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March 17, 2004

Honorable Deborah Taylor Tate, Chairman
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0505

Re. Implementation of the Federal Communications Commission's Triennial Review Order (Nine-month Proceeding) (Switching)
Docket No. 03-00491

Dear Chairman Tate:

Enclosed for filing is the original and 4 copies of the Surrebuttal Testimony, and 1 CD-ROM with the exhibits for Don J Wood, Cheryl Bursh, Mark Van De Water, Steve E. Turner and Jay M Bradbury on behalf of AT&T

If you have any question, please contact me.

Very truly yours,

BOULT, CUMMINGS, CONNERS & BERRY, PLC

By. Henry Walker

HW/pp

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

IN RE:

IMPLEMENTATION OF THE FEDERAL	)	
COMMUNICATIONS COMMISSION'S	)	**DOCKET NO.**
TRIENNIAL REVIEW ORDER – 9 MONTH	)	**03-00491**
PROCEEDING MASS MARKET SWITCHING	)	

SURREBUTTAL TESTIMONY OF DON J. WOOD

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTH CENTRAL STATES, LLC

MARCH 17, 2004

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is Don J. Wood My business address is 30000 Mill Creek Avenue, Suite 395, Alpharetta, Georgia, 30022

Q. ARE YOU THE SAME DON J. WOOD WHO PREFILED DIRECT AND REBUTTAL TESTIMONY ON BEHALF OF AT&T IN THIS PROCEEDING?

A Yes.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of BellSouth witness Debra Aron.

In her rebuttal testimony, Dr Aron engages primarily in a strategy of mischaracterizing my testimony and that of Dr Bryant, Mr. Turner, and Mr. Gillan, grossly oversimplifying the issues before the Authority, and responding with "facts" that are based on flawed research and that are simply incorrect.[1]

Q. AT PAGE 35 OF HER REBUTTAL TESTIMONY, DR. ARON STATES THAT HER "INTERPRETATION" OF YOUR TESTIMONY IS THAT YOU ARE URGING THE AUTHORITY TO DISREGARD PORTIONS OF THE TRO. IS HER "INTERPRETATION" ACCURATE?

A. Not at all. Specifically, Dr Aron asserts that "Mr. Wood urges the TRA to simply disregard the potential deployment component of the FCC's impairment methodology as part of its determination [of impairment] . . on the grounds that he already knows what the answer should be " Even a cursory examination of my direct testimony will reveal that I am in no way suggesting that the TRA ignore any part of the TRO. To the contrary, I am suggesting a more comprehensive consideration than proposed by Dr. Aron. While she urges the Authority to consider a "potential deployment"

analysis in a vacuum, I am recommending that the Authority consider such an analysis as one of an interrelated series of tests. For example, in my direct testimony I asked the Authority to consider the following:

1. Based on an extensive record, the FCC found "on a national level that requesting carriers are impaired without access to unbundled local circuit switching when serving mass market customers." (¶419) Impairment is assumed to exist unless and until specific, concrete evidence to the contrary is presented.

2. Any analysis of *potential* entry via self-provisioned local switching is considered only after the TRA has concluded, pursuant to a sufficiently granular analysis, that *actual* entry has not occurred to any significant degree in the identified markets. This absence of *actual* deployment reveals, at a level of significance that could never be attained by any attempted "potential entry" analysis, the market realities that exist today. Experience indicates that CLECs have either been unable to economically justify the deployment of the own local circuit switching equipment to serve mass market customers, confirming the observed absence of actual entry in this manner.

3. Any potential entry analysis must consider both operational and economic factors in concert The existence of operational impairment cannot be overcome by the absence of economic impairment, or *vice versa*

Dr Aron argues (p. 35) that I am urging this Authority to disregard any "potential entry" demonstration because I already know what the answer should be. To the contrary, I am urging the TRA – based on its knowledge of Tennessee markets for mass market services and experience with competitive entry into those markets – to consider any "potential entry" claims within the context of what *it* knows the answer will likely be.

Q. DR. ARON (PP. 35-36) STATES THAT THE FCC'S TRIGGER TESTS ARE ASYMMENTRIC. IS SHE RIGHT?

A. No Dr Aron argues that "the FCC's trigger's tests are asymmetric tests of impairment· satisfying the triggers demonstrates lack of impairment, but failing them

[1] As I will explain in more detail below, a demonstration of the significance of these assumptions can be made using BellSouth-provided information and the BACE model

does not demonstrate impairment." Her conclusion appears to be based at least in part on her flawed conclusion that "passing a triggers test clearly indicates that there is no impairment." This, of course, is not what the FCC concluded.

In reality, the FCC explicitly recognized the possibility for exceptions to the results of a triggers analysis, and did so symmetrically. First, as Dr. Aron explains, if the results of a triggers analysis indicate a finding of impairment, the Authority will then proceed to a "potential deployment" analysis in order to determine if some set of factors exists for that market that – in spite of the lack of *actual* deployment – nevertheless indicate that the potential exists for such deployment. Second, as Dr. Aron fails to mention, if the results of a triggers analysis indicate a finding of non-impairment, the TRA may then proceed to an "exceptional barrier" analysis in order to determine if some set of factors exists for that market that would prevent further deployment: "we recognize that there may be some markets where three or more carriers are serving mass market customers with self-provisioned switches, but where some significant barrier to entry exists such that additional carriers with self-provisioned switches are foreclosed from serving mass market customers ... Where the self-provisioning trigger has been satisfied and the state commission identifies an exceptional barrier to entry that prevents further entry, the state commission may petition the [FCC] for a waiver of the application of the trigger, to last until the impairment to deployment identified by the state no longer exists " (¶462).

Q. DR. ARON ALSO REFERS TO AN "ASYMMETRY" IN THE "OBSERVABILITY OF OUTCOMES." DO YOU AGREE WITH HER CONCLUSIONS?

A Specifically, Dr. Aron argues (p 2) that "if the Tennessee Regulatory Authority . errs in finding impairment where none exists, the social costs are extremely difficult to measure," but such difficulty does not make these costs "any less real or any less significant." In other words, reaching an erroneous conclusion of impairment will, according to Dr. Aron, result in social costs that are significant though not readily apparent.

In contrast, she argues, "if the TRA errs in finding no impairment where impairment exists," the social cost is low ("merely" the forgone entry of carriers who would rely on the network of the incumbent) but visible. In other words, reaching an erroneous conclusion of non-impairment will, according to Dr Aron, result in social costs that are apparent but not significant.

Based on her conclusions about social costs, Dr. Aron argues that the Authority should err on the side of a finding of non-impairment (colloquially, she recommends a rule of "when in doubt, throw them out") Her conclusions, however, rely on the accuracy of her fundamental assumption that if local circuit switching is not available as a UNE,[2] CLECs will invest in their own local circuit switching equipment to serve mass market customers. As I explain below, this assumption has no empirical foundation and is based on confusion regarding cause and effect. The point here is that Dr Aron goes on to reach some dangerous conclusions based on this very shaky foundation.

At p 3 she suggests that with "*true* competition" (i.e. competitive entry only in the form of self-deployed equipment and facilities, including local circuit

switches), the need for administrative oversight and regulation of BellSouth are reduced. Her flawed logical sequence can be summarized as follows: (1) Elimination of UNE local switching and UNE-P provides missing "incentives" for CLECs to invest in their own equipment, (2) in response to these incentives, CLECs make these investments and are able to compete with BellSouth on this basis, (3) the resulting competitive market forces can act as a substitute for regulation in order to protect consumers. If Dr. Aron's fundamental premise – that it is economically rational for CLECs to invest in their own local circuit switching equipment to serve mass market customers - is wrong, a more logical sequence is the following (1) Elimination of UNE local switching and UNE-P eliminates the ability of CLECs to economically serve mass market customers, (2) in response, CLECs must discontinue their offerings to mass market customers in most or all geographic markets, and (3) with no regulation and no competitive market forces to act as a constraint, BellSouth operates as an unregulated monopoly. Dr. Aron completely ignores the social costs of an unregulated monopoly in her analysis, though such an outcome is clearly not good for consumers.

Q. YOU STATED THAT DR. ARON'S FUNDAMENTAL PREMISE THAT IT IS ECONOMICALLY RATIONAL FOR CLECS TO INVEST IN THEIR OWN LOCAL CIRCUIT SWITCHING EQUIPMENT TO SERVE MASS MARKET CUSTOMERS IS WRONG. PLEASE EXPLAIN.

A. Dr. Aron refers (p. 6) to a situation in which "a CLEC would rather exit the market than pursue the UNE-L opportunity," suggesting that whenever a CLEC does not use its own local circuit switching equipment to serve mass market customers, it has

[2] And, by extension, if UNE-P is not available

simply chosen not to do so Such as statement is not only flawed and unsupported, it is naive.

Dr Aron's reasoning is flawed in several areas. Any meaningful analysis of why CLECs in most instances rely upon ILEC-provided local circuit switching to serve the mass market must consider the following three points.

1. CLECs have a number of incentives to pursue a UNE-L strategy, and these incentives have been present since 1996. As Chairman Powell observed in language cited by Dr Aron (p. 4), CLECs have an incentive to invest in their own facilities in order to offer differentiated services, control their costs, become less dependent on the incumbent (a competitor), and offer redundancy of networks. These incentives exist today; they are not simply created if UNE local switching is unavailable. The relevant question, ignored by Dr. Aron, is "In response to these incentives, what have CLECs done in order to offer services to mass market customers, particularly when UNE local switching or UNE-P has not been available?"

2. In the absence of access to UNE-P, CLECs have not deployed their own local circuit switching equipment to serve mass market customers. Dr. Aron takes issue (p. 38) with my recommendation that the Authority consider important historic evidence regarding impairment, or what she refers to as "a retrospective review of CLEC successes and failures *in a world of ubiquitous UNE-P availability*" (emphasis added). I don't know where Dr. Aron has been for the past eight years, but her fantasy "world of ubiquitous UNE-P availability" certainly didn't exist in the BellSouth region. In reality, BellSouth refused to make UNE-P operationally available until at least the conclusion of AT&T's arbitration with BellSouth in 2000.

As a result, there are two factually distinct time periods that can be examined. The first, from1996 until 2000, consists of a period of time in which CLECs had the *incentive* to invest in their own facilities in order to offer differentiated services, control their costs, become less dependent on the incumbent, and offer redundancy of networks, and did not have access to UNE-P. The second, from 2000 until the present, consists of a period of time in which CLECs had the same incentives, but during which UNE-P was available. Comparing the actions of CLECs during these two time periods can in fact represent a meaningful indicator of impairment.

In reality, during a time in which CLECs had incentives to deploy their own switching facilities – but during which the "corrupting influence" of UNE-P did not exist – CLECs did not invest in local circuit switching equipment in order to offer mass market services. The presence of these two distinct time periods allows us to control for the key variable identified by Dr. Aron (UNE-P availability) and determine if the observable results change in the two scenarios They don't. Whatever factor is preventing CLECs from making this investment, it isn't the availability of UNE-P: something else (the absence of an economically rational basis for doing so, perhaps) must have prevented CLEC investments in local circuit switching to serve mass market customers during the time in which UNE-P was not available

3. CLECs have the necessary expertise to deploy the necessary network facilities. Dr. Aron speculates (p 6) that perhaps the reason that CLECs are not (and have not) deployed local circuit switching facilities to serve mass market customers is because these carriers lack the necessary "expertise with the deployment of actual

telephone network facilities." Not only is Dr. Aron's statement completely unfounded, it ignores a wealth of available evidence to the contrary. Dr. Aron cannot seriously be arguing that AT&T has no experience or expertise with the deployment of actual network facilities. Other CLECs attempting to provide services to mass market customers in Tennessee have similar experience and expertise. Dr Aron also ignores the fact that in many cases CLECs are now relying on the expertise of individuals who were previously employed – and whose expertise was relied upon – by BellSouth. There is absolutely no factual foundation for a conclusion that CLECs have not self-deployed these facilities because they lack the necessary expertise.

Q. AFTER A CONSIDERATION OF ALL OF THESE FACTORS, WHAT IS THE MOST LIKELY REASON THAT CLECS HAVE NOT SELF-DEPLOYED LOCAL CIRCUIT SWITCHING TO SERVE MASS MARKET CUSTOMERS?

A A review of the factors described by Dr. Aron suggests that CLECs have not made these investments because it is not economically rational for them to do so Results obtained from BellSouth's BACE model, described in detail later in my testimony, also support such a conclusion.

Q. DR. ARON ARGUES THAT THE EXISTENCE OF UNE-P IMPACTS THE VIABILITY OF UNE-L. DO YOU AGREE?

A Not at all. Dr. Aron states (p. 35) that there is "no doubt" that the existence of UNE-P affects the "*viability* of pursuing a UNE-L strategy." This is a frankly bizarre notion for which Dr. Aron offers no support The *viability* of UNE-L depends on the characteristics of the market in question, the revenue opportunities that can reasonably be expected to exist in that market, and the cost (including investment in local circuit switching) required to provide the necessary services. As I describe in my rebuttal testimony, a meaningful business case analysis can be performed if (but

only if) all variables are properly established and considered, but "availability of UNE-P" is not one of those variables It is perhaps telling that the "availability of UNE-P" is not a variable considered by the BACE, which Dr. Aron endorses as an appropriate analysis.

In reality, CLECs have considered the viability of UNE-L as a means of serving mass market customers, and will probably continue to do so While the availability of UNE-P may make it possible to serve mass market customers in geographic markets where UNE-L is not viable, UNE-P availability has no impact whatsoever on whether a business case can be made for UNE-L.

Q. DR. ARON ARGUES THAT CLECS GAIN FROM THEIR RELIANCE ON THE INCUMBENT. DO YOU AGREE?

A. No. Such a conclusion is nonsensical for two reasons. First, it is directly at odds with the language attributed by Dr. Aron to Chairman Powell, in which he explains that CLECs have a number of incentives to invest in their own facilities in order to minimize reliance on the ILEC, including "to offer differentiated services, control their costs, become less dependent on the incumbent [a competitor], and offer redundancy of networks."

Second, Dr. Aron (pp. 5-6) explains that a CLEC can utilize UNE-P in order to avoid making the investment necessary for self-deployment. While she makes every effort to tread carefully, she gets dangerously close to the right answer: CLECs rely on UNE-P because a business case that considers all relevant variables cannot be made for the higher risk entry strategy of self-deployment of local circuit switching and UNE-L to serve the mass market. As I explained in my rebuttal testimony, much of the financial risk in self-deployment is created by the fact that the CLEC begins

with higher unit costs than BellSouth due to both a lower market share and backhaul requirements. In this respect, BellSouth's "first in" advantage in significant and potentially insurmountable The FCC's TELRIC methodology puts ILECs and CLECs on a more equal footing by neutralizing – to some degree – this "first in" advantage in the pricing of UNEs by equalizing the component of each carrier's cost associated with this investment risk.

As I described in my rebuttal testimony, a fundamental problem with BellSouth's "potential deployment" analysis is that while Dr. Aron is arguing that CLEC's utilize UNE-P in order to reduce their risk to serve mass market customers, Dr Billingsley is simultaneously arguing that CLECs investing in their own local circuit switches will experience significantly *less* risk than these same carriers have experienced when using UNE-P [3] This inconsistency must be resolved in favor of Dr. Aron Dr. Billingsley's assumption that CLECs will incur less risk and a lower cost of capital when making the substantial investments necessary to self-deploy local circuit switching (and his assumption that the necessary capital will be available at any price) is absurd on its face. While she subsequently reaches the wrong conclusions, Dr. Aron gets closer to the truth· because of the inherently higher risk, a business case analysis cannot support self-deployment of local circuit switching by CLECs to serve mass market customers A business case can be made, for some geographic markets, to provide such services by utilizing UNE-P.

Q. DR. ARON CITES TO A CORRELATION BETWEEN THE AVAILABILITY OF UNE-P AND THE FAILURE OF CLECS TO SELF-DEPLOY LOCAL

[3] This assumption causes Dr Billingsley to significantly understate the relevant cost of capital for CLECs, and subsequently causes BellSouth to utilize a discount rate in the BACE that is much too low to reflect the risks associated with the investments that it analyzes

CIRCUIT SWITCHING TO SERVE MASS MARKET CUSTOMERS AS A RATIONALE FOR ELIMINATING UNE-P. DO YOU AGREE?

A. Not at all Dr Aron (pp 37-38) falls victim to a basic logical fallacy. Dr. Aron may be correct that when she notes that there is a correlation between the availability of UNE-P and the failure of competitors to utilize their own switching capacity. But as Dr. Aron certainly ought to be aware,[4] the existence of even a high degree of correlation does not imply causation (and certainly does not suggest that causation applies equally in both directions). It is equally correct to note that there is a correlation between people who fall down a lot and people who don't tie their shoes. The existence of this correlation in no way demonstrates that people *decide* not to tie their shoes *because* they fall down a lot. In the same way, a correlation between UNE-P and CLECs that do not self-deploy local circuit switching in no way demonstrates – or even suggests – that CLECs decide not to self-deploy *because* UNE-P is available. To the contrary, such a correlation could – and almost certainly does – underscore the importance of UNE-P by noting that CLECs use UNE-P where self-deployment of local circuit switching to serve mass market customers is not economically rational

Q. DR. ARON SUGGESTS (P. 5) THAT THE ELIMINATION OF UNE-P IS OF LITTLE CONSEQUENCE, BECAUSE LOCAL CIRCUIT SWITCHING MAY CONTINUE TO BE AVAILABLE AT "MARKET" PRICES. DO YOU AGREE?

A No. As an initial matter, "may be available" is not the same as "will be available." The Authority should consider this key distinction before eliminating the mechanism that makes competitive alternatives available to many mass market customers in

[4] Anyone who can use phrases like "accommodate heterogeneity in costs" – even if they are wrong when they use it – can be expected to have a rudimentary understanding of statistics

Tennessee. It is equally important to consider the characteristics of the "market" for local circuit switching and UNE-P. If the triggers analysis indicates that wholesale alternatives are not available (neither BellSouth nor Verizon make a claim that such wholesale alternatives exist), BellSouth represents the sole provider of this functionality Competitive market forces cannot constrain prices if only one provider exists. Finally, Dr Aron does not suggest that local circuit switching, combined with access to voice grade local loops as a UNE-P offering, "may" be made available (if history is any guide, it won't be).

Q. YOU STATED THAT IT IS IMPORTANT FOR THE TRA TO CONSIDER THE FACT THAT BELLSOUTH WOULD BE THE SOLE PROVIDER OF THIS FUNCTIONALITY IN DR. ARON'S "MARKET." DO YOU HAVE ANY EXPERIENCE THAT SUGGESTS A LIKELY PRICE LEVEL?

A. Yes In a recent arbitration with ITC^DeltaCom, BellSouth proposed rates for local switching elements that would apply if the Authority reaches a finding of non-impairment. These rates were similar to the "market" rates identified by FCCA witness Gillan in his rebuttal testimony. As Mr Gillan explains, BellSouth's idea of a "market rate" is several hundred percent above the existing UNE rate. BellSouth also publishes its idea of "market based rates" on its interconnection website. The section of the *BellSouth/CLEC Agreement* containing *Market Based Rates* current posted shows a proposed rate for a switch line port of $14 per month. The current UNE rate is $1.40, one-tenth of the proposed "market" level.

Q. DR. ARON ALSO PRESENTS REBUTTAL TESTIMONY IN SUPPORT OF THE INPUTS TO BELLSOUTH'S BACE MODEL. DO YOU AGREE WITH HER REASONING?

A. No. I disagree with Dr. Aron's assumptions that existing retail prices will remain unchanged for ten years, that BellSouth has considered revenues at a sufficient level

of granularity, and that it is reasonable to expect that all CLECs offering mass market services will capture 15% of the relevant geographic market (particularly if BellSouth's win-back efforts are considered).

