDENTIFY GEOGRAPHIC MARKETS WHERE IMPAIRMENT DOES NOT EXIST? (WOOD DIRECT 4-5.)

A. Yes, it should reject Mr. Wood's proposal. Mr. Wood argues that an economic analysis may be useful as a way to identify factors that contribute to impairment, but that the Commission should not use a business case analysis to determine whether impairment exists. Mr. Wood argues that a business case analysis that does not demonstrate "impairment" is inherently flawed because many CLECs have tried and failed to implement UNE-L over the past 7 years. Mr. Wood therefore concludes that "impairment" is obvious. I interpret this testimony to

imply that Mr. Wood urges the Commission to simply disregard the potential deployment component of the FCC's impairment methodology as part of its determination of the geographic markets in which BellSouth can be relieved of the unbundled local switching obligation, on the grounds that he already knows what the answer should be. (Wood Direct 5-6.)

Clearly, this is not what the FCC appeared to have in mind when it wrote 51.319(d)(2)(iii)(B). This rule requires states to evaluate potential deployment as part of their impairment assessments if neither switching trigger is met. The FCC's rule clearly requires a state commission to evaluate the bright-line triggers tests, and then, in instances where the triggers are not met, to nevertheless find that requesting carriers are not impaired without access to the local switching UNE where it finds that self-provisioning of switching is economic. As a matter of logic, the fact that the FCC includes the potential deployment test must be understood to imply that the FCC considers it possible to demonstrate lack of impairment thereby. The FCC's rules recognize that if the triggers are not satisfied in a market, that does not necessarily imply that CLECs could not economically do business there with UNE-L if unbundled switching were unavailable. There is no doubt that the existence of UNE-P affects the desirability and viability of pursuing a UNE-L strategy.

CLECs may opt to use UNE-P rather than UNE-L when the former provides the CLEC with a greater profit opportunity, or greater flexibility, than the latter.

However, greater (or lesser) profitability is not the standard that the FCC requires for an evaluation of impairment. As I noted earlier, the FCC's standard of impairment is whether an efficient CLEC could economically enter the market without access to the unbundled element. (TRO ¶ 84.) The FCC's trigger's tests are asymmetric tests of impairment: satisfying the triggers tests demonstrates lack of impairment, but failing them does not demonstrate impairment. If there is "multiple, competitive supply" (TRO fn. 283) (as indicated by the triggers tests), an efficient CLEC clearly is not impaired without access to the unbundled element. Thus, passing a triggers test clearly indicates that there is no impairment. But, if there is not multiple, competitive supply currently in the market, this does not mean that competitors would be unable to enter the market without access to the UNE. As I mentioned, CLECs might use UNE-P instead of UNE-L because it promises greater profits, not because it uniquely resolves the market entry problem. As FCC Chairman Powell noted, "[A]n honest inquiry into this area [of impairment analysis using the triggers] must recognize what the record amply demonstrates: there is a correlation between the availability of UNE-P and the failure of competitors to utilize their own switching capacity." (TRO Powell Separate Statement, page 6.) A well-structured business case analysis can help identify those areas where CLECs are not impaired, even when neither trigger test is satisfied.

Q. AREN'T THE PAST 7 YEARS THEMSELVES INDICATIVE OF IMPAIRMENT, AS CLAIMED BY MR. WOOD? (WOOD DIRECT 5-6.)

A. No. First, Mr. Wood seems to argue that the triggers tests will demonstrate that CLECs are not serving mass-market customers using their own switches. (Wood Direct 5.) Mr. Wood's entirely unsupported and conclusory rhetoric aside, he provides no evidence that CLECs have experienced impairment in the specific geographic markets that are at issue in this proceeding, and admits in discovery that he performed no economic impairment analysis, study, or evaluation of impairment associated with local switching. (AT&T Response to BellSouth Florida Interrogatories 4-152 and 4-153.)

Second, even in those instances where the triggers are not met, CLECs are not necessarily impaired, as the FCC has clearly recognized in its Rule requiring a potential deployment analysis. As I have discussed, one reason that CLECs are not necessarily impaired in geographic markets where the triggers are not met is that the availability of UNE-P itself affects CLECs' business decisions. The availability of UNE-P where there is no impairment provides a convenience for CLECs, as noted by Chairman Powell in his Separate Statement to the TRO. Even when UNEs are priced based on cost, CLECs may well have the incentive to use UNE-P, rather than make their own investments, even in many areas for which there is no genuine impairment. Moreover, the availability of UNE-P to other CLECs in areas where there is no genuine impairment damages the business cases of those CLECs that otherwise would invest in their own switching. In sum, the forward-looking risks and potential profits of an efficient CLEC, rather than a

retrospective review of CLEC successes and failures in a world of ubiquitous UNE-P availability, is the relevant indicator of impairment.

Q. IS IT TRUE, AS MR. WOOD ASSERTS, THAT "AN EFFICIENT CLEC THAT EXPERIENCES A COST DISADVANTAGE CANNOT COMPETE ON PRICE OVER TIME, AND THEREFORE CANNOT PRUDENTLY INVEST IN ASSETS WHOSE COSTS CAN ONLY BE RECOVERED OVER AN EXTENDED PERIOD OF TIME"? (WOOD DIRECT 11.)