Q. PLEASE EXPLAIN WHY YOU DISGREE WITH DR. ARON'S ASSUMPTION THAT EXISTING RETAIL PRICES WILL REMAIN UNCHANGED FOR TEN YEARS.

A. At p 14, Dr Aron argues that "the main deficiency (of an assumption of future price reductions) 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*" As she is wont to do, Dr. Aron is taking one sentence from the TRO and failing to consider its interrelationship with other FCC requirements

When conducting a business case analysis, it is important to consider the likely level of revenues and costs over the time horizon of the analysis. In a short run analysis, it may be appropriate to consider the current level of prices to be fixed If the analysis encompasses a longer period of time (such as the BACE's immutable ten year assumption), it is necessary to consider the potential for changes in the level of revenues and costs over time. This uncertainty increases as more distant time periods are considered, thereby increasing the risk associated with these more distant expected cash flows. The consideration of projected revenues and costs – and the uncertainty associated with those expectations – is fully consistent with the FCC's conclusion (¶517) that when "judging whether entry is economic," states must consider how "competitive risks affect the likelihood of entry."

BellSouth has juxtaposed assumptions of fixed price levels, a ten year time horizon, and a discount rate based on a *lower* level of risk than CLEC's currently face. If Dr Aron were correct that it is reasonable to consider fixed prices (and therefore to assume no uncertainty and no risk associated with that uncertainty), it would not be necessary to conduct an NPV analysis at all, the expected value would simply be the sum of future net cash flows (with no discount rate applied).

Q. DR. ARON HAS ARGUED IN FAVOR OF GRANULAR ASSUMPTIONS REGARDING COSTS AND REVENUES. DOES THE BACE OPERATE IN THIS MANNER?

A. No. In other states Dr. Aron has referred to "the requirement that the (potential deployment) analysis be sufficiently granular to take into account the state of impairment in a particular market," and specifically cites to the FCC's conclusion (¶ 485) that an appropriate analysis must consider "the significant variation in the costs and revenues an efficient entrant is likely to face."[5] Oddly enough, after acknowledging the FCC's requirement in the TRO for such granularity, Dr. Aron has removed this statement from her testimony. While this revision makes her testimony consistent with the BACE – neither considers revenues and costs at the necessary level of granularity - both the BACE and now Dr Aron's testimony are *inconsistent* with the clear requirements of the TRO that an analysis consider "significant variation in the costs and revenue" of an entrant.

As I described in detail in my rebuttal testimony, the BACE does not (and based on its construction, cannot) do this. BellSouth's existing retail prices for mass market customers are characterized by areas of high rates and low costs, exactly the

kind of relationship that the FCC found to be unsustainable. BellSouth's prices and reported costs vary at the wire center level. The price assumptions in the BACE, however, cannot be changed at this level of granularity. Dr. Aron's previous assertion has been that it is necessary to reflect the unique characteristics of a state's customer base. While this is an accurate description of what a business case model *should* do, it is inaccurate with regards to what the BACE *can* do.

Q. DR. ARON MAKES SEVERAL CLAIMS ABOUT HOW THE BACE MODEL TREATS CLEC MARKET SHARE OVER TIME. DO YOU AGREE WITH HER TESTIMONY?

A. No I disagree with Dr. Aron's market share assumptions in three areas First, her claims regarding how the BACE treats CLEC market shares is simply factually incorrect. Second, the assumptions and model inputs that she supports fail to reflect important information.

In both her direct and rebuttal testimony, Dr Aron states that an ultimate market share of 15% is assumed for each CLEC. A review of BellSouth's base run assumptions, however, indicates that the actual assumptions range from 7.53% to 20.12% for residence customers and 3 6% to 32.85% for 1-3 line business customers. If 15% is Dr. Aron's magic number, it is unclear why BellSouth has not actually used it in the BACE.

[5] See "Rebuttal Testimony of Debra Aron before the Florida Public Service Commission" (p 14) Docket No 030851-TP January 7, 2004

Second, Dr Aron's testimony, particularly when compared to Ms. Tipton's,[6] suggests that her assumptions are unlikely to prove true. At p 28 Dr. Aron argues that "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." BellSouth's BACE assumptions (sponsored by Dr. Aron) are inconsistent with this statement: based on her "p value" of .5 and an ultimate CLEC market share of 15%, the BACE assumes that every CLEC will have a Year One market share of 7.5% - a market share that is 50% higher than the 5% Dr. Aron refers to as "reasonable" for "a growing CLEC."

Third, Dr. Aron fails to incorporate additional relevant information. She does not discuss (and makes no indication that she has considered) that the customers willing to leave BellSouth are likely to be enticed back to BellSouth's due to "win-back" offerings. In its Fourth Quarter 2003 *Investor Relations Competitor Earnings Update*, BellSouth CFO Ron Dykes is quoted as saying that "BellSouth is on the 'bleeding edge' in terms of aggressiveness in win-backs for UNE-P competitors," and that BellSouth has "won back "40% of its consumer losses and more than 60% of its business losses." If BellSouth is "on the bleeding edge of aggressiveness" in its efforts to win back customers from UNE-P providers (customers for whom it receives wholesale revenue to recover network costs), it is reasonable to expect that BellSouth would be somewhere beyond the "bleeding edge of aggressiveness" in its attempts to win back customers from a CLEC utilizing self-deployed local circuit switching

[6] Ms Tipton shows between three and five CLECs in each market using self-provisioned local switching (assuming that some carriers are utilizing UNE-P instead ,,the actual number of CLECs in therefore likely to be higher) In ten years, Dr Aron's assumptions yield a total CLEC share of the market of between 45and 75% of the total market

(customers for whom it receives no revenue). BellSouth's window of opportunity to "win back" a customer before it is actually lost is also greater in a UNE-L scenario. With UNE-P, BellSouth has approximately twenty-four hours before the cutover of the customer is completed With UNE-L, BellSouth's "win-back before actually lost" window expands to five days.

Based on BellSouth's existing on-but-not-yet-beyond the bleeding edge of aggressiveness win-back offerings, it has been able to entice about half of the customers won by CLECs to return. In other words, a CLEC must win two customers from BellSouth in order to keep one. Assuming that Dr. Aron's assumptions about a CLEC's ability to attract customers are accurate (as described above, a generous assumption), the BACE has overstated both the rate of customer acquisition and ultimate CLEC market share by failing to consider the impact of BellSouth's bleeding edge aggressiveness.[7]

Q. YOU STATED THAT THE BACE CAN BE USED TO DEMONSTRATE THE IMPORTANCE OF USING REASONABLE ASSUMPTIONS. PLEASE EXPLAIN HOW YOU HAVE REACHED THIS CONCLUSION.

A While the structure of the BACE makes it impossible to reflect all relevant revenue and cost information with sufficient granularity to perform a meaningful business case analysis, it is possible to consider the impact that certain BellSouth assumptions (sponsored by Dr. Aron) have on the results. A table containing these results is attached as Exhibit DJW-5.

These results can be summarized as follows:

[7] A win-back offering effectively reduces that rates against which a CLEC must compete The ability of BellSouth to make win-back offers underscores the fallacy of Dr Aron's assumption of constant prices

If prices are assumed to decrease by 5 1% per year, and no other changes are made to BellSouth's assumptions, the reported NPV declines to negative 99 million.

If Dr. Billingsley's CLEC-specific cost of capital is used, and no other changes are made to BellSouth's assumptions, the reported NPV declines by 56%

If the CLEC market penetration assumptions are adjusted to reflect the impact of BellSouth's win-back pricing, and no other changes are made to BellSouth's assumptions, the reported NPV declines by 176%.

Q. DR. ARON ARGUES THAT A COST DISADVANTAGE IS INSUFFICIENT TO DEMONSTRATE IMPAIRMENT. DO YOU AGREE?

A. No She argues (p. 29) that whether "CLECs incur costs that are not incurred by ILECs is not determinative of impairment," but instead that "costs are relevant only within the context of a well-defined business case analysis that evaluates whether entry by an efficient CLEC is economic." As a practical matter in this case, the questions (and the answers) are the same.

Dr Aron argues (pp 38-39) that "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." Dr. Aron goes on to explain that CLECs can "compete by differentiating their products from their rivals and earn a premium" from certain customers. Dr. Aron does not explain why if it is necessary to differentiate a product in order to command a higher price from some customers, firms with higher unit costs but *providing identical products* could successfully compete

Dr. Aron goes on to describe "the richness of economic models of competition." While the 'richness" of these models may provide for interesting academic debate at a 30,000 foot level, this case is about what is actually happening at ground level. Dr. Aron offers no examples, theoretical or otherwise, of how telecommunications services to mass market customers could be differentiated in a way that would support any significant difference in price, nor does she explain how – even in the absence of BellSouth's ability to effectively reduce the rate against which the CLEC must compete through a win-back offering – a CLEC with a higher per-unit cost can compete on price *for mass market customers within the identified geographic markets in Tennessee.* A description of the "richness" of economic theory cannot serve as a substitute for the granular analysis of actual market conditions required by the TRO

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

SCENARIO	Changes in Inputs	NPV Mass Market	% Change from BellSouth Default
1	BellSouth Default	$15,671,297 77	0%
2	5 1% Yearly Price Decreases	-$98,984,833 21	-731 63%
3	Billingsley Cost of Capital (20 87% COE, 70% E/D, and 15 36% WACC)	$6,870,829 58	-56 16%
4	CLEC Market Share Reflecting Impact of BellSouth Win-Back Program (p=0 25, terminal % =1/2 Projected Amount)	-$11,853,466 29	-175 64%

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

IN RE:

IMPLEMENTATION OF THE FEDERAL COMMUNICATIONS COMMISSION'S TRIENNIAL REVIEW ORDER – 9 MONTH PROCEEDING MASS MARKET SWITCHING)	**)**	**DOCKET NO. 03-00491**

SURREBUTTAL TESTIMONY OF CHERYL BURSH

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTH CENTRAL STATES, LLC

MARCH 17, 2004

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Cheryl L. Bursh My business address is 1200 Peachtree Street, Suite 8100, Atlanta, Georgia 30309.

Q. ARE YOU THE SAME CHERYL BURSH WHO PREVIOUSLY FILED REBUTTAL TESTIMONY IN THIS DOCKET ON FEBRUARY 27, 2004?

A Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to various performance related issues raised in the Rebuttal Testimony filed by BellSouth witness Alphonso J. Varner.

Q. BELLSOUTH WITNESS ALPHONSO VARNER'S REBUTTAL TESTIMONY AT PAGE 8 DISPUTES AT&T'S EXPERIENCE WITH HOT CUT IMPAIRMENTS. PLEASE COMMENT.

A. AT&T witness Mark Van De Water has described AT&T's negative experience with BellSouth's hot cut process, specifically listing provisioning delays and factors that contributed to customer service outages. (See Van De Water Direct at pp. 7 and 8.) Nonetheless, Mr. Varner dismisses "'substandard performance in returning timely firm order confirmations', and other failures related to the scheduling of hot cuts and 'erroneous disconnection of end users' line,' and 'undue delay in reconnection'" as meritless. (See Varner Rebuttal, p. 8, lines 8-16.) And although his testimony purportedly demonstrates this, it, in fact, focuses on a different period of time than that discussed in AT&T's testimony and does not focus on data for 2Wire Analog Loop w/Local Number Portability ("2W

Analog Loop w/LNP"), the type of loop that will be most frequently used in an Unbundled Network Element-Loop ("UNE-L") environment

Q. WHY DO YOU MAINTAIN THAT MR. VARNER'S TESTIMONY USES A TIME PERIOD WHICH DOES NOT SUPPORT THE POINT HE PURPORTS TO MAKE?

As AT&T has noted, the company virtually eliminated UNE-L as a means of acquiring customers several years ago. (See Van De Water Direct at p 6). For the last several years, including December 2002 through October 2003, the period of time used by Mr Varner, AT&T has been acquiring its mass market (residential and small business) customers using the Unbundled Network Element-Platform ("UNE-P").

Q. BELLSOUTH CLAIMS THAT "...FOR THE PERIOD DECEMBER 2002 TO OCTOBER 2003, OVER 94% OF THE LSRS FOR UNE LOOP ORDERS (WHICH INCLUDE HOT CUTS ORDERS) RECEIVED A FIRM ORDER CONFIRMATION (FOC) WITHIN THE INTERVAL ESTABLISHED BY THIS COMMISSION" (SEE VARNER REBUTTAL, P. 8, LINES 20-23). DOES THIS SUPPORT YOUR POINT THAT BELLSOUTH'S PERFORMANCE ASSESSMENT DOES NOT FOCUS SPECIFICALLY ON THE TYPES OF LOOPS THAT WOULD BE USED IN A UNE-L ENVIRONMENT?

A. Yes. The 94% touted by BellSouth appears to encompass all UNE Loops even though 2W Analog Loop w/LNP results would be more meaningful for evaluating performance in a UNE-L environment. Evaluating the Firm Order Confirmation ("FOC")(partially mechanized) performance for 2W Analog Loop w/LNP shows non-compliant levels of service. In the period from November 2002 to October 2003 for partially mechanized FOCs, 2W Analog Loop w/LNP Design resulted in 12 consecutive months of non-compliance and 2W Analog Loop w/LNP Non-

Design reflected 2 out of 3 months of non-compliance (Direct Testimony of Varner, Exhibit AJV-1, Attachment pages BST000152-153).

Q. ARE MR. VARNER'S COMMENTS CONCERNING THE AVERAGE COMPLETION NOTICE INTERVAL PERFORMANCE RESPONSIVE TO AT&T'S CONCERN OVER BELLSOUTH'S FAILURE TO NOTIFY "CONSISTENTLY AND TIMELY THAT CUSTOMER LOOPS HAD BEEN TRANSFERRED TO AT&T"? (SEE VARNER REBUTTAL AT P. 9.)

A. No BellSouth references a different notification than that discussed in Mr. Van De Water's Direct Testimony Mr. Van De Water refers to the call that the BellSouth provisioning center makes to the Competitive Local Exchange Carrier ("CLEC") to advise that the old cross connection jumper that connected the customer's loop to the Incumbent Local Exchange Carrier's ("ILEC's") switch was removed and that the re-wired cross connection from the CLEC's Connecting Facility Assignment ("CFA") has been terminated to the customer's loop.

Mr. Varner's testimony references something different, the Average Completion Notice Interval ("ACNI") metric. The endpoint for this metric is the time stamp when the completion notice was delivered to the CLEC interface for mechanized orders. For non-mechanized orders, the endpoint for the ACNI metric is when the order status is changed to complete in the Service Order Control System ("SOCS"). The starting point for the ACNI metric does not even begin until several steps after the re-wired cross connection from the CLEC's CFA has been terminated to the customer's loop. Any performance results associated with the ACNI metric have no relevance to Mr. Van De Water's point

that BellSouth fails to notify AT&T consistently and timely that customer loops have been transferred to AT&T.

Q. IS MR. VARNER CORRECT IN STATING THAT MR. VAN DE WATER'S COMPARISONS AND CONCLUSIONS ARE INVALID FOR UNE-P VERSUS UNE-L ORDERS? (VARNER REBUTTAL AT PP. 12-14.)

A. No. For the reasons specified in my Rebuttal Testimony, comparing order intervals for UNE-P versus UNE-L orders is important to understanding impairment in an environment in which UNE-P is absent. (See Bursh Rebuttal at pp. 4-6.)

Q. DOES MR. VARNER'S ATTEMPT TO EXPLAIN THE FLAW IN COMPARING THE PERFORMANCE OF UNE-P TO UNE-L ACTUALLY SUPPORT AT&T'S POINT THAT IT IS APPROPRIATE TO USE UNE-P PERFORMANCE AS THE STANDARD TO DEMONSTRATE HOW IMPAIRED CLECS WOULD BE IN AN ENVIRONMENT WITHOUT UNE-P?

A. Yes. Mr Varner states,

> An order for UNE-P typically involves little more than changing the billing of an existing end-user from BellSouth retail (or from another CLEC) to the acquiring CLEC. In this instance, no physical work is required, an outside dispatch is not needed and the order is not subject to facility shortages In contrast, a UNE-L order will always require some form of physical work, in the central office, at the customer's premise, or both. A dispatch may be needed and the order interval can be affected by facility shortages. As a result of these two processes, the applicable ordering intervals will usually differ

Varner Rebuttal, p 13, lines 3-12. The fact that the processes differ demonstrates the very reason why the comparison is appropriate It is only via the comparison that the differences can be assessed and later evaluated to determine how the difference will contribute to the CLECs being impaired in the local market.

Q. AT P. 13 OF HIS REBUTTAL TESTIMONY, MR. VARNER IS CRITICAL OF AT&T'S USE OF UNE-P/SWITCHED-BASED COMPLETIONS FOR

COMPARISON WITH ANALOG LOOPS/WITH LNP. IS THIS JUSTIFIED?

A. No. As explained in Mr. Van De Water's Direct Testimony, data demonstrates that UNE-P orders are completed much more quickly than UNE-L orders The chart included in Mr. Van De Water's testimony shows completion intervals for UNE-P orders without any field work to compare against UNE-L orders without any field work. Data for both switch-based and central office based completions for UNE-P orders is provided. Contrary to Mr. Varner's assertions, switch based completions contain both feature changes and migrations that do not require central office work. Notably, Mr Varner has no comment regarding the central office based completions, which completed on average in only 1 64 days, far more quickly than UNE-L completions.

Q. ON PAGE 15, MR. VARNER STATES THAT MOST UNE-P ORDERS ARE MIGRATION ORDERS. WHAT IS YOUR RESPONSE?

A Mr. Varner should certainly have access to information regarding types of orders being processed by BellSouth. However, I find it quite bizarre that he would make that statement, since it contradicts his earlier comments. For example, he contends on page 13 that switch-based completions are not migrations (i.e., "nothing more than a request for a feature change") knowing full well that those types of completions comprise the vast majority of the UNE-P orders. Now he is saying that most UNE-P orders are migrations. Further, it is unclear why he comments that Mr Van De Water's analysis is based on the ordering patterns of today, since he presents no evidence as to why this is an inappropriate approach or what the changes should be

Q. MR. VARNER CLAIMS, "CLEARLY, THE FCC DID NOT SUPPORT THE IDEA THAT UNE-P AND UNE-L INSTALLATION INTERVALS MUST BE THE SAME, NOTWITHSTANDING MR. VAN DE WATER'S SUGGESTION TO THE CONTRARY." IS MR. VARNER'S CLAIM MISLEADING?

A. Yes. Mr. Varner references Paragraph 491 of the TRO as the basis for this claim, but what it actually addresses is whether "other mechanisms [can] mitigate the disruptions and other practical difficulties inherent in the current loop infrastructure." TRO, Para 491. The FCC concluded that it would not order Electronic Loop Provisioning in the TRO but would reconsider at a later date if hot cut processes prove insufficient. This discussion had nothing to do with UNE-P and UNE-L installation intervals It certainly cannot be cited for Mr. Varner's proposition that the FCC does "not support the idea that UNE-P and UNE-L installation intervals must be the same."

Q. DOES MR. VARNER'S STATEMENT ON PAGE 16 THAT "UNE-L DATA REFLECTS DATA FOR NEW SERVICES..." APPLY TO THE AT&T TABLE HE CRITICIZES?

A No The data reflected on page 15 of the Direct Testimony of Mr. Van De Water represents performance specifically for Analog Loops/with LNP which is migration of existing service. The table "illustrates the inferior performance BellSouth provides for analog loops compared to UNE-P in Tennessee " (See Van De Water Direct at p. 15, lines 13-14) Mr Varner, however, states that "[f]or the most part UNE-L data reflects data for new service while UNE-P data is largely migration of existing service " (See Varner Rebuttal, p. 16, lines 19-20.) While this may be true for UNE Loops in general, it does not apply to the AT&T table, for the data it contains reveals Analog Loop/with LNP performance results,

which is existing service. Therefore, the differences appear to represent inferior performance for Analog Loop/with LNP given that both reflect data that is largely migration of existing service.

Q. MR. VARNER CRITICIZES AT&T'S COMPARISON OF UNE-L TO UNE-P PERFORMANCE, SAYING THAT THIS COMPARISON IS INCONSISTENT WITH RULINGS IN THE COMMISSION'S PERFORMANCE MEASUREMENT PROCEEDINGS. (SEE VARNER REBUTTAL, PP. 18-19.) IS THE COMMISSION'S OBJECTIVE IN THIS PROCEEDING THE SAME AS THAT FOR PERFORMANCE MEASUREMENT PROCEEDINGS?

A. No. In response to the Federal Communications Commission's (FCC) August 21, 2003, Triennial Review Order ("TRO"), this Commission opened Docket P-03-00491 to determine when competing carriers are not impaired without unbundled local switching for mass market customers. In other words, the TRA will evaluate the difference in the CLEC customer experience in an environment without UNE-P and how that less desirable experience will impair CLECs The Performance Measurement Docket was opened, however, to establish permanent performance measurements and enforcement mechanisms for those performance measures.[1]

Q. DO COMPARISONS OF UNE LOOPS AND UNE-P IN THIS PROCEEDING CONTRADICT ANY RULINGS IN THE PERFORMANCE MEASUREMENT PROCEEDING?

A No. A comparison of UNE-P versus Analog Loop/with LNP is not in conflict with the Commission's findings that established a retail analogue for each

[1] **In re: Docket To Establish Generic Performance Measurements, Benchmarks And Enforcement Mechanisms For BellSouth Telecommunications, Inc., Docket No. 01-00193, May 14, 2002.**

product. Determining impairment requires incremental steps from monitoring performance. Once performance is assessed for UNE-P and Analogue Loop/with LNP based on the performance standard ordered by this Commission, the Commission also will understand differences in the two results. Next, the Commission will assess how this difference or inferior performance impairs CLECs' ability to compete. In other words, this Commission will evaluate the difference in the CLEC customer experience in an environment without UNE-P and how that less desirable experience will impair CLECs. Evaluating impairment requires a different methodology than that of monitoring performance. Evaluating impairment requires an additional step beyond that required for monitoring performance.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. An assessment of the anticipated customer experience in an environment that excludes UNE-P is essential for determining whether CLECs will be impaired without its continued availability Comparisons of the UNE-P versus UNE-L experience provide valuable information for that assessment. AT&T originally had market plans based on a UNE-L strategy that resulted in customer dissatisfaction Therefore, assessing anticipated differences in a new environment, in which UNE-P is absent, is critical

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A Yes

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

IN RE:

IMPLEMENTATION OF THE FEDERAL COMMUNICATIONS COMMISSION'S TRIENNIAL REVIEW ORDER – 9 MONTH PROCEEDING MASS MARKET SWITCHING	))))	**DOCKET NO. 03-00491**

SURREBUTTAL TESTIMONY OF MARK DAVID VAN DE WATER

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTH CENTRAL STATES, LLC

MARCH 17, 2004

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Mark David Van de Water My business address is 7300 East Hampton Avenue, Room 1102, Mesa, AZ 85208-3373.

Q. ARE YOU THE SAME MARK DAVID VAN DE WATER THAT PREVIOUSLY FILED DIRECT TESTIMONY IN THIS DOCKET ON JANUARY 16, 2004, AND REBUTTAL ON FEBRUARY 27, 2004?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My Surrebuttal testimony responds to portions of the rebuttal testimony of BellSouth's witnesses A. Wayne Gray and Eric Fogle.

Testimony of BellSouth Witness Wayne Gray

Q. ON PAGES 14 AND 15 OF HIS TESTIMONY, MR. GRAY PROVIDES HIS VIEW OF BELLSOUTH'S OBLIGATION TO PROVIDE CROSS CONNECTS. PLEASE COMMENT.

A. Inexplicably, Mr. Gray insists on discussing BellSouth's view of its obligations under portions of Section 51.323, which are not at issue, and refuses to address its obligations under Section 51.319, which are at issue in this docket. As the following makes clear, BellSouth is obligated to provide cross connects under the TRO.

First in Paragraph 478:

> *Incumbent LEC Provisioning of Competitive LEC-to-Competitive LEC Cross – Connects* We further find that an incumbent LEC's failure to provide cross-

connections[1473] between the facilities of two competitive LECs on a timely basis can also result in impairment. Competition in the absence of unbundled local circuit switching requires seamless and timely migration not only to and from the incumbent's facilities, but also to and from the facilities of other competitive carriers [1474] Such interconnection **requires that the incumbent LEC place** cross connections between the competitive carriers' facilities in its central office on a timely basis. The incumbent's failure to do so will tend to delay competitors' entry, and thus to increase competitors' costs. We conclude that in some cases, such failure can give rise to impairment in the absence of unbundled local circuit switching.

[1473] **Cross-connection is the "attachment of one wire to another usually by anchoring each wire to a connecting block and then placing a third wire between them so that an electrical connection is made** " *Id*, *see also* AT&T Brenner Decl at para 21, Z-Tel Comments, Declaration of Peggy Rubino at para 12

(emphasis added) Second, in Paragraph 514:

Competitive LEC – to – Competitive LEC Cross Connects We have also determined that an incumbent LEC's **failure to provide** cross-connections between the facilities of two competitive LECs on a timely basis can result in impairment. Therefore, a state commission considering whether to find "no impairment" with regard to mass market switching must evaluate whether such delays increase requesting carriers' costs to such a degree that entry into the market is rendered uneconomic in the absence of unbundled switching **Evidence relevant to this inquiry would include,** for example**, information regarding the incumbent's practices and procedures with regard to provision of cross-connects linking competitive carriers' facilities,** competitive LECs' complaints regarding the incumbent's past performance in this area, the incumbent LEC's response to these complaints, the **costs incurred in connection with deficient performance in this regard, and the degree to which those costs render entry into a given market uneconomic.**

(emphasis added). And in the TRO rules, Section 51.319 which states.

Specifically, the state commission shall examine whether.. .difficulties in obtaining cross-connects in an incumbent LEC's wire center render entry uneconomic for requesting telecommunications carriers in the absence of unbundled access to local circuit switching.

Q. ON PAGE 16 OF HIS TESTIMONY, MR. GRAY DESCRIBES A NEW FCC TARIFF OFFERING IN WHICH BELLSOUTH WILL OFFER TO PROVIDE CROSS CONNECTS. DOES THIS SECTON 201 TARIFF

connections[1473] between the facilities of two competitive LECs on a timely basis can also result in impairment. Competition in the absence of unbundled local circuit switching requires seamless and timely migration not only to and from the incumbent's facilities, but also to and from the facilities of other competitive carriers.[1474] Such interconnection **requires that the incumbent LEC place** cross connections between the competitive carriers' facilities in its central office on a timely basis. The incumbent's failure to do so will tend to delay competitors' entry, and thus to increase competitors' costs We conclude that in some cases, such failure can give rise to impairment in the absence of unbundled local circuit switching.

[1473] **Cross-connection is the "attachment of one wire to another usually by anchoring each wire to a connecting block and then placing a third wire between them so that an electrical connection is made** " *Id*, *see also* AT&T Brenner Decl at para 21, Z-Tel Comments, Declaration of Peggy Rubino at para 12

(emphasis added) Second, in Paragraph 514:

Competitive LEC – to – Competitive LEC Cross Connects We have also determined that an incumbent LEC's **failure to provide** cross-connections between the facilities of two competitive LECs on a timely basis can result in impairment. Therefore, a state commission considering whether to find "no impairment" with regard to mass market switching must evaluate whether such delays increase requesting carriers' costs to such a degree that entry into the market is rendered uneconomic in the absence of unbundled switching. **Evidence relevant to this inquiry would include,** for example**, information regarding the incumbent's practices and procedures with regard to provision of cross-connects linking competitive carriers' facilities,** competitive LECs' complaints regarding the incumbent's past performance in this area, the incumbent LEC's response to these complaints, the **costs incurred in connection with deficient performance in this regard, and the degree to which those costs render entry into a given market uneconomic.**

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Q. ON PAGE 16 OF HIS TESTIMONY, MR. GRAY DESCRIBES A NEW FCC TARIFF OFFERING IN WHICH BELLSOUTH WILL OFFER TO PROVIDE CROSS CONNECTS. DOES THIS SECTON 201 TARIFF

OFFERING PROVIDED VIA AN ACCESS SERVICE TARIFF MEET CLEC NEEDS FOR CROSS CONNECTS FOR USE IN THE MASS MARKET?

A No. As I described in my rebuttal testimony, BellSouth's new FCC tariffed "Special Access product" will require that the CLECs wishing to have BellSouth provide a cross connection on BellSouth's frame between a connecting facility assignment ("CFA") from one CLEC's collocation to a CFA in a second CLEC's collocation to engage in "line splitting" of a local loop (not otherwise subject to the FCC's jurisdiction) certify that the traffic carried on that CFA to CFA connection (a frame jumper wire) meet the FCC's de minimus (10%) interstate rule.[1] This unnecessarily subjects a non-complex Plain Old Telephone Service ("POTS") mass market line to cumbersome procedures such as certification and audits, and irrelevant obligations such as the requirement that the line carry at least 10% interstate traffic [2] While Mr. Gray cites, on page 15 of his testimony, to the portion of the rules pursuant to section 201 of the Act, he provides no offering pursuant to section 251 of the Act, which requires no such certification (and is referenced in the same paragraph of the rule)

Further, BellSouth's new "product" cannot be ordered efficiently. UNE local loops are ordered on a Local Service Request ("LSR"). When such a loop is to be "split" between two CLECs, BellSouth will require that the connection necessary to accomplish the "split" be ordered and provisioned out of its FCC Access Tariff using an Access Service Request ("ASR"). There will be no means of electronically ordering such an arrangement and the coordination, through

[1] See Exhibit MDV-R1 of my rebuttal testimony for a copy of BellSouth's FCC tariff

relating the LSR and ASR, that will be required to establish working services (voice and ADSL) for the customer. Thus the voice CLEC must issue an LSR, the data CLEC must issue an LSR, and one of the CLECs (depending on the routing of the loop between the two) must issue an ASR. Manual processing will be required for all three ordering documents. Such a manual and restrictive process creates operational and economic barriers to providing Digital Subscriber Line ("DSL") services to mass market customers.

Further, BellSouth has assigned the exorbitant rate of $350.00 per 2 wire circuit for this access service.[3] In contrast, BellSouth is only permitted to charge $7.68 for cross-connects for local service. BellSouth's proposed policies and practices for this service are designed to complicate and hinder the provision of line splitting service to CLEC customers and should be rejected by this Commission.

Q. ON PAGES 16-20 OF HIS TESTIMONY, MR. GRAY DISCUSSES BELLSOUTH'S POLICY REGARDING THE USE OF MULTIPLE COMPANY CODES AND RECOMMENDS ACTION THAT AT&T TAKE TO ADDRESS THIS ISSUE. PLEASE COMMENT.

A. On page 17, lines 14-16 of his testimony, Mr Gray succinctly describes the root cause of the problem I described on pages 44-48 of my direct testimony: "It is BellSouth's policy not to accept assignments from CLECs other than the owner of

[2] It makes no sense for BellSouth to offer cross-connects via an access tariff in this mass market proceeding when it has clear responsibilities to provide cross-connects for mass markets under the TRO

[3] The exorbitant rate and tortured procedures offered for cross connects is belied by the testimony of BellSouth witness Varner, who at page 27 of his direct testimony states, "As previously stated in this testimony, the cross-connect process is a very basic procedure that BellSouth performs frequently on an ongoing basis There is no appreciably greater difficulty involved in providing co-carrier cross-connect as compared to a cross-connect between BellSouth and a CLEC A cross-connect is a cross-connect "

the collocation space . . " (Mr. Gray does not indicate how he thinks the ordering CLEC could have the assignments to provide them to BellSouth without first having obtained them from the owning CLEC) Mr. Gray goes on to say that the reason for this policy is "to protect a CLEC's assets/property," and that "BellSouth's ordering and provisioning systems contain edits that prevent unauthorized assignment of its customer's collocation assets." Incredibly, BellSouth takes this position when AT&T attempts to use its own assets that have differing codes, although it knows full well that AT&T owns the equipment and is therefore fully "authorized." Instead, it offers extremely costly and burdensome options to remove protection AT&T has not requested.

Q. DOES MR. GRAY ACKNOWLEDGE THAT BELLSOUTH'S POLICIES, PRACTICES, AND SYSTEMS EFFECTIVELY PREVENT A CLEC FROM BEING ABLE TO ORDER A LOOP FROM BELLSOUTH AND SWITCHING FROM ANOTHER CLEC?

A Yes, he does, although it follows his initial answer of no. The net of Mr. Gray's response (on pages 17-20) is that BellSouth will permit a DS1 loop to be ordered from BellSouth by one CLEC and delivered to the collocation space of another CLEC, but will ***not*** permit a DS0 loop be ordered from BellSouth by one CLEC and delivered to the collocation space of another CLEC. DS0 loops are those used to serve mass market customers and accordingly they are the subject of this proceeding. It is unclear why Mr. Gray felt it necessary to include enterprise loops in his response.

Q. PLEASE SUMMARIZE THE RELEVANCE OF THIS PROBLEM TO THIS PROCEEDING.

A. Any CLEC who wanted to order wholesale switching, should it become available, to use with analog UNE loops (DS0) for mass market customers would encounter the problems described in my direct testimony and the testimony of Mr Gray. These difficulties are caused solely by BellSouth's claimed policy decision to provide unwanted protection to CLECs. If BellSouth's interest is truly to protect CLECs, as well as itself, it could require that a letter of authorization between the two company entities/CLECs be provided before service is provisioned BellSouth does this today for DS1 or higher level of service. It simply refused to do so for DS0 service.

Testimony of BellSouth Witness Eric Fogle

Q. ON PAGE FOUR OF HIS TESTIMONY, MR. FOGLE ASSERTS THAT YOU MISCHARACTERIZED LINE SPLITTING AS UNE-P BASED. PLEASE RESPOND.

A. Based on his response, Mr. Fogle does not appear to take issue with my detailed description of line splitting, only the "UNE-P based" label. Further, as he did not take issue with the substance of my description, it is unclear why he believes I was operating under a "misconception".

Q. DO BELLSOUTH EMPLOYEES ALSO REFER TO "UNE-P LINE SPLITTING?

A. Yes. For example, in the bracketed section of the second page of BellSouth-generated meeting notes from the December 11, 2003 BST Line sharing/Line Splitting Collaborative, BellSouth reports "Readily identified as high importance were a) migrating ***existing UNE-P with line splitting*** to UNE-L and retain DSL ." (emphasis added) (See Exhibit MDV-SR1.)

Q. ON PAGE ELEVEN OF HIS TESTIMONY, MR. FOGLE REFERENCES THE FACT THAT DEDICATED WIRING DOES NOT MAKE SENSE FOR A 3.7% TAKE RATE OF DSL. PLEASE RESPOND.

A. AT&T never indicated that it "made sense," only that installing dedicated CLEC collocation cage to CLEC collocation cage cabling was the only process available. Further, it appears that Mr. Fogle does not share the same optimism as other BellSouth witnesses about CLECs' ability to attract DSL customers. For example, in her direct testimony at Exhibit DJA-05, Dr. Aron indicates that in three years a single CLEC would obtain a 15% penetration rate of the residential DSL market, and 25% of the small business DSL market.

Q. ON PAGE TWELVE OF HIS TESTIMONY, MR FOGLE SUGGESTS THAT AT&T DISPATCH ON EVERY DSL ORDER INSTEAD OF WIRING DEDICATED CABLING. PLEASE RESPOND.

A As I indicated in footnote 21 of my direct testimony, AT&T is aware of the dispatch option, but views such an arrangement as both economically and operationally infeasible. Therefore, Mr. Fogle simply offers to exchange one inefficient process for another He recommends that AT&T approach BellSouth to provide technician dispatches at undefined "market" rates. However, in

calculating our "savings" if we do not deploy some of the equipment I described in my direct testimony, he fails to provide the additional costs of the required dispatches, which I assume would minimally include the $350.00 per line charge for a cross connect

Q. GIVEN THE OPERATIONAL AND ECONOMIC HURDLES OF LINE SPLITTING USING UNE-L YOU HAVE DESCRIBED IN YOUR TESTIMONY, WHAT DO YOU RECOMMEND?

A. Those hurdles are an additional source of impairment to an already impaired UNE-L process As such, a finding that CLECs are impaired without access to unbundled switching would certainly address the problems of being forced to use such a process.

Q. FOR ANY CASES WHERE A CLEC CHOOSES TO PROVIDE DSL VIA UNE-L LINE-SPLITTING, HAS BELLSOUTH MET ITS OBLIGATIONS?

A. No. As I described above in my response to Mr. Gray, the TRO at ¶514 specifically determined that "an incumbent LEC's failure to provide cross connections between the facilities of two competitive LECs on a timely basis can result in impairment." BellSouth's "access" cross-connect is not economically or operationally feasible. Further, BellSouth's existing "Co-carrier Cross Connection Arrangement" is not, in fact, a cross connection offering at all, it is only BellSouth's authorization for two CLECs to install a dedicated cable between the respective collocations in the same central office

Q. ON PAGE 17 OF HIS TESTIMONY, MR. FOGLE APPEARS TO INDICATE THAT THE CLEC'S "INTEREST" IN UNE-L LINE SPLITTING HAS BEEN LIMITED AND RECENT. IS THAT YOUR UNDERSTANDING?

A No. A review of BellSouth's line-splitting collaborative meeting notes indicates that in the February 27, 2003 meeting, MCI agreed to provide information to the group about UNE-L or loop-splitting. Further, it is clear from the attached July 2003 e-mails from Denise Berger of AT&T to various BellSouth employees that discussions on this topic occurred in the May and June 2003 collaborative meetings. Finally, the July 30, 2003 e-mail from Denise Berger asked a series of questions attempting to gain information on this topic. (See Exhibit MDV-SR2.) Ms Berger received no response from Bellsouth to her July request until December 19, 2003 in which her questions were still not answered, but she was referred to an upcoming tariff. (See Exhibit MDV-SR3.)

Q. YOU MENTIONED THAT AMONG OTHER OBSTACLES, THE USE OF AN ASR IS REQUIRED IN BELLSOUTH'S OFFERING. DOESN'T THAT DIFFER FROM MR. FOGLE'S TESTIMONY ON PAGE 15?

A. Yes. Mr. Fogle says ASRs are not needed for any ***currently*** available components needed for Line Splitting. However, the process BellSouth is offering to obtain cross-connects for UNE-L line splitting does require ASRs, and the effective date of the tariff is January 9, 2004.

Q. ON PAGE 19 OF HIS TESTIMONY, MR. FOGLE INDICATED THAT THE CLECS HAD NOT FORMALLY REQUESTED BELLSOUTH TO BEGIN WORK ON ESTABLISHING PROCEDURES, ETC. FOR HOT CUT MIGRATIONS TO UNE-L. PLEASE RESPOND.