A. No. Both in theory and in fact, competition can be viable when competitors have varying levels of costs, and one would be hard-pressed to explain much of the real world if one insisted on a worldview that permits the survival only of competitors with identical costs. The claim that a cost disadvantage renders a firm incapable of competing effectively and viably in a market is simply inconsistent with much of modern economic theory, which provides a number of models in which firms with different cost structures providing identical products viably coexist. The notion that competition cannot accommodate heterogeneity in costs reflects a shallow understanding of the richness of economic models of competition.

Moreover, efficient CLECs need not compete only on price, but can compete by differentiating their products from their rivals and earn a premium from those customers who value the specific product characteristics offered by the CLEC.

Q. MR. WOOD ARGUES THAT REVENUES NEED NOT BE CONSIDERED BECAUSE THE SAME REVENUE POTENTIAL EXISTS FOR BOTH ILEC AND CLEC, SO THAT THE ONLY ISSUE IS COSTS. PLEASE COMMENT. (WOOD DIRECT 11.)

A. Mr. Wood is incorrect on at least two grounds. First, as a matter of economic principle, if the revenue potential is the same for two firms, a cost difference nevertheless does not necessarily render the higher cost firm uneconomic, as I just explained. Second, Mr. Wood is incorrect that CLECs and ILECs necessarily face the same revenue potential. One of the advantages of a CLEC is the ability to target high-profit customers, and ignore unprofitable ones. My own analysis indicates that this "cream skimming" is occurring in the BellSouth-served territories. Mr. Wood's entire approach, besides being rejected as probative by the FCC, is based on a flawed premise.

V. RESPONSE TO MR. GILLAN

Q. PLEASE COMMENT ON MR. GILLAN'S ASSERTION THAT ABOUT 97 PERCENT OF THE UNE-BASED LOCAL COMPETITION IN KENTUCKY IS "DEPENDENT UPON UNE-P." (GILLAN DIRECT 8.)

A. Mr. Gillan presumes the outcome of this proceeding. The purpose of this proceeding is to determine those markets in which an efficient CLEC, executing the

most efficient business model, could economically enter and serve a particular market *without access to unbundled local switching*. In instances where this occurs (as in the case of the triggers tests) or where it is likely to be economic (in the case of the potential deployment test), the efficient CLEC is not "dependent upon UNE-P." Mr. Gillan seems to be arguing that all of the lines thus far served by UNE-P-based CLECs in areas where there is no genuine impairment would not be served by switch-based CLECs. That is simply unfounded speculation on his part.

Q. DOES MR. GILLAN ARGUE THAT THE COMMISSION SHOULD NOT REMOVE A NETWORK ELEMENT BASED ON A POTENTIAL DEPLOYMENT ANALYSIS? (GILLAN DIRECT 16-17.)

A. Yes, I believe he does. Like Mr. Wood, Mr. Gillan argues that a potential deployment analysis can indicate why impairment exists, but that it would not be "reasonable" for the Commission to remove a network element unbundling requirement based on a potential deployment analysis. (Gillan Direct 16-17.) Hence, like Mr. Wood, Mr. Gillan would have the Commission ignore the plain language of the federal rules. I believe that this is misguided for the reasons I discussed in my response to Mr. Wood's recommendation. Nothing in the FCC's discussion or its rules even hints at this ill-conceived proposal. Rather, the FCC is very explicit that states must first examine the bright-line triggers tests and then they must consider whether an efficient CLEC could economically provide mass-market service without access to the unbundled switching UNE. This is one way of

addressing Chairman Powell's concern that CLECs use UNE-P even in instances where there is no genuine impairment. Mr. Gillan's undisciplined advocacy should be rejected.

Q. MR. GILLAN ARGUES THAT UNE-P ENCOURAGES INVESTMENT. (GILLAN DIRECT 55.) PLEASE COMMENT.

A. Mr. Gillan's opinions and conjecture on this are irrelevant to any determination of "impairment" under the FCC's rules. The FCC clearly states that facilities-based competition serves the public policy goal of innovation. (TRO fn. 233.) Moreover, removal of unbundling obligations is not optional if the impairment test fails. It is mandatory. The public policy considerations weighing any pros and cons of unbundling already are incorporated in the provisions of the Act itself.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes it does.

ADDITIONAL UNIMPAIRED MARKETS IN KENTUCKY			
UNE Zone	**CEA**	**Net Present Value**	**NPV for Mass Market**
Zone1	Lexington KY-TN-VA-WV	361,068	190,904
Zone1	Owensboro KY	1,502,796	700,364
Zone1	Paducah KY-IL	859,958	358,050
Zone2	Bowling Green KY	1,526,460	550,943
Zone2	Evansville-Henderson IN-KY-IL	711,560	246,250
Zone2	Lexington KY-TN-VA-WV	1,778,155	635,640
	TOTAL:	**6,739,997**	**2,682,151**
OTHER UNIMPAIRED MARKETS IN KENTUCKY			
Zone1	Louisville KY-IN	14,233,287	8,004,412
Zone2	Louisville KY-IN	4,173,220	2,816,387
	TOTAL:	**18,406,506**	**10,820,799**