A While I am unsure what sort of "formal" request BellSouth requires, I assume Mr Fogle is not insinuating that CLECs have not repeatedly communicated with BellSouth on the need for a viable means of loop splitting and attempted to move forward to implementation, as it is absolutely clear that is not the case. For example, as I described earlier in my testimony, AT&T attempted in writing to obtain more information from BellSouth in July 2003 by posing the following questions:

1. How does BellSouth plan to solicit and incorporate CLEC input into the development of this capability and the subsequent offering? In which CLEC forum will this be discussed?
2. What is the timeframe for delivery of this service?
3. How does BellSouth plan to provide procedures and business rules for ordering and provisioning?
4. How does BellSouth plan to provide CLECs with information around cost/price?
5. Does BellSouth plan to provide a mechanized ordering option for CLECs? Will this interface require systems upgrades or systems work by CLECs? When does BellSouth plan to provide such information?
6. Will there be a manual ordering option for CLECs?
7. Will CLECs be able to order this functionality via a single LSR?
8. Will BellSouth require CLECs to install any special or additional collocation equipment?
9. If special equipment is required, will BellSouth offer the access to such equipment as an unbundled network element?

See Exhibit MDV-SR2 To date, BellSouth has not answered our questions nor referred us to the appropriate forum to place a "formal" request. The Commission should require that BellSouth answer these legitimate questions regarding a local service they are obligated to provide to avoid CLEC impairment, and to put in place an efficient electronic Operations Support System upgrades to allow the

ordering and provisioning of this local service using the Local Service Request (LSR) process.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A Yes, it does.

BST Line Sharing/Line Splitting Collaborative
Conference Call Notes – December 11, 2003

ATTENDEES: Via Bridge

BellSouth	Al-Call	Sunshine State Tel	Covad	AT&T	MCI	Webshoppe	Network Telephone
Debbie Timmons	Greg Davis	Andrea Loncaric	John Boshier	Jay Bradbury	Amanda Hill	Craig Uptagrafft	Kyle Kopytchak
Tommy Williams	Theresa Hall		Brian Foor	Becky Webber	Sam Tenerelli		
Diann Hammond	Melissa Davis						
Jimmy Patrick							
Vivian Smith							

FROM: Debbie Timmons, Project Manager – BellSouth Telecommunications, Inc

NOTES:

1. **Welcome and Opening Remarks**
   Debbie Timmons opened the meeting with roll call and agenda review

2. **Review Process Flow: Facility Reservation Pair Change**
   Debbie Timmons lead the review of the process flow for FRN Management Process. BellSouth has proposed and the Collaborative has accepted a process change whereby when a CLEC reserves a spare loop pair, should that loop prove not viable in the field, the I&M tech will work with AFIG & SAC to identify a viable loop pair, perform the cut & work the Shared Loop service order

   The FRN Management Process Flow will be presented for baseline at the next Collaborative meeting Refer to the attached FRN Management Process document.

3. **Loop Characteristics for Shared Loops**
   The update to the Proposed Standards and Procedures for Line Sharing/Splitting Loop Parameters submitted November 3rd by Greg Davis of Al-Call was reviewed. Greg Davis accepted the additional language provided by Gary Tennyson of Bellsouth and stated overall agreement with and acceptance of the document as presented.

   John Boshier of Covad commented the document does not establish anything, especially since the ULM process language was removed and Covad continues to experience situations where certain Bridged Tap is detrimental to Covad's shared loop service Debbie Timmons and Tommy Williams reviewed the history of this subject, specifically citing the need to have a specification for shared loops in the TR73600 document, that shared loop products make use of the stand-alone offering Loop Modification, and that the shared loop collaborative is not the appropriate forum to discuss the Loop Modification product as CLECs not represented in this forum use the Loop Modification process, too

   Kyle Kopytchak of Network Telephone stated disagreement with the position that the Shared Loop Collaborative is not the proper forum to discuss Loop Modification, citing discussions with Jerry Latham, product manager for Loop Modification, wherein it was stated that this collaborative is the appropriate forum. Tommy Williams noted the previous collaborative discussions where Loop Modification discussions were dropped from this collaborative Refer to meeting minutes of 10/23/03, 10/30/03 and 11/13/03

   John Boshier of Covad stated changes to the Loop Modification product are underway and asked if the changes would apply to Shared Loops. Diann Hammond of BellSouth noted that Loop Modification is a stand-alone product that CLECs may choose to use in conjunction with not only Shared Loop products, but other UNE Loop products as well Tommy Williams of BellSouth noted that any changes to the Loop Modification product would be announced via the Carrier Notification Process and that the Interconnection Standard is the vehicle that CLECs and BellSouth use to determine how we conduct business

   Kyle Kopytchak of Network Tel and John Boshier of Covad do not accept the Proposed Standards and Procedures for Line Sharing/Splitting Loop Parameters as presented Greg Davis of Al-Call noted that one reason the Loop Modification information was removed from the proposed standards was because

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Surrebuttal Testimony of Mark Van de Water
Exhibit: MDV-SR1

the Shared Loop CLEC representatives could not reach agreement on Bridged Tap CLECs agreed to review the revisions to the Loop Modification, particularly relative to bridged tap removal before they can agree to the Loop Characteristics for Shared Loops

Refer to the attached Proposed Standards and Procedures for Line Sharing/Splitting Loop Parameters document

4. **Status on Bantam Test Jacks on BST Splitters**
Tommy Williams of BellSouth introduced discussion of eliminating the Bantam Test Jacks on BellSouth Splitters, noting that it has been BellSouth's desire to do so for some time as it is costly and most CLECs don't use it He further commented that Al-Call does use the Bantam Test Jack, but that they had not used the MLT test capability of DLEC-TAFI. When this topic was last discussed, Greg Davis of Al-Call had agreed to assess the use of the MLT capability for Al-Call's environment. Greg reported that the MLT testing does not provide them with the same capability as the Bantam Test Jack, but on the other hand, he has no objection to removing it from the offering.

A vote was called on removing the Bantam Test Jack from the BST Splitter
Yes – Greg Davis of Al-Call
Yes – John Boshier of Covad
Yes – Sam Tenerelli of MCI
Yes – Becky Webber of AT&T
Yes – Melissa Davis of Al-Call
Yes – Craig Uptagrafft of WebShoppe
Yes – Tommy Williams of BellSouth

Tommy Williams thanked the CLECs for their support and noted that the change would become part of the 2004 Shared Loop Work Plan

5. **Sharing to Splitting UNEL Discussion**
During the previous Collaborative meeting, it was suggested that the Collaborative review the Line Splitting Scenario Matrix, suggesting that it may serve as a starting point to define the migration scenarios being sought by the CLECs Debbie Timmons of BellSouth lead a review of the existing matrix. Tommy Williams of BellSouth stated it would be beneficial to know what scenarios are needed and the order of importance. (Readily identified as high importance were a) migrating existing UNE-P with line splitting to UNEL and retain DSL, and b) migrating line sharing to UNEL with CLEC port and retain DSL.

It was suggested to update the Line Splitting Scenario Matrix with columns to identify the voice port provider as ILEC or CLEC. Craig Uptagrafft also requested that Remote Site migrations be included The updated matrix will be reviewed and the next Collaborative meeting

Sam Tenerelli of MCI introduced discussion of the migration process for Batch Hot Cut to Line Splitting recently ordered by California where the voice port is provided by the CLEC known as Loop Splitting in BellSouth. He also noted the CLECs need an originating process to order new service to establish DSL on a UNE Loop with CLEC voice port, and asked if BellSouth has any plans to develop, and if this was the proper forum for discussion Tommy Williams of BellSouth affirmed this as the proper forum and advised the CLECs of his recent escalation seeking to understand if the TRO requires the ILEC to make the cross-connect to the second collocation space, whether new or hot cut.

Sam also introduced discussion of when two CLECs combine within the same collocation site, how loop tagging and spectrum management would be addressed These discussions will be included on the next agenda.

Refer to the attached Line Splitting Scenario Matrix

6. **2004 Meeting Schedule**
Debbie Timmons of BellSouth lead the discussion of the proposed 2004 meeting schedule BellSouth is recommending the meeting move to one standing meeting day per month, while holding a second day in reserve to be used on an as needed basis The collaborative agreed to hold the two meetings in January and to decide the matter of one or two meetings on a monthly basis

Refer to the attached 2004 Meeting Schedule

7. **New Business/New Agenda Items/Wrap-up**
Tommy Williams requested 2004 Charter for the next agenda

Brian Foor of Covad introduced new issues pertaining to Line Splitting provisioning and repairs For provisioning, three items were noted· a) No response from LCSC and having to escalate too often, b) Due Dates being assigned incorrectly – getting due dates 1-5 days beyond the requested date, and c) the circuit ID is the telephone number. The issue with repair is that Covad is receiving push back from the Central Office and CWINS; there is a lack of knowledge of the process This item will be monitored and status taken at the next the meeting

- **Agenda Items:**

  - Review FRN Process Flows
  - Loop Characteristics of Shared Loop
  - Line Sharing to Line Splitting UNEL Discussion
  - 2004 Charter
  - Status Covad's Issues on Line Splitting Provisioning & Maintenance

- **Attached Items:**

  1 FRN Management Process Flow

  2 Proposed Standards and Procedures for Line Sharing/Splitting Loop Parameters document

  3 Line Splitting Scenario Matrix

  4 2004 Meeting Schedule

Collaborative Website:

http.//www interconnection bellsouth.com/markets/lec/line_sharing_collab/

- **Next Meetings: Bridge: 205-968-9300 Access: 643487 Password: 6714**

  Shared Loop Collaborative Conference Call – 1/15/2004, 1 30 EST

  Shared Loop Collaborative Conference Call – 1/29/2004, 12 30 EST

Norris,Sharon E - LGCRP

From: Berger,Denise C - NKLAM
Sent: Wednesday, July 30, 2003 2 11 PM
To: Brewer, Lynne
Cc: Schenk, James M, Butler, Amanda (BST), Tousek, Albert; Hyche, Keith
Subject: RE: Loop Splitting Issues

July 30, 2003

L. Brewer
BellSouth Interconnection Services

Lynne:

I understand from Keith Hyche's message below that you are leading BellSouth's efforts to develop and deploy BellSouth's loop splitting offer. This was subsequent from the issue being removed from discussions at the BellSouth/CLEC DSL Collaborative.

I would still like to understand BellSouth's positions on the following questions:

1. How does BellSouth plan to solicit and incorporate CLEC input into the development of this capability and the subsequent offering? In which forum will this be discussed?
2. What is the timeframe for delivery of this service?
3. How does BellSouth plan to provide procedures and business rules for ordering and provisioning?
4. How does BellSouth plan to provide CLECs with information around cost/price?
5. Does BellSouth plan to provide a mechanized ordering option for CLECs? Will this interface require systems upgrades or systems work by CLECs? When does BellSouth plan to provide such information?
6. Will there be a manual ordering option for CLECs?
7. Will CLECs be able to order this functionality via a single LSR?
8. Will BellSouth require CLECs to install any special or additional collocation equipment?
9. If special equipment is required, will BellSouth offer the access to such equipment as an unbundled network element?

Finally, I'd like to make sure that I am aligned with BellSouth in understanding to which FCC mandate this offer responds.

Thank you for the information. If you would like to discuss further, please call me at the number below.

Denise C. Berger
Operations Assistant Vice President
AT&T Local Services
Telephone: 404/810-8644
Facsimile: 281/664-3648
E-Mail: deberger@att.com

-----Original Message-----
From: Hyche, Keith [mailto:Keith.Hyche@BellSouth.com]
Sent: Tuesday, July 29, 2003 3:41 PM
To: Berger, Denise C, CSLSM
Cc: Schenk, James M; Hyche, Keith; Butler, Amanda (BST); Tousek, Albert; Brewer, Lynne
Subject: RE: Loop Splitting Issues

Denise,

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Exhibit: MDV-SR2

The following issue has been referred to the Collocation Development Team lead by Lynne Brewer not the Collocation User Group. I apologize for the misunderstanding. This will be mentioned Thursday, July 31st during the collaborative call lead by Al Tousek.

If you have questions about the development of this product you can contact Lynne Brewer at 404-927-7536.

Thank you!

Keith Hyche

-----Original Message-----
From: Berger, Denise C, CSLSM [mailto:deberger@att.com]
Sent: Friday, July 25, 2003 2:08 PM
To: BST-Amanda Butler (E-mail)
Cc: BST-Jim Schenk (E-mail); BST-Keith Hyche (E-mail)
Subject: Loop Splitting Issues

July 25, 2003

A. Butler
BellSouth Interconnection Services

Amanda:

I spoke with Keith regarding this issue on Tuesday afternoon. However, I'm bringing it to your attention to assist Keith in obtaining a clear and quick understanding of BellSouth's intent relative to working loop splitting issues.

Included in the May 22, 2003, DSL collaborative meeting minutes is the following:

"1. Connecting Two Collocations Update

Lynne Brewer joined the call to discuss the latest developments regarding the connecting of two collocations. Lynne reported that BellSouth has initiated the development of a tariffed product whereby BellSouth will provide a service to the CLECs to connect two collocations located in the same CO through cross connects at the frame The rate elements are presently under study. At this time no decisions have been made regarding what recurring and/or non-recurring charges may be applicable. The target availability date is Q403."

Further the meeting minutes from the June 26, 2003, collaborative state,

* Collocation to Collocation CFA

This item will no longer be tracked in the shared loop team. This collaborative took the issue to the collocation development team, which is the responsible organization. The item is now being handled by the collocation development team and outside the control of the shared loop management team. It was suggested that those interested in following this item should join the collocation users group.

Although this is not meant to reflect harshly on Keith, but I was very confused after my discussion with him. Apparently, although the shared loop (or DSL collaborative) team believes that they have handed off the issue to the Collocation Users' group, your team is not aware of the hand-off. Somehow it fell in a black hole. Additionally, since the next Collocation Users' group meeting is not scheduled until October 14, 2003, I'm perplexed at how CLECs can participate in the development of this capability. I have numerous questions regarding BellSouth's plans.

* How does BellSouth plan to solicit and incorporate CLEC input into the development of this capability and the subsequent offering?
* How does BellSouth plan to provide procedures and business rules for ordering and provisioning?
* How does BellSouth plan to provide CLECs with information around cost/price?
* Does BellSouth plan to provide a mechanized ordering option for CLECs? Will this interface require systems upgrades or systems work by CLECs? When does BellSouth plan to provide such information?
* Will there be a manual ordering option for CLECs?
* Will CLECs be able to order this functionality via a single LSR?
* Will BellSouth require CLECs to install any special or additional collocation equipment?

Additionally, Keith indicated in our conversation on Tuesday that BellSouth was working to provide this capability in response to an FCC mandate. Can you share which FCC mandate that BellSouth is addressing?

Please let me know if you have additional questions.

Denise C. Berger
Operations Assistant Vice President
AT&T Local Services
Telephone: 404/810-8644
Facsimile. 281/664-3648
E-Mail: deberger@att.com

FAX COVER

3 Pages (Including Cover)

DATE: January 16, 2004

TO:
Ms. Denise Berger
Operations Assistant Vice President
AT&T Local Services
Phone No.: (770) 621-9136
Fax No.: (281) 664-3648

FROM:
Lynne G. Brewer
Sr. Product Manager – Collocation
BellSouth Telecommunications, Inc.
Phone No.: (404) 927-7536
Fax No.: (404) 529-7074

RE: Letter re: Availability of Collo Cross-Connects

Comments: Denise,

As you requested, attached is a copy of the original letter I sent to you in regard to the availability of cross-connects between AT&T's collocation space and the collocation space of another carrier in the same central office. As I indicated in my email earlier this week, the original letter was mailed to you on December 19, 2003, but it was returned by the post office as being "undeliverable as addressed." In addition to this faxed copy, I will send you the original letter at the new address you included in your email. Again, I apologize for any inconvenience this may have caused you. Please contact me if you have any questions.

Thank you.

Lynne Brewer

TRA Docket NO. 03-00491
Surrebuttal Testimony of Mark Van de Water
Exhibit: MDV-SR3

BELLSOUTH

BellSouth Interconnection Services
675 West Peachtree Street
Atlanta, Georgia 30375

December 19, 2003

Ms. Denise C Berger
Operations Assistant Vice President
AT&T Local Services
1200 Peachtree Street, NE
Atlanta, GA 30309

Dear Ms. Berger:

This is in response to your e-mail dated July 30, 2003, concerning what you referred to as BellSouth's loop splitting offer. Based on discussions in several BellSouth/CLEC DSL Collaborative meetings subsequent to your e-mail, BellSouth understands that the issue is the availability of cross-connects between AT&T's collocation space and the collocation space of another carrier. Although this issue was originally brought to the BellSouth/CLEC DSL Collaborative, it is a product development issue that has been addressed by the BellSouth Collocation Product Team.

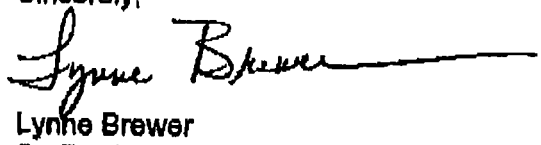
As you may already be aware, BellSouth currently allows two collocated CLECs to place co-carrier cross connects between their collocation arrangements located in the same Central Office. This offering has been available for some time and utilizes CLEC-provisioned cable placed by the CLEC's BellSouth Certified Supplier via BellSouth's cable racking assembly, if the two arrangements are not contiguous. This co-carrier cross connect offering is made available by BellSouth pursuant to the applicable language that must be included in the ordering CLEC's Interconnection Agreement. This language must also be included in the Interconnection Agreement of the other CLEC to which the co-carrier cross connect is being placed. In addition, a Letter of Authorization (LOA) is required from the other CLEC.

A similar offering called a Direct Connect is also available. This offering permits a CLEC with multiple collocation arrangements in the same Central Office to interconnect those arrangements with each other, again utilizing CLEC-provisioned cable and BellSouth's cable racking assembly.

In addition, AT&T may request a co-carrier cross connect interstate service pursuant to Section 201 of the Communications Act. Although the FCC has yet to establish a deadline for BellSouth to offer this service pursuant to tariff, BellSouth will make this service available through its Tariff FCC No. 1 in early January 2004. In this tariff filing, BellSouth will use the name "Intra-Office Cross Connects" to distinguish this interstate service from the offering available under its Interconnection Agreements described above. This will be a service provisioned by BellSouth using CLEC-provided Connecting Facility Assignment (CFA) appearances on BellSouth's frames or panels. A complete description of the service, including the rates, terms and conditions, will be included in the tariff.

I believe the questions listed in your original e-mail will be answered in the tariff filing described above, but if not, please call me at 404-927-7536 or Lue Elder at 404-927-7568.

Sincerely,



Lynne Brewer
Sr. Product Manager – Collocation
ICS - Marketing

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

IN RE:

IMPLEMENTATION OF THE FEDERAL COMMUNICATIONS COMMISSION'S TRIENNIAL REVIEW ORDER – 9 MONTH PROCEEDING MASS MARKET SWITCHING	))))	**DOCKET NO. 03-00491**

SURREBUTTAL TESTIMONY OF

STEVEN E. TURNER

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, LLC

MARCH 17, 2004

I. INTRODUCTION OF WITNESS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Steven E. Turner My business address is Kaleo Consulting, 2031 Gold Leaf Parkway, Canton, Georgia 30114.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS DOCKET?

A Yes I filed Direct Testimony on January 16, 2004.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. WHY ARE YOU FILING SURREBUTTAL TESTIMONY?

A I have been asked by AT&T Communications of the Southern States, LLC ("AT&T") to respond to the Rebuttal Testimony of Dr. Debra J. Aron, Mr. W. Keith Milner, and Ms. Kathy K Blake on behalf of BellSouth Telecommunications Inc. ("BellSouth"). These three witnesses have filed limited rebuttal to my Direct Testimony regarding the AT&T DS0 Impairment Analysis Tools. In my Direct Testimony, I demonstrated that an efficient CLEC would expect to incur an absolute cost disadvantage to BellSouth for providing facilities-based switched service of between $15.71 and $17.98 per month depending on the LATA within BellSouth territory. In short, my Direct Testimony supports the conclusion that hypothetical efficient CLECs face substantial, absolute cost disadvantages relative to the ILEC in each geographic market in which BellSouth has elected to challenge the FCC's national finding of impairment.

Q. HAVE BELLSOUTH'S WITNESSES OFFERED ANY EVIDENCE THAT YOUR EVALUATION OF THE COST DISADVANTAGE FACED BY CLECS IN TENNESSEE DOES NOT EXIST?

A. Absolutely not. Dr Aron simply attempts to dismiss my analysis as being "useless."[1] It is not surprising that Dr. Aron would attempt to be so trivializing of my testimony in that it is not possible for her to legitimately rebut the clear cost disadvantage CLECs face in Tennessee Nonetheless, in the testimony that follows, I address her claims that this Commission should ignore these cost disadvantages and I show that the cost of impairment is a vital consideration that this Commission should evaluate in its determination regarding access to unbundled cost-based switching for CLECs in Tennessee.

Mr. Milner provides five high level criticisms of my impairment cost development.[2] My testimony demonstrates that these criticisms do not in any way undermine the validity of the analysis that I have performed or the resulting impairment cost that I document. In fact, most of his criticisms have nothing to do with developing the cost of impairment at all.

Finally, Ms. Blake asserts that she will address my Direct Testimony as it pertains to hot cut issues in Docket No. 03-00526. I am not certain procedurally how the Tennessee Regulatory Authority will specifically handle this situation as I have not filed testimony in that docket. Nonetheless, within this docket, Ms. Blake does not provide any rebuttal and I therefore have no opportunity to

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1 BellSouth Telecommunications, Inc , Rebuttal Testimony of Dr Debra J Aron, Before the Tennessee Regulatory Authority, Docket No 03-00491, February 27, 2004, p 30 (Hereafter referred to as "Aron Rebuttal Testimony "

2 BellSouth Telecommunications, Inc , Rebuttal Testimony of W Keith Milner, Before the Tennessee Regulatory Authority, Docket No 03-00491, February 27, 2004, pp 10-14 (Hereafter referred to as "Milner Rebuttal Testimony "

respond to her testimony according to the schedule set forth for this proceeding because she intends to raise her issues in a separate docket at a later time.[3] In short, Ms. Blake has offered no rebuttal whatsoever to the conclusion that I reach that CLECs face systematic cost disadvantages to BellSouth that range between $15.71 and $17.98 per month depending on the LATA within BellSouth territory. This cost disadvantage is real and is a critical concern that this Commission should consider in its evaluation of whether to maintain BellSouth's requirement to provide access to unbundled switching in Tennessee

III. RESPONSE TO DR. DEBRA J. ARON

Q. DR. ARON'S SOLE REBUTTAL TO YOUR TESTIMONY IS THAT YOUR ANALYSIS IS "USELESS" BECAUSE YOUR APPROACH TO IMPAIRMENT WAS "CONSIDERED AND EXPLICITLY REJECTED BY THE FCC." COULD YOU PLEASE RESPOND TO HER ASSERTION?

A. Dr Aron's testimony is simply wrong, because my analysis is directly responsive to the FCC's express directions in the TRO.

The TRO provides that a state commission "*must* consider *all factors affecting the costs* faced by a competitor providing local exchange service to the mass market "[4] And critically in this regard, the TRO found that.

> (T)hese costs would likely include (among others) the recurring and non-recurring charges paid to the incumbent LEC for . . collocations, transport, hot cuts and other services and equipment necessary to access the [mass market customer's] loop, the cost of collocation and equipment necessary to serve local exchange customers in a wire center, taking into consideration an entrant's likely market share, the scale economies inherent to serving a wire center, and the line density of the wire center; the cost of

[3] BellSouth Telecommunications, Inc , Rebuttal Testimony of Kathy K Blake, Before the Tennessee Regulatory Authority, Docket No 03-00491, February 27, 2004, p 2

[4] TRO at ¶ 520 (Emphasis added)

> backhauling the local traffic to the competitor's switch; other costs associated with transferring the customer's service over to the competitor; the impact of churn on the cost of customer acquisitions; the cost of maintenance, operations, and other administrative activities; and the competitors' capital costs.[5]

Moreover, the FCC specifically held that "State commissions should pay particular attention to the impact of migration and backhaul costs on competitors' ability to serve the market."[6] That is exactly what my analysis does; it specifically focuses on the unique migration and backhaul costs that CLECs incur when they attempt to serve mass market customers without access to ILEC switching Accordingly, my analysis is not at all "useless;" rather, it is directly responsive to the FCC's requirements.

My analysis also provides critical background data for the Commission's review of the BellSouth's trigger claims, because it demonstrates that CLECs face a very sizable economic impairment (from $15.71 and $17.98 per line per month) when they attempt to serve the mass market. This is especially true when the average impairment cost is compared to the reasonably anticipated "typical" revenues that can be earned from serving "average" mass market customers [7] Accordingly, in order to obtain economically rational results from the "short form" trigger review, the Commission should establish criteria for identifying proposed trigger firms that assure those firms' actual performance in the market is persuasive evidence that they have overcome the significant economic

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5 *Id*

6 *Id*

7 TRO at ¶ 472

impairment CLECs face when attempting to serve average mass market customers.

IV. RESPONSE TO W. KEITH MILNER

Q. MR. MILNER BELIEVES THAT YOUR IMPAIRMENT COST ANALYSIS IS "FATALLY FLAWED" BECAUSE OF HIS ASSERTION THAT "THE ASSUMPTION UNDERLYING MR. TURNER'S ANALYSIS ABOUT COSTS THAT HE ATTRIBUTES TO CLECS BUT NOT TO ILECS IS SIMPLY INCORRECT."[8] PLEASE RESPOND TO HIS ASSERTION.

A. This assertion covers two of the five criticisms that he makes of the cost analysis that I perform If I understand Mr. Milner correctly, he believes that I should have somehow included BellSouth's customer migration costs back from the CLEC to BellSouth in developing the cost of impairment that is faced by CLECs. This is illogical The question that my testimony and the AT&T DS0 Impairment Analysis Tools answers, in response to the TRO's requirements, is the cost disadvantage that the CLEC has in "backhauling" loops that appear in BellSouth's disparate central offices to the CLEC's own switch as compared to the cost that BellSouth incurs in connecting the same loops to its switch that is located normally on the same floor of the central office where the loops terminate. The criticisms that Mr. Milner raises regarding my failure to include BellSouth's costs for switching a customer back to its network do not make sense in light of the analysis that I perform.

Q. COULD YOU PROVIDE MORE DETAIL REGARDING HIS CONCERNS THAT YOU DID NOT INCLUDE BELLSOUTH'S "HOT CUT" COSTS?

A Mr. Milner's notes the following:

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[8] Milner Rebuttal Testimony, p 11

> While Mr. Turner is correct that the CLEC will incur costs associated with the hot cut to disconnect the loop serving the customer from BellSouth's switch and then re-connect the loop to the CLEC's switch, he ignores the fact that in cases where a customer chooses to return to the ILEC, those same work steps and the related costs (disconnection of the serving loop from the CLEC's switch and re-connecting the loop to the ILEC's switch) and associated costs will likewise be incurred by the ILEC.[9]

Here is the problem with Mr Milner's logic. *When the customer is migrated from BellSouth's network to the CLEC, the CLEC pays BellSouth for all of the cost that BellSouth incurs to make this migration plus the CLEC pays for its own costs as well.* However, BellSouth only incurs *some* of these costs for some of their customers – those won back from a CLEC. Yet CLECs must incur these costs for *every single customer* they acquire.

Q. WHAT IS THE OTHER COST THAT FALLS INTO THIS SAME CATEGORY?

A. Mr Milner believes that Local Number Portability cost falls into this same category. This is not the case Mr. Milner's notes the following:

> Mr. Turner attributes costs to perform Local Number Porting ("LNP") activities to the CLEC but does not likewise attribute those same costs to ILECs in cases where the customer chooses to return to the ILEC. In other words, the work steps required to "port" the telephone number from BellSouth's network to the CLEC's network are required to "port" the telephone number from the CLEC's network to BellSouth's network.[10]

First of all, Mr. Milner is mistaken regarding the inclusion of Local Number Porting activities or costs in the specific run made for Tennessee. The DS0 Impairment Analysis that was run for Tennessee did not include *any* costs for

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[9] Milner Rebuttal Testimony, pp 11-12

[10] Milner Rebuttal Testimony, p 12

Local Number Portability making the fundamental premise of Mr. Milner's criticism inaccurate.

Q. MR. MILNER TAKES ISSUE WITH THE COLLOCATION COSTS THAT ARE INCLUDED IN THE DS0 IMPAIRMENT ANALYSIS TOOLS. COULD YOU PLEASE RESPOND?

A. Yes. First of all, Mr. Milner asserts that the DS0 Impairment Analysis Tools has overstated the cost for collocation by "Mr. Turner's suggestion that ILECs may assess a minimum square footage charge for collocation "[11] Mr. Milner does not even identify the type of collocation that the DS0 Impairment Analysis Tool uses (Physical Caged Collocation). Moreover, he has provided absolutely no evidence that this choice leads to higher costs for collocation. There are numerous elements associated with collocation such as space preparation, security, land and building space, power, and interconnection arrangements. All of these elements come into play in one manner or another regardless of the form of collocation that is selected. From a modeling standpoint, Physical Caged Collocation was used because it is straightforward to model and representative of what CLECs routinely use for collocation within BellSouth central offices.

Mr Milner indicates that he believes that Cageless Collocation would be a superior alternative because of allowing CLECs to purchase space in single equipment bay increments. It turns out that in the core office (or Network Nodes) that the DS0 Impairment Analysis Tool actually computes collocation costs on a per frame basis just as Mr. Milner would suggest is reasonable even though the collocation arrangement assumed is Caged Collocation. This is done because the

[11] Milner Rebuttal Testimony, p 14

model assumes that the other space in the collocation arrangement may be used for other applications such as enterprise traffic. In Satellite Offices, this is not the case in the default assumption loaded into the model. However, if BellSouth believes that the floor space included in the cost development in the Satellite Offices should be treated more in the manner of Cageless Collocation (for example), the breakage assumption can be changed in the model so that only the space needed just for backhaul will be included in the satellite offices. This would give an approximation of the cost for Cageless Collocation, but it is minimally different that what has already been evaluated within my filing of the DS0 Impairment Analysis Tools for Tennessee

Q. DO YOU BELIEVE THAT VOICE GRADE EELS PRESENT A VIABLE ALTERNATIVE FOR CLECS TO PROVIDE SERVICE TO CUSTOMERS IN TENNESSEE?

A Once again, Mr. Milner has made assertions in his testimony without any support whatsoever. I have performed evaluations regarding the use of EELs for Voice Grade applications and I have never seen, from a cost standpoint, any EEL arrangement for voice grade service that is economically viable. The DS0 Impairment Analysis Tool gives a hypothetical large efficient CLEC every opportunity to achieve some scale economies through the use of leased backhaul and digital loop carrier equipment to make the assigned costs as low as possible. Mr. Milner appears to believe that assuming much lower volumes and using EELs instead of concentrated transport would produce a lower cost.[12] In my experience, this is simply not the case Further, Mr. Milner has offered no evidence on his

[12] Milner Rebuttal Testimony, p 12

own part to provide that EELs would lower the cost of impairment below that which I have calculated using the DS0 Impairment Analysis Tools.

As referenced above, there is a significant increase in cost for an EEL loop that the CLEC must bear that would make its backhaul impairment greater than that already contained in the DS0 Impairment Analysis Tools. Specifically, with an EEL the CLEC is required to pay more for the recurring cost of the loop. The Service Level 1 2-Wire Analog Voice Grade Loop, which would be used with a UNE-P combination, has a recurring cost of $22.53 in Zone 3.[13] The recurring cost for the loop when used as part of an EEL is $29.19. This difference increases the CLEC's cost (and impairment) by $6.66 per month just to start. On top of this the CLEC must pay for the DS1 Dedicated Interoffice Transport that is used for the EEL. This has a cost of $165.75 per DS1 assuming an average mileage of 20 miles between the central office where the loop terminates to the central office where the EEL is transported.[14] If I assume that all 24 channels in the DS1 are used for EELs (the most conservative assumption possible to lead to the lowest cost of impairment), this still leads to a cost per loop of $6 91 per month. In total the recurring incremental cost per loop is $13.57. This is the monthly cost Mr. Milner would want a CLEC to pay instead of the backhaul cost already included

[13] I have selected Zone 3 for this comparison throughout as it is in this area that I would anticipate that Mr Milner must be assuming that an EEL would be a possible alternative to collocation and leased backhaul, which is included in the DS0 Impairment Analysis Tool

[14] If the Commission reviews the price list from the AT&T Interconnection Agreement with BellSouth, the Commission will note that the cost for this transport is $187 82 However, this cost includes the first loop with a cost of $29 19 I have removed the $29 19 to identify the transport cost only with a total of $158 63 To this amount, mileage must be added For 20 miles at a mileage rate of $0 3562 per mile, the total mileage cost would be $7 12 This leads to a total DS1 cost of $165 75 This amount is then spread across the 24 2-Wire Analog Voice Grade Loops that could be terminated into this DS1 Dedicated Interoffice Transport

in the DS0 Impairment Analysis Tool – an amortized average cost of $3.48 per month Moreover, the DS0 Impairment Analysis Tool backhaul cost of $3.48 still cannot be completely avoided in that the EEL would be purchased from the wire center where the loop terminates back to the nearest wire center where the CLEC has network infrastructure. CLEC self-provided transport (which still contributes to the backhaul impairment) would still need to be provided.

Of course this only represents the incremental recurring cost that the CLEC would have to pay There are also significant nonrecurring charges that would be required For example, the DS1 Interoffice Facility has a nonrecurring charge of $422.72 which when divided across 24 DS0s has an incremental nonrecurring cost per loop of $17 61 The bottom line is that when all of these costs are included, EELs for voice grade mass market applications simply do not make sense from an economic standpoint.

Q. MR. MILNER CLAIMS THAT THE FACILITY RING PROCESSOR TOOL USED IN YOUR ANALYSIS "DOES NOT REDUCE THE TOTAL FACILITY COSTS BY THE AMOUNT OF THE CAPACITY REQUIRED TO HANDLE THAT PORTION OF THE CAPACITY USED THAT IS NOT FOR 'BACKHAULING' LOOPS AND THAT IS NOT USED FOR 'ENTERPRISE' CUSTOMER TRAFFIC."[15] COULD YOU PLEASE RESPOND TO HIS CRITICISM?

A Yes. Mr. Milner seems to have picked up on an explanation provided in my testimony and the documentation of the DS0 Impairment Analysis Tools without really evaluating what is happening within the cost model. First of all, to simply get the facts about the DS0 Impairment Analysis Tools straight, Mr. Milner is incorrect regarding this alleged error in the Facility Ring Processor ("FRP") The

[15] Milner Rebuttal Testimony, pp 12-13

FRP establishes the least cost ring architecture among the wire centers that make up the CLEC's self-provided network. It does not address any of the cost calculations regarding the allocation of transport cost to backhaul, enterprise traffic, or other uses such as interconnection Instead, these calculations are contained within the Transport Impairment Analysis Tool.

In fact, if Mr Milner had reviewed the calculations in the latter tool, he would have found that the cost per DS3 is developed by assuming an 80 percent fill factor on the transport. My testimony and the supporting documentation references the use of the transport network for circuits such as for enterprise traffic as an example of why we assumed such a *high* fill factor. However, other reasons justify why the fill level would be this high, including its use for interconnection facilities Nonetheless, from a modeling standpoint, the DS3 cost per circuit that is applied to backhaul is developed using an 80 percent fill factor, regardless of whether the other circuits that contribute to that high level of fill are related to, whether they be enterprise traffic, interconnection, or any other application Mr Milner has simply picked an issue with the documentation However, the model calculates the cost for backhaul in an extremely conservative and appropriate manner – the details of which contradict Mr Milner's criticism and the details of which Mr. Milner has found no issue with. One of the conservative assumptions in the model is that the CLEC will use self-provided transport rather than purchase special access from the incumbent This assumption lowers the cost for transport In short, Mr. Milner's criticism is

unfounded and does not change the cost of impairment developed in the DS0 Impairment Analysis Tool

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

IN RE:

IMPLEMENTATION OF THE FEDERAL COMMUNICATIONS COMMISSION'S TRIENNIAL REVIEW ORDER – 9 MONTH PROCEEDING MASS MARKET SWITCHING)	)))	DOCKET NO. 03-00491

SURREBUTTAL TESTIMONY OF JAY M. BRADBURY

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTH CENTRAL STATES, LLC

DOCKET NO. 03-00491

MARCH 17, 2004

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION TITLE.

A. My name is Jay M. Bradbury. My business address is 1200 Peachtree Street, Suite 8100, Atlanta, Georgia 30309. I am employed by AT&T Corp ("AT&T") as a District Manager in the Law and Government Affairs Organization

Q. ARE YOU THE SAME JAY M. BRADBURY THAT PREVIOUSLY FILED DIRECT TESTIMONY IN THIS DOCKET ON JANUARY 16, 2004, AND REBUTTAL ON FEBRUARY 27, 2004?

A. Yes, I am

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My surrebuttal testimony responds to portions of the rebuttal testimony of BellSouth's witnesses W. Keith Milner, A. Wayne Gray, Gary Tennyson, and Eric Fogle My responses focus on the operational and economic impairments that arise from various CLEC network architecture requirements, the impact of those impairments upon the CLECs, and the role of Electronic Loop Provisioning (ELP) in this docket.

RESPONSES TO MR. MILNER

Q. ON PAGE 2 OF HIS REBUTTAL TESTIMONY, MR. MILNER CHALLENGES YOUR STATEMENT THAT CLEC SWITCHES ARE ALWAYS LOCATED REMOTELY FROM THE ILEC CENTRAL OFFICE

WHERE THE EXISTING LOCAL LOOPS TERMINATE. HE NOTES THAT CLECS HAVE THE OPTION TO PLACE SWITCHES IN THEIR COLLOCATION ARRANGEMENTS IN BELLSOUTH'S CENTRAL OFFICES. DOES MR. MILNER'S INFORMATION DISPROVE YOUR STATEMENT?

A. No Mr. Milner has simply attempted to provide the proverbial exception that proves the rule. Further, the FCC's findings in the TRO support the general validity of my statement (TRO ¶480, ¶464, FN 1406, ¶ 424, FN 1298, ¶ 429.) Mr. Milner fails to provide even one example of where a CLEC has chosen to install a switch within its collocation arrangements in a BellSouth central office in Tennessee. The reason is simple – there are no collocated CLEC switches in Tennessee.

Additionally, placing switches in collocations will exponentially increase collocation costs (preparation, space, power, etc.) for the CLEC. Were such arrangements truly viable, one would expect to see many companies doing so.

Q. ON PAGES 2-3 OF HIS REBUTTAL TESTIMONY MR. MILNER ALSO CHALLENGES YOUR USE OF THE FCC'S FINDINGS RELATED TO THE CLECS' NEED TO USE SWITCHES LOCATED "RELATIVELY FAR FROM THE END USER'S PREMISES" RESULTING IN "MUCH LONGER LOOPS THAN THE INCUMBENT ". HE STATES THAT A CLEC COULD "HOUSE ITS SWITCH IN A BUILDING DIRECTLY ACROSS THE STREET FROM THE ILEC'S CENTRAL OFFICE", AND REFERENCES CITATIONS IN HIS DIRECT TESTIMONY TO AT&T TESTIMONY IN AN EARLIER

ARBITRATION PROCEEDING. PLEASE RESPOND.

A. Mr. Milner admits I have quoted the FCC correctly, but then goes on to state that he disagrees with the FCC.

Placing a CLEC switch across the street from one of several ILEC central offices being served by that CLEC switch, as Mr Milner suggests, clearly does nothing to change the fact that the CLEC switch will still be "relatively far" from the end user's premises and require "much longer" loops than the ILEC for every end user premises NOT served from that ILEC central office. A CLEC switch that is close to an ILEC central office, by definition, means that it is "relatively far" from other ILEC central offices and the end users being served through those central offices.

Even for the single location where the CLEC switch is "directly across the street" from the ILEC central office, the CLEC will still require a collocation arrangement within the central office and backhaul to cross the street. Any cost reductions from such an arrangement (at the one location) would be incremental and would not eliminate the impairment that results from the significant cost disadvantage required to backhaul the loop from multiple ILEC central offices where the mass market customer loops terminate.

I have already addressed Mr. Milner's (and BellSouth's other witnesses') inappropriate use of the statements in AT&T's Arbitration testimony in my rebuttal testimony on page 16 and pages 19 - 21 In short, Mr. Milner's reliance upon AT&T's arbitration testimony is misplaced because the issues in that case are different from the issues in this docket The fact that AT&T is entitled to the tandem

switching rate because its switches serve widely dispersed enterprise customers (the issue in the arbitration) does not demonstrate that CLECs are not impaired in attempting to serve the mass market in the absence of unbundled switching (the issue in this docket).

Q. ON PAGES 3-4 OF HIS REBUTTAL TESTIMONY MR. MILNER CHALLENGES THE NEED FOR CLECS TO "ESTABLISH A COLLOCATION ARRANGEMENT IN EVERY ILEC WIRE CENTER". CAN YOU ADDRESS THIS?

A Yes. Mr. Milner's direct testimony and my response to BellSouth's Interrogatory No. 154 in Florida TRO Docket No. 030851-TP both indicate that CLECs may generally have three options in the use of collocation arrangements to extend loops to their switches to serve the mass market. CLEC arrangements may include (1) collocations in ILEC wire centers that directly extend loops to the CLEC switch, or (2) collocations in ILEC wire centers that are "hubbed" to collocations located in another wire center through the use of "transport," with the receiving collocation equipped to directly extend the "hubbed" collocation loops to the CLEC switch, or (3) extending loops from a wire center without a collocation to a wire center that does have a collocation through the use of DS0 Enhanced Extended Links (EEL), with the receiving collocation equipped to directly extend the EEL loops to the CLEC switch.

Only the third option (DS0 EELs) allows the potential for a CLEC to serve a wire center without having a collocation in that wire center. However, CLECs have found that the use of DS0 EELs to serve mass market customers is operationally and

financially infeasible. BellSouth reports in its response to AT&T's Interrogatory 115 that there are only 14 DS0 EELs in service from only 7 wire centers in Tennessee. Thus, as a practical matter, collocation in each wire center is required.

Q. ON PAGE 4 OF HIS REBUTTAL TESTIMONY MR. MILNER CHALLENGES YOUR STATEMENT THAT ILEC CHARGES TO TRANSFER LOOPS FROM THE ILEC TO THE CLEC OR BETWEEN CLECS ARE EXORBITANT. WHERE CAN THE AUTHORITY LOOK TO FORM AN OPINION ABOUT THE LEVEL OF ILEC CHARGES FOR LOOP TRANSFERS?

A. The Authority can look directly to the TRO.

The FCC stated that the "record evidence indicates that the non-recurring costs associated with cutting over large volumes of loops would likely be prohibitively expensive for a competitive carrier seeking to provide service without the use of unbundled local circuit switching. TRO at ¶ 470. The FCC found that a seamless, ***low-cost*** batch cut process switching mass market customers from one carrier to another is necessary, at a minimum, for carriers to compete effectively in the market. TRO at ¶ 487 (emphasis added). This batch cut process must "render the hot cut process more efficient and reduce per-line hot cut costs " TRO at ¶ 460.

Clearly, the FCC was aware the non-recurring costs had been set in state proceedings, and found them "prohibitively expensive".

Q. ON PAGES 4-5 OF HIS REBUTTAL TESTIMONY MR. MILNER CHALLENGES THE VALIDITY OF COMPARING THE LOOP TRANSFER PROCESS WITH THE UNE-P OR PRIMARY INTEREXCHANGE CARRIER (PIC) CHANGE PROCESSES. ARE THESE VALID COMPARISONS?

A. Yes. In his direct testimony, beginning on page 51, AT&T's witness Mark Van de Water discussed how the FCC identified the standard against which an ILEC's hot cut process should be measured The FCC itself established the UNE-P process as a standard.

> This review is necessary to ensure that customer loops can be transferred from the incumbent LEC main distribution frame to a competitive LEC collocation *as promptly and efficiently as incumbent LECs can transfer customers using unbundled local circuit switching*." TRO at n.1574 (emphasis added).

My discussion serves to demonstrate what must happen in order to eliminate the operational impairment caused by the manual hot cut processes Mr. Milner references. However, as I discuss in my direct testimony and later in this document, the Authority should establish a separate docket to investigate ways to eliminate this operational impairment, such as Electronic Loop Provisioning (ELP), after it confirms through its deliberations in this docket that the FCC's impairment findings still apply in Tennessee.

Q. ON PAGE 6 OF HIS REBUTTAL TESTIMONY MR. MILNER ASSERTS THAT CLECS DO NOT NEED TO PERFORM THE FUNCTIONS YOU DISCUSS (DIGITIZATION, CONCENTRATION, MULTIPLEXING, AND AGGREGATION) FOR THEMSELVES BUT CAN RELY UPON BELLSOUTH'S UNBUNDLED LOOP CONCENTRATION (ULC)

OFFERING. ARE YOU AWARE OF THIS OFFERING AND IS IT THE SUBSTITUTE MR. MILNER CLAIMS?

A. Yes, I am aware of this offering and no, it is not the solution Mr Milner would have this Authority believe

First, it is important to note that Mr Milner does not dispute that these functions (digitization, concentration, multiplexing, and aggregation) must be performed in order for a CLEC to backhaul its customer's traffic to its own switch. Therefore, a legitimate question is whether the CLEC should lease or purchase the equipment to perform these functions BellSouth's ULC offer might be thought of as the option to lease the equipment rather than purchase.

However, BellSouth's ULC offering introduces a number of operational problems not present when a CLEC installs its own Digital Loop Carriers (DLC). A major operational problem is the ordering of BellSouth's ULC offering. All ordering of service for the ULC arrangement must be performed manually, using facsimile transmission of the Local Service Request (LSR) Further, there is not one word of instruction as to how to fill out such an LSR in the BellSouth Local Ordering Handbook, which may be found and searched for "Unbundled Loop Concentration" or "ULC" on-line at http://www interconnection.bellsouth.com/guides/leo/bbrlo_releases/14_0/pdf/140-3.pdf.

Additional operational concerns include the fact that the use of BellSouth's ULC offering and the provisioning of a CLEC Digital Subscriber Line (DSL) service are

incompatible and that CLEC testing and repair of the DLC portion of its backhaul arrangement is eliminated. BellSouth's ULC offering is clearly inferior to CLEC owned DLCs installed in the CLEC's collocation.

Evidently, neither BellSouth nor Mr Milner considers ULC to be a creditable solution, since Mr Milner's direct testimony does not mention it as part of any network architecture option available or useful to CLECs, and BellSouth's own BACE model does not include the use of the ULC offering in its manipulations.

Q. ON PAGE 6 OF HIS REBUTTAL TESTIMONY MR. MILNER CHALLENGES YOUR REASONS FOR THE CLECS' USE OF DLC, ASSERTS THAT YOUR TESTIMONY STATES THAT ONLY CLECS MAKE USE OF DLC EQUIPMENT, AND NOTES THAT ILECS USE DLC EQUIPMENT ROUTINELY. HOW DO YOU RESPOND?

A In his rebuttal Mr Milner manages to ignore the contents of the very next paragraph of my testimony that states:

> The equipment digitizes, encodes, concentrates and multiplexes the analog signals received from the customer so that the CLEC can extend the loop signal back to its remote switch in a manner the (1) provides service quality that will meet customer expectations and (2) minimizes the CLEC's costs to transport its customers' traffic back and forth from its switch. (Bradbury, direct, page 29, lines 12-17.)

I make no suggestion that DLC equipment is only useful for differences in transmission quality. (Milner, rebuttal, page 6, lines 21-22).

At the central office, the need to use DLCs in their collocations to interface with analog DS0 mass market loops is unique to CLECs and not required for the ILEC's

interface with those very same loops BellSouth's response to AT&T's Interrogatory 118 in Florida Docket No 030851-TP, prepared by Mr Milner, confirms this. When asked to provide the number and percentage of loops converted to T1 (DS1) level interfaces through the use of DLCs located in the central office, Mr. Milner replied:

> This question cannot be answered as posed because any multiplexing of copper subloops (that is, individual cooper loop distribution pairs) unto DS1 of higher level digital transmission facilities occurs at the DLC Remote Terminal ("RT"), rather than within the central office.

CLECs must use DLCs in their ILEC central office collocations to receive analog communications from the loop, and digitize, concentrate, and mulitiplex the communications so that the connecting backhaul facility can be used efficiently; the CLEC's switch can provide the customer with dial tone, ringing, and other functions; and customer service quality will meet expectations. The ILEC is able to achieve all of this with the "jumper" wire pair I discussed on page 18 of my direct testimony.

Q. ON PAGES 7-8 OF HIS REBUTTAL TESTIMONY MR. MILNER ATTEMPTS TO ADDRESS THE "LUMPY" CHARACTERISTICS OF DLC EQUIPMENT, AND DIGITAL CROSS CONNECTION (DSX) EQUIPMENT. DO HIS COMMENTS ALTER THE PRINCIPLE YOU DISCUSS OR THE IMPACT UPON THE CLECS?

A. No. There are DLCs that come in sizes smaller than used in my example The tool used by Mr. Turner to conduct the DSO Impairment Analysis allows for this flexibility, as does BellSouth's BACE model. However, CLECs electing to use DLCs installed in smaller increments will then have to bear the increased cost of more frequent installations. It is a decision that means the CLEC will be selecting

between which kinds of lumps it wants in its cost equation – equipment cost lumps or installation cost lumps In either case, CLEC costs to serve the same mass market customers are greater than ILEC costs

While Mr Milner's comments are generally factual, he has provided mis-information about DSX-3 and DSX-1 equipment. A DSX-1 is not a smaller version of a DSX-3. These two pieces of equipment operate at different digital single levels. If you need a DSX-3, a DSX-1 cannot be substituted.

Q. ON PAGE 8 OF HIS REBUTTAL MR. MILNER CLAIMS TO BE SPEAKING TO YOUR TESTIMONY LISTING THE STEPS IN BELLSOUTH'S HOT CUT PROCESS AND STATES THAT HE SEES SOME SORT OF IRONY THAT YOUR EARLIER TESTIMONY FOUND THIS PROCESS TO BE INADEQUATE. HOW DO YOU RESPOND?

A Mr. Milner offers no rebuttal of my testimony and there is no irony. The paragraph he is citing concludes "the process is inadequate to service mass market customers." Clearly Mr Milner had some agenda other than rebutting my testimony and the Authority should disregard the entire question and answer in Mr Milner's testimony.

Q. ON PAGES 9-10 OF HIS REBUTTAL TESTIMONY MR. MILNER CHALLENGES YOUR STATEMENT CONCERNING THE NEED FOR COPPER LOOPS OF LESS THAN 18,000 FEET IN ORDER TO PROVIDE DSL SERVICES, STATING THAT A CLEC "COULD LIKEWISE COLLOCATE ITS DSLAM (DIGITAL SUBSCRIBER LINE ACCESS

MULTIPLEXER) AT THE REMOTE TERMINAL." IS IT REALLY THAT SIMPLE?

A. No. CLECs do not have "remote terminals" as Mr. Milner is using the term A CLEC's "terminals" (DLCs) are located in the central office. BellSouth will not allow a CLEC to place a CLEC DSLAM card in a BellSouth remote terminal. Therefore, to have a "remote terminal collocation", a CLEC would have to build it and provide or arrange transport facilities from it to the CLEC's central office collocation.

While the technology for remote collocation exists, the economics do not. This is evidenced by the fact that, to the best of my knowledge, there are no CLEC remote terminal collocations in BellSouth's territory If this were a valid solution one would expect to see CLECs requesting and performing remote terminal (RT) collocations. They are not.

I would note that this is another case in which BellSouth and Mr. Milner apparently do not believe in the validity of their own proposals, since Mr. Milner's direct testimony mentions remote terminal collocation only in passing and BellSouth's BACE model does not include the use of remote terminal collocation in its manipulations

Q. ON PAGE 10 OF HIS REBUTTAL TESTIMONY MR. MILNER CHALLENGES YOUR STATEMENT THAT THE CLECS' LACK OF ECONOMIES OF SCALE WILL MAKE THEIR CALL TERMINATION

ARRANGEMENTS MORE RELIANT ON THE ILEC'S TANDEM NETWORK. HOW DO YOU RESPOND?

A Once again, Mr. Milner is providing the exception that proves the rule. While the list of factors both the CLECs and the ILECs use in the calculus of determining whether to direct or tandem trunk are the same, the values in each parties equations will be vastly different. The values in a CLEC's equations will always result in a higher reliance upon tandem trunking because of the CLEC's relative lack of scale in comparison to the ILEC Where a CLEC does have sufficient scale (volume) between two offices to justify direct trunking, I would expect that CLEC to make the proper economic decision.

Having a higher reliance upon ILEC tandem trunking increases the CLEC's cost of call termination and the greater potential for call blockage if the ILEC fails to properly manage the tandem trunk network.

RESPONSES TO MR. GRAY

Q. ON PAGES 7-8 OF HIS REBUTTAL TESTIMONY MR. GRAY CHALLENGES THE NEED FOR CLECS TO HAVE A COLLOCATION ARRANGEMENT IN EVERY ILEC WIRE CENTER IN ORDER TO OFFER FACILITIES BASED MASS MARKET SERVICES. IS THIS CHALLENGE ANY DIFFERENT FROM THAT MADE BY MR. MILNER?

A. No Mr Gray's comments are the same as those made by Mr. Milner, discussed previously. As a practical matter, collocation in each wire center is required to serve

the analog DS0 loop mass market customer, EELs and assembly points notwithstanding. I would note that assembly points were not mentioned in Mr. Milner's direct testimony and that the BellSouth BACE model does not include them in its manipulations.

Q. ON PAGES 8-10 OF HIS REBUTTAL TESTIMONY MR. GRAY ADDRESSES THE ISSUE OF PLACING SWITCHES IN COLLOCATIONS. DOES THIS DISCUSSION PROVIDE THE AUTHORITY WITH ANY MEANINGFUL INFORMATION?

A. No. As I discussed previously, the meaningful information is the fact that no CLECs have found such an arrangement to be economically attractive in Tennessee.

Q. ON PAGES 10-14 OF HIS REBUTTAL TESTIMONY MR. GRAY DISCUSSES A NUMBER OF CHARGES AND FEES ASSOCIATED WITH COLLOCATION ARRANGEMENTS. DOES ANY OF THIS INFORMATION SIGNIFICANTLY CHALLENGE OR CHANGE THE FACT THAT THESE COSTS OF COLLOCATION EXIST FOR CLECS?

A No. Mr. Gray's comments provide clarification about how these costs are billed to CLECs by BellSouth, but otherwise confirm that the costs exist and are significant factor in any CLECs attempts to serve mass market customers using analog DS0 loops.

RESPONSES TO MR. TENNYSON

Q. ON PAGES 2 THROUGH 5 OF HIS REBUTTAL TESTIMONY MR. TENNYSON COMMENTS ON ELECTRONIC LOOP PROVISIONING (ELP), CITING TO THE TESTIMONY OF AT&T'S WITNESS MARK VAN DE WATER. DID YOU ALSO ADDRESS ELP IN YOUR TESTIMONY?

A Yes I addressed ELP on pages 45-47 of my direct testimony.

Q. DOES AT&T RECOMMEND THAT THE AUTHORITY ORDER IMPLEMENTATION OF ELP AS A RESULT OF THIS DOCKET?

A. No. AT&T is not proposing that the Authority order the implementation of ELP as a result of its deliberations in this docket as that was not one of the purposes of this docket, nor is ELP an identified issue.

AT&T recommends that the Authority open a separate docket to address how to eliminate the impairment it will find here. It is in that docket that ELP and any other proposals with potential to eliminate impairment should be considered.

Q. WHAT THEN DO YOU SUGGEST THAT THE AUTHORITY DO WITH THE INFORMATION ABOUT ELP AND THE OTHER PROPOSALS WITH POTENTIAL TO ELIMINATE IMPAIRMENT BEING PRESENTED IN THIS DOCKET BY VARIOUS PARTIES, INCLUDING AT&T?

A. The Authority should accept the information that has been presented in this docket for use in formulating the scope of the follow-on docket in which it would consider these

issues This would allow the parties and the Authority to focus in the current docket on the issues specifically requiring consideration in this proceeding by the TRO

In the separate follow-on docket the parties and the Authority would then not be constrained by the arbitrary 9-month interval mandated by the TRO. The parties and the Authority could then devote the appropriate resources necessary to present and consider the complex technological, cost and policy issues associated with an effort to eliminate impairment in a more reasoned and less constrained manner

Q. IS THERE SPECIFIC INFORMATION IN MR. TENNYSON'S TESTIMONY TO WHICH YOU WISH TO RESPOND?

A. Yes In keeping with my view of how the Authority should proceed with regard to information presented in this docket related to ELP and other proposals with potential to eliminate impairment, I will limit my comments, with the expectation that there will be a forum at a later date in which a full investigation of the issues will occur Additional detail about ELP in support of the comments I will make below can be found in Exhibit JMB-SR1, a presentation entitled "Electronic Loop Provisioning (ELP), Enabling the Competitive, All Service Network of the Future," dated November, 2003.

On page 3, Mr Tennyson discusses packetizing digital signals into Asynchronous Transfer Mode (ATM) cells and then asserts "this packetization is not performed in any DLC systems used in BellSouth today". This is misleading. All DLCs in Tennessee that BellSouth has equipped to provide DSL service do perform packetization to ATM format for the DSL service. BellSouth has not invested in

cards for those DLCs that are capable of packetizing voice or combined voice and DSL. Such cards convert the existing Next Generation DLCs (NGDLCs) into the "true" NGDLC (tNGDLC) discussed in Exhibit JMB-SR1.

At the bottom of page 3, Mr Tennyson provides the following note and assertion. "Note that this process (referring to ELP) would require that every loop be connected to an ATM switch, a switch that does not exist in BellSouth's network today." Mr. Tennyson is wrong on both counts. As can be seen in the diagrams on pages 15, 26 and 27 of Exhibit No. JMB-SR1 in the ELP architecture, once the loop has been treated by the tNGDLC it is the highly efficient, packetized, high capacity ATM uplink of the tNGDLC that is connected to the ATM switch, individual loop connections to the ATM do not exist Second as Mr. Tennyson later admits (page 5) BellSouth does have ATM switching capability. Today that capability is used to support BellSouth's DSL product lines and others that make use of ATM technology. The fact that "BellSouth does not have the quantity of switches, or the switch capacity, necessary to deploy ELP" (Tennyson, rebuttal page 5, lines 14-15) is unremarkable and does not demonstrate that it could not deploy additional ATM switching capacity to implement ELP.

On page 5, Mr. Tennyson also admits that BellSouth has voice gateways in its network, but once again makes the unremarkable claim that they are not "in the necessary capacity, or quantity." This claim does not demonstrate that BellSouth could not deploy additional voice gateway capacity to implement ELP

On page 4, Mr Tennyson makes the claims that "ELP is not the best architecture to enable DSL and would impede DSL innovation." These claims are absurd – ELP is built on exactly the same architecture that BellSouth is using to implement DSL -- remote terminal NGDLC deployments using ATM protocols.

On page 5, Mr. Tennyson, in discussing how long it might take to deploy ELP, states "It would take at least several years, given the magnitude of such an undertaking and given that each and every loop in BellSouth's region will need to be modified." ELP can be implemented in phases, over time and by "priority", starting when and where BellSouth desires to be relieved of its obligation to provide unbundled switching. As each geographic area is converted on BellSouth's (or the Authority's ordered) schedule, unimpaired competition would be established and BellSouth would receive the relief it seeks While, ultimately, modification of "each and every loop" *may* eventually be required, it also may *never* be required. Only those loops that actually do become subject to migration to a CLEC need to be immediately "ELPed," allowing for the use of a managed process like that being used for the support of BellSouth's DSL deployment. Further, I would note that the UNE-P to UNE-L transition itself, if BellSouth were granted relief in this docket, would not complete until May 2007, or several years from now.

Finally there is the matter of cost. Mr Tennyson provides a discussion of cost on pages 4 and 5, but provides no support for how any of the three major data points he presents were determined He claims that with ELP, CLECs would avoid only $13 per loop in costs compared to the existing hot cut costs. There is no explanation as to how this number was derived, however, here are some factors that would have to play

in such a calculation (1) the cost to CLECs of an SL1 hot cut in Tennessee is $68 51; (2) the BellSouth central office technician work time per hot cut is approximately 43 minutes, (3) an additional hour of BellSouth outside plant technician work time is required on all loops served by IDLC (28%) in Tennessee). It is difficult to grasp Mr. Tennyson's determination that only $13 dollars of cost is avoided by ELP given the known amount of work that is eliminated. Second, Mr. Tennyson states that there would have to be an on-going monthly charge of $6.66 per loop per month. Again no explanation is provided. Possibly this number was somehow derived from Mr Tennyson's third claim that "it would cost BellSouth approximately $8 billion in capital expenditures to implement ELP in its network," but there is no indication how that number was determined, either

Exhibit No. JMB-SR1 addresses costs on page 21 AT&T's estimate of the total cost to implement ELP in BellSouth's territory would be approximately one-half BellSouth's estimate, and that does not take into consideration the costs avoided by the elimination of collocation costs, hot cuts, etc

Q. SHOULD COST BE THE ONLY CONSIDERATION IN EVALUATING AN ELP PROPOSAL?

A. No, of course not, and that is one of the major reasons behind my recommendation that the Authority open a separate docket to consider these matters. An investment in ELP or any other proposal with the potential to eliminate impairment must be viewed in the context of its benefits ELP provides significant benefits (including cost

reductions, enhanced features, and increased revenue opportunities) to a broad range of constituents and telecommunications issues, including:

- End-Users
- Competition
- CLECs & ILECs
- Broadband & Advanced Services
- Local Network Infrastructure
- Telecommunications Industry / Market
- U.S. Economy

It simply is not possible within the scope and the artificial time constraints placed upon this proceeding by the TRO for the Authority to make a fully informed decision about ELP in this docket

RESPONSES TO MR. FOGLE

Q. ON PAGES 20 AND 21 OF HIS REBUTTAL TESTIMONY, MR. FOGLE CHALLENGES YOUR STATEMENT THAT CLECS ARE DENIED THE ABILITY TO PROVIDE DSL SERVICE TO CUSTOMERS EXCEPT WHEN A COPPER LOOP OF LESS THAN 18,000 FEET IN LENGTH IS AVAILABLE AND DISCUSSES A NUMBER OF OPTIONS HE STATES A CLEC CAN UTILIZE. IS THERE ANY DIFFERENCE BETWEEN MR. FOGLE'S COMMENTS AND THOSE OF MR. MILNER, TO WHICH YOU RESPONDED ABOVE?

A. Not really. Mr. Fogle's list of options is longer but contains none that allows any CLEC to have a DSL reach relative to mass market customers that is anywhere near equal to BellSouth's at an economic cost. As I noted in my direct testimony, the

retail product BellSouth provides to the mass market is its FastAccess ® Service. All of the options Mr. Fogle lists are either (1) prohibited by BellSouth, (2) uneconomic, (3) inappropriate for the mass market, (4) and/or provide an inferior service when compared to BellSouth's FastAccess ® Service.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

TRA DOCKET NO. 03-00491

SURREBUTTAL TESTIMONY OF JAY M. BRADBURY

EXHIBIT: JMB-SR1

MARCH 17, 2004

Electronic Loop Provisioning (ELP)

Enabling The Competitive, All-Service Network Of The Future

November 2003

Overview

Electronic Loop Provisioning (ELP)

Enabling The Competitive, All-Service Network Of The Future

<<< Background and Introduction >>>

<<< Network Architecture and Design >>>

<<< Investments and Costs >>>

<<< Attachments >>>

Background and Introduction

Background

Why The Need For ELP ?

- The local network and loop access architecture was designed with one carrier and one carrier only in mind—the Incumbent LEC
- As a result, there are inherent architectural impediments in the Incumbent LECs' local networks that effectively preclude practical and economic CLEC access to analog voice-grade loops used to provide voice services
- Unlike the ILECs, whose circuit switches are located at the same location where their end-users' loops terminate (i.e. the Local Serving Office or LSO), CLECs must create an extensive "backhaul network" to extend their end-users' loops to their circuit switches
- In order to connect their customers' loops to their switches, the ILECs merely run a jumper wire from one side of a Main Distribution Frame ("MDF") to the other in the same LSO
- In sharp contrast, CLECs face a significant "backhaul penalty" in order to connect UNE-Loops to their circuit switches
- The underlying network must change in order to accommodate practical, efficient and economical multi-carrier access to loops – ELP is one potential way

Background

The CLEC Backhaul Penalty

- In summary, the CLEC backhaul penalty includes the following costs :

  (1) Engineering, establishing and maintaining collocation, including the associated space preparation and power requirements for sustaining collocation

  (2) Installing and maintaining digitization, concentration and multiplexing equipment at collocations, as well as related monitoring/testing and power distribution equipment

  (3) Arranging for and providing transport between collocations and CLEC switch locations

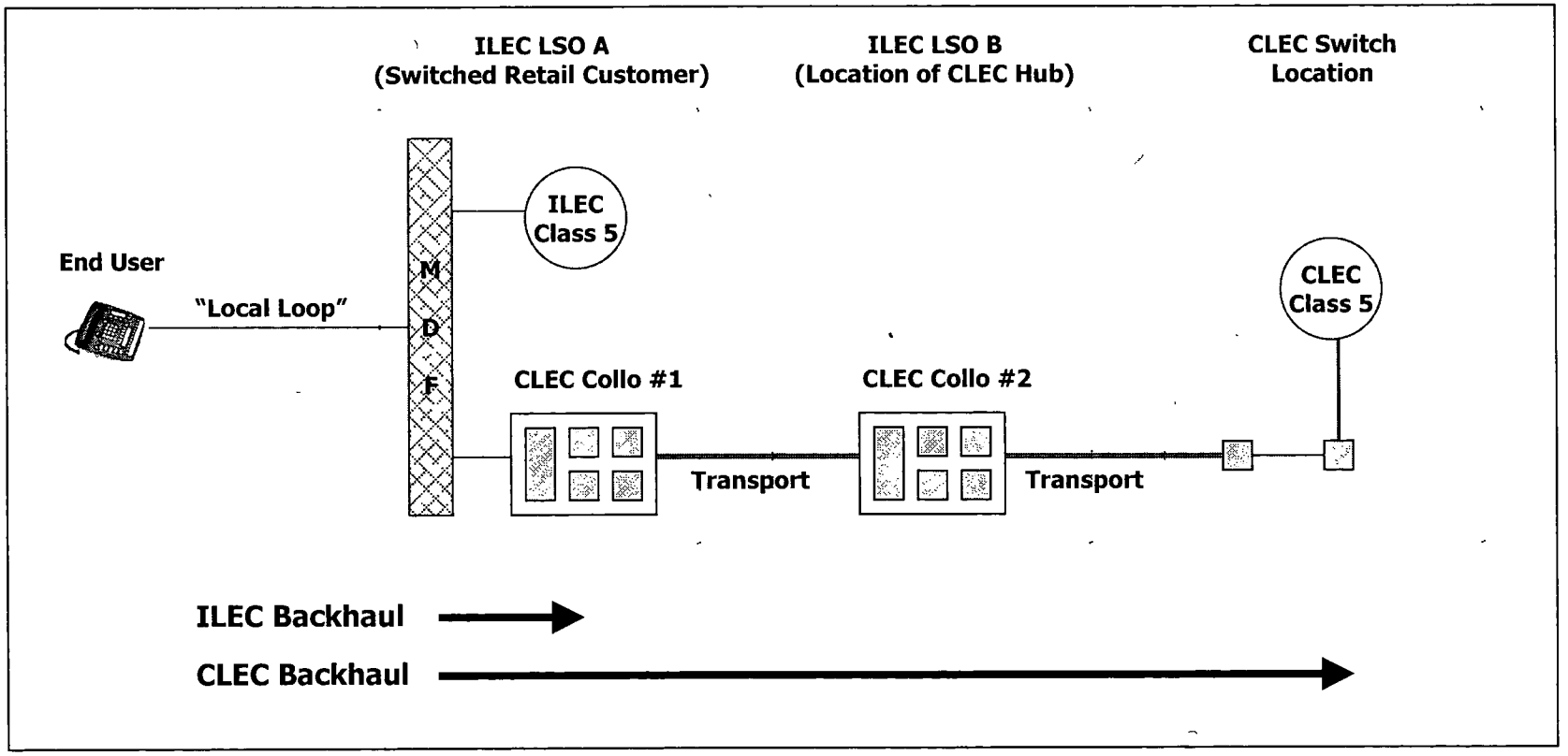
  (4) Engaging in the "coordinated hot-cut process" in order to migrate loops from the ILEC's network to the CLEC's network, which starts at the CLEC collocation

- Only after each of these requirements have been satisfied can a CLEC provision POTS service to end-users using an unbundled ILEC loop

- This "backhaul penalty" makes it practically and economically prohibitive to service analog voice grade loops using a UNE-L facilities based entry

Background

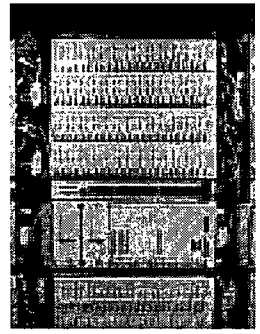
ILEC vs. CLEC Loop Access



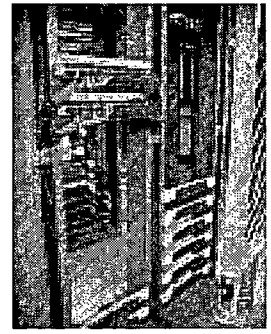
Background

Today's Collocation*
Digitization, Concentration, Multiplexing, Power and Testing Equipment

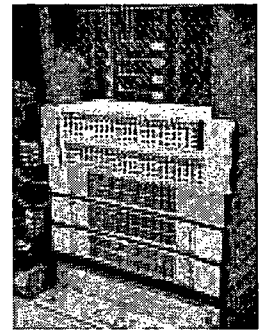
Collocation Cage
(Empty—Looking Out)



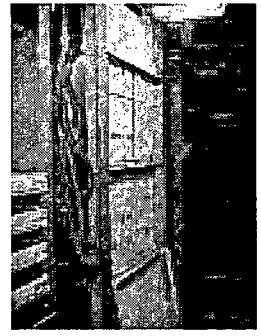
DLC



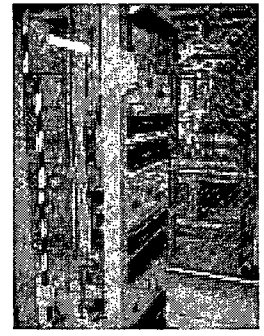
DSX-1



DSX-3



OC-X

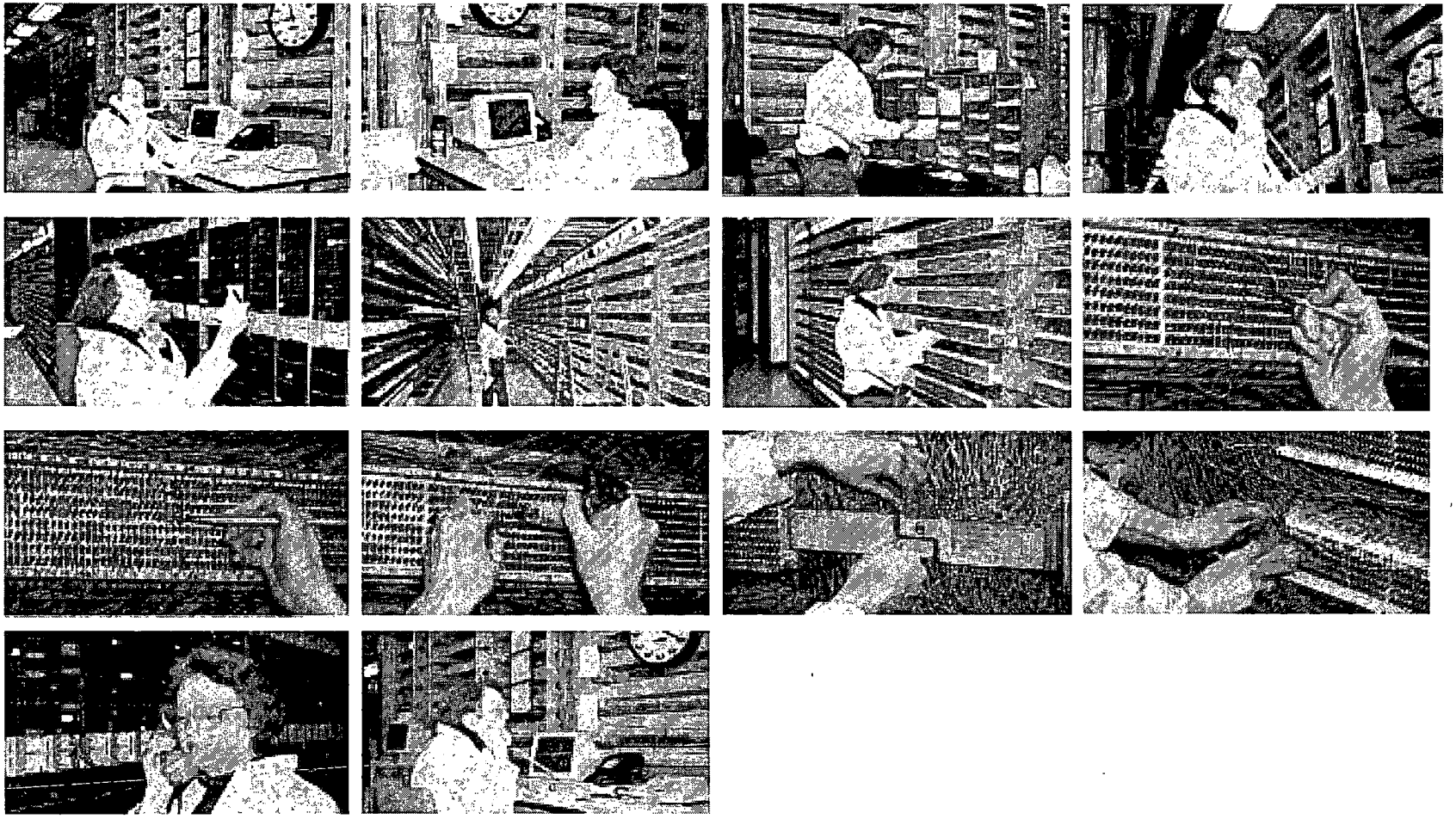


BDFB

*NOTE : Collocation profiles may vary based on CLEC and/or particular circumstances.

Background

Today's Loop Migration via "Hot-Cuts"



Source : BellSouth

Background

ELP Is One Potential Solution

- ELP addresses the underlying network architecture issues that impede competition for the so-called "mass-market" (i.e., residential and small business locations)

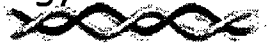
- ELP is a targeted infrastructure upgrade to the incumbent LECs' local network that introduces currently available network transmission technology into the local access network that digitizes and packetizes all end-user communications traffic, both voice and data

- Digitization and Packetization of the local access network...

  - ...eliminates the need for manual, labor-intensive "hot-cuts"
  - ...reduces the need for CLEC collocation and related equipment
  - ...improves CLEC transport economies

- ELP (or a technological equivalent that provides CLECs equivalent access to end-user loops as the ILECs) in conjunction with pro-competitive policies is required in order to make it both (a) practical, and (b) economic for CLECs to serve mass market locations using UNE-L facilities based entry

- Absent such a solution, UNE-P is the only practical and economic entry strategy to bring local competition to mass market locations



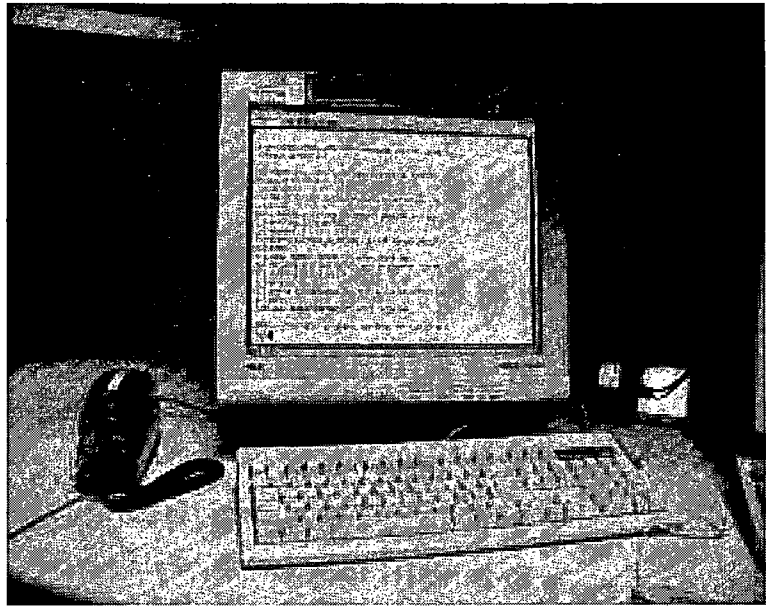
Introduction

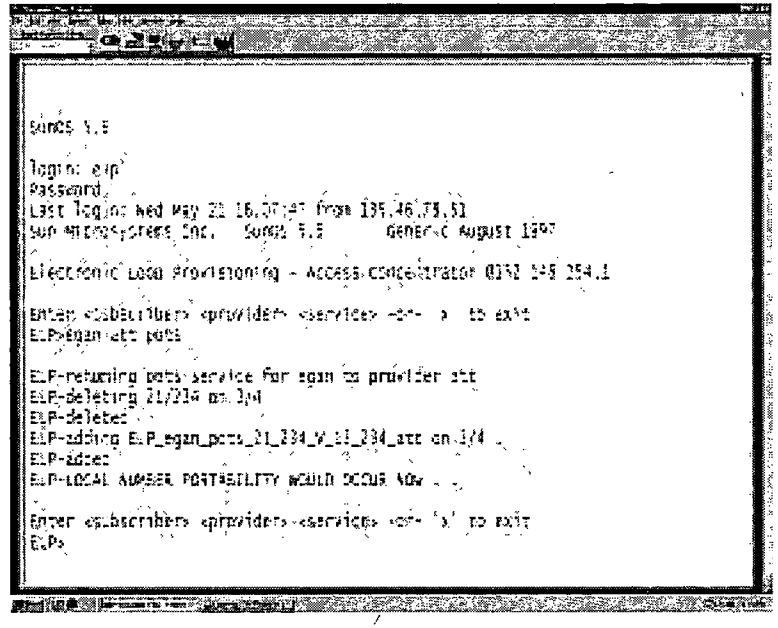
AT&T's Proposed Solution

- AT&T's ELP proposal is one way in which voice digitization and packetization in the access network can be achieved
- It is premised on a "true" NGDLC access architecture that employs ATM transmission protocol
- ELP introduces three network elements into the local access network:
  - "true" Next Generation Digital Loop Carrier (tNGDLC) equipment
  - ATM modules
  - Voice Gateways (VGs)
- The introduction of these network elements transforms the local network into a digital, packet access network
- This fundamental change enables an open network architecture that will support nondiscriminatory multi-carrier access

Background

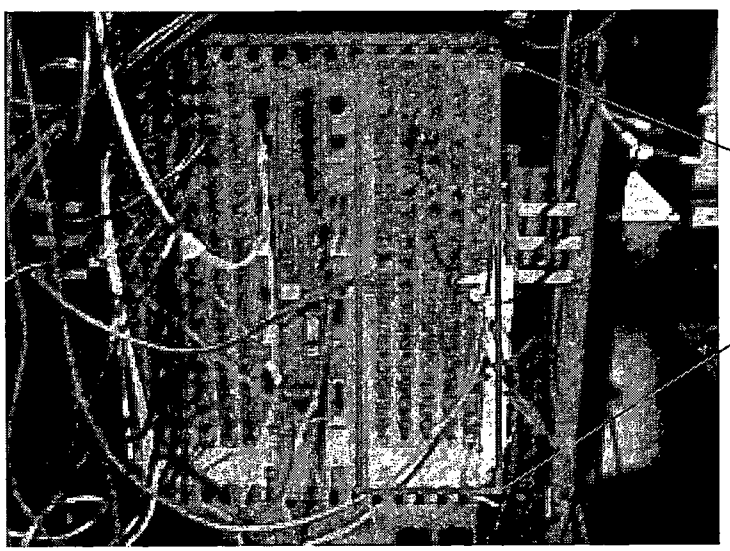
Loop Migration via ELP



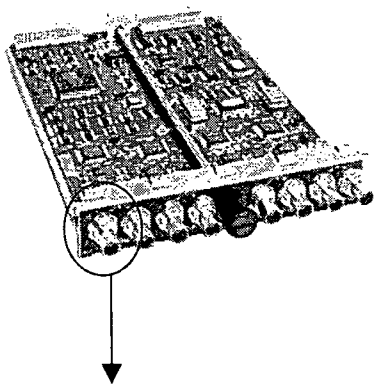


Background

Collocation Under ELP
An ATM Module Port and Associated Transport Facility*



ATM Module (Backplane View)



CLEC Collocation can equal a DS1, DS3, or OC-3 or higher port on the ATM Module w/associated transport facility

*NOTE : Collocation under ELP will vary/be dependent upon how it is architecturally implemented.

Network Architecture and Design

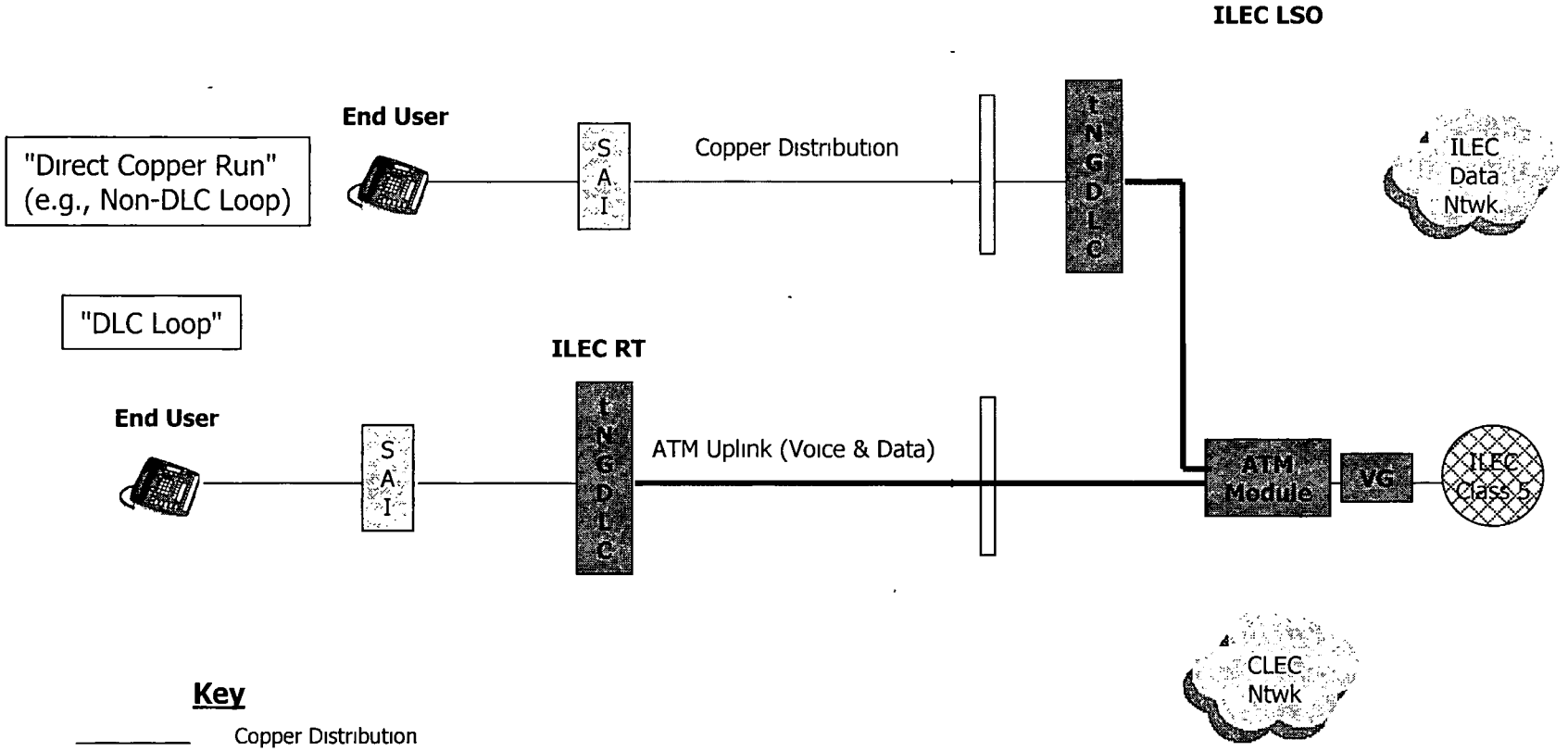
Network Architecture and Technology

Three Key Elements

- Three Prime Components in the ELP Architecture
  - "true" NGDLC (tNGDLC)
  - ATM module
  - Voice Gateway (VG)
- ***tNGDLC.*** Performs the analog-to-digital conversion, voice and data "packetization" (e.g., Voice Packet Processing or VPP), multiplexing and concentration of end-users' communications traffic
- ***ATM Module.*** Performs the multiplexing and concentration of end-users' communications traffic from sub-tending tNGDLC units in RTs or in the CO
- ***VG.*** Performs the packet-to-circuit protocol conversion between the ATM based ELP access architecture and TDM based circuit switched architecture

ELP Network Architecture Overview

Generic ELP Network Architecture



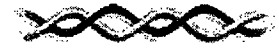
Key

———	Copper Distribution
▭	Copper Distribution Frame (MDF)
▬	Fiber Feeder
▭	Fiber Distribution Frame (FDF)
TNGDLC	"true" NGDLC with Voice Cell Processor (VCP)
VG	Voice Gateway

Network Architecture and Technology

"true" NGDLC Technology

- **"True" NGDLC (tNGDLC) technology** converts current separate voice/data hardwired end-user to central office connections into software-defined connections that:
  - Convert end-user analog voice signals into packet format before they are transported to the central office
  - Combine these voice signals with data traffic (which current DSL technology already transports as packets)
  - Transport these combined voice and data packets to the central office over all-fiber facilities
- The most convenient packet-like transport format is likely to be **Asynchronous Transfer Mode (ATM)** protocol:
  - ATM is the format currently used for nearly all DSL transport
  - ATM permits quality-controlled permanent virtual circuits (PVCs) to be established and maintained for voice traffic as well



Network Architecture and Technology

Values of a Digital, Packet Access Network

- By converting data *and* voice traffic into packet format...
  - All traffic rides on a converged loop network
  - A central office-located packet module (e.g., an ATM module) serves as an efficient interface point where all service providers can access all voice and data PVCs ("loops") subtending this switch
    - An end-user's voice traffic may be unbundled separately from that end-user's data traffic
    - Both ILECs and CLECs obtain identical access to these loops (although CLECs still face some asymmetric but reduced backhaul costs and issues)
  - Because the "loop" and "network" ports on this packet module are software-controlled:
    - Loops can be assigned to different carriers instantaneously
    - New services can be provisioned by all carriers equally
    - Functionality analogous to 1980s FGD "equal access" with its automated PIC process for selecting long distance carriers is established for local loops and carriers

Network Architecture and Technology

Preservation of Legacy Investments

- All other portions of current loop infrastructure may remain unchanged by ELP
  - CPE used for voice services remains unchanged – as does CPE currently used for advanced services such as DSL or derived voice lines, etc.
  - Copper distribution facilities remain unchanged (unless they need to be shortened and/or repaired or conditioned to improve service)
  - Fiber feeder facilities remain unchanged (copper facilities upgraded to fiber, as necessary)
- Substantial portions of current ILEC NGDLC investment (and investment in legacy DLC systems) may be reusable
  - Sites, cabinets, power systems
  - Channel banks, common cards and channel cards (depending on vendor of legacy equipment)
  - ATM Modules (e.g., OCDs under Pronto, PARTS, etc.)

Investments and Costs

Investments and Costs

ELP Forward-Looking Investment Cost

Three Key Elements

- **Baseline forward-looking network costed using UNE SynMod**
  - No change to SynMod NID or loop distribution investments because are based on <18 kft. of clean copper
  - DLC investments adjusted to current GR-303 prices
  - Feeder remains copper/fiber – no concentration and no daisy-chaining
  - CO remains Class 5 circuit switch
  - SONET ring / TDM interoffice transport
  - SS7 signaling

- **Forward-looking basic ELP costed using UNE SynMod *(assuming DSL capability, but no actual DSL provisioning)***
  - No change to NID or loop distribution investments
  - Add tNGDLC investments on previous copper lines
  - Substitute tNGDLC investments on previous fiber/DLC lines
  - All feeders costed as fiber – no daisy-chaining
  - Add ATM module and voice gateway at each CO
  - CO remains Class 5 circuit switch
  - SONET ring / TDM interoffice transport
  - SS7 signaling

Network Architecture and Technology

Results

- Incremental forward-looking investment cost for basic ELP over current forward-looking baseline
  - ~ $113/line
  - Cost to upgrade all RBOC lines: ~$17.4 B
  - This cost will vary based on extent of ELP upgrade (e.g., just switched lines or switched plus special lines), carrier universe (e.g., just RBOCs or all nonrural) and expected ADSL "take" rate
- Further investments necessary to actually provision DSL
  - Substitution of a combo voice/DSL channel card for a voice-only channel card
  - Modest increases in ATM capacity
  - Cost of interoffice data network to serve ISPs
  - Extra investment cost over basic ELP: ~ $150/line
  - Cost to provision DSL on 40% of all RBOC lines: ~$9.2 B

ELP Short Run Incremental Cost

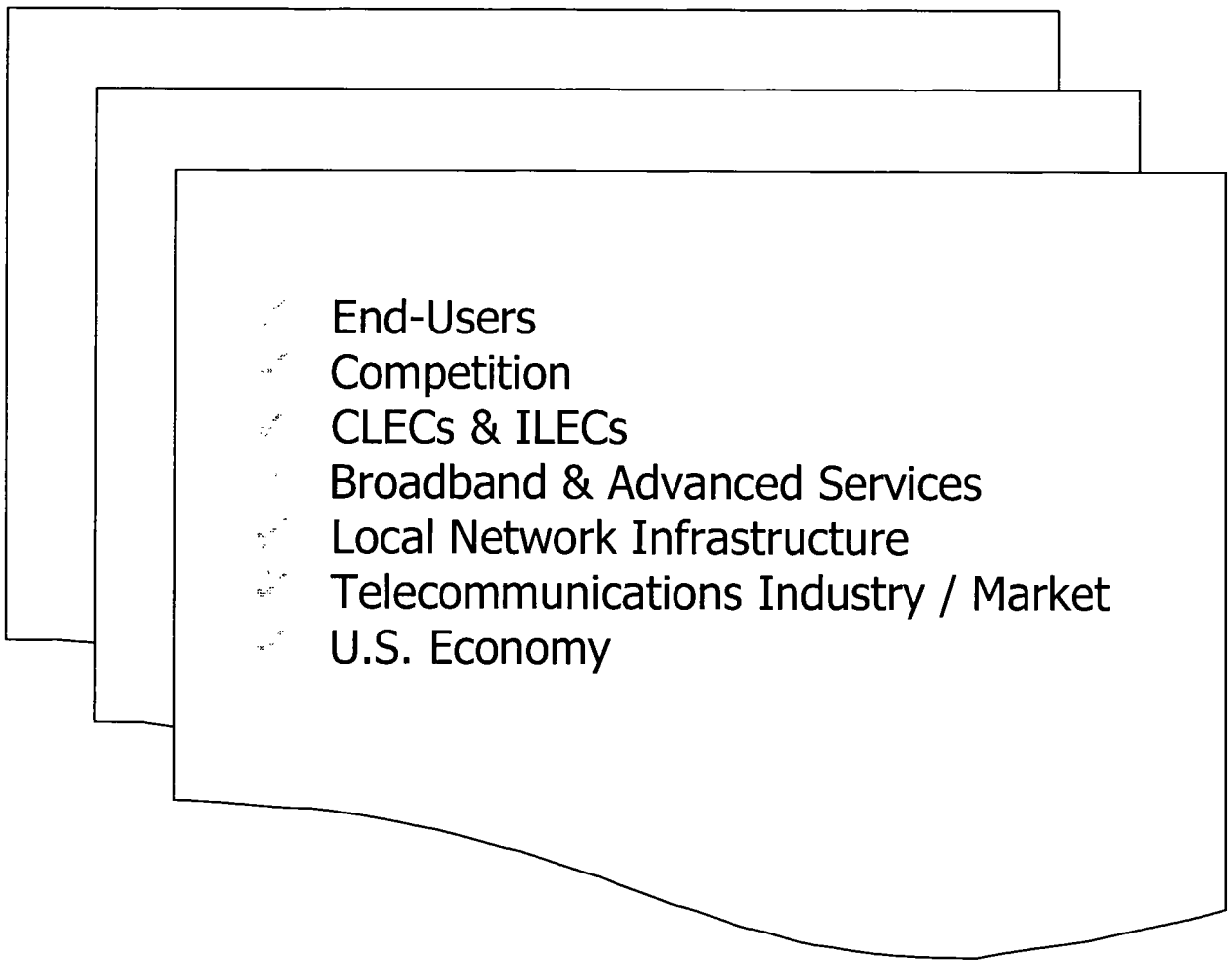
"Upgrades" By Loop Technology

Loop Technology	Additional Equipment
Fiber-fed IDLC/NGDLC	Voice Packet Processor (VPP) ATM module and VG
Fiber-fed UDLC	tNGDLC w/ VPP ATM module and VG
Copper-fed legacy DLC or all copper >18 kft.	tNGDLC w/ VPP Fiber feeder ATM module and VG
All copper <18 kft.	tNGDLC w/ VPP Fiber feeder (if needed) ATM module and VG

- The cost of these short run incremental investments to current embedded networks will depend on these networks' existing penetrations of fiber and modern DLC. It will likely exceed full forward-looking incremental investment cost by 25 to 50%.

Investments and Costs In Perspective

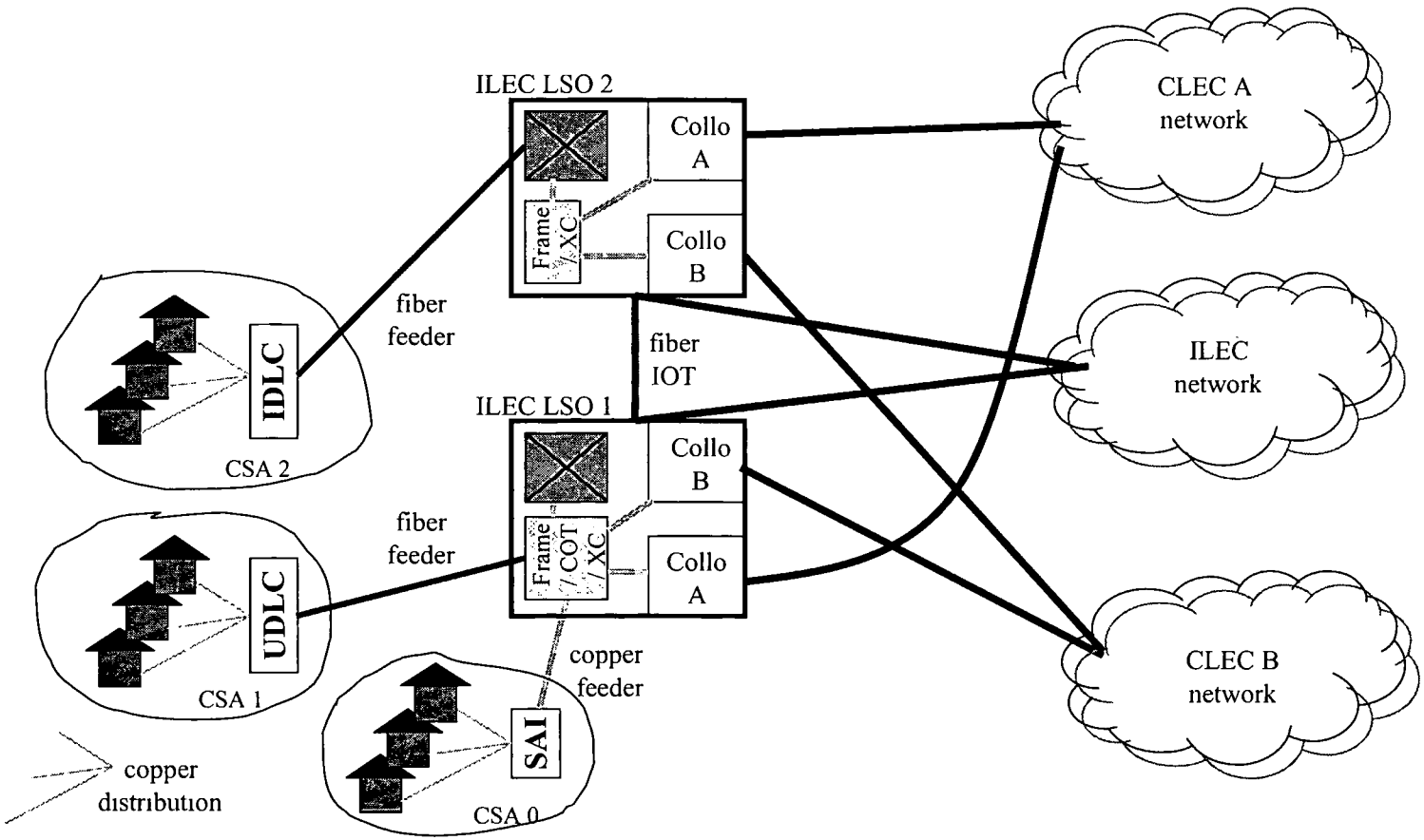
ELP Investment Must Be Viewed in The Context of Its Benefits



Attachments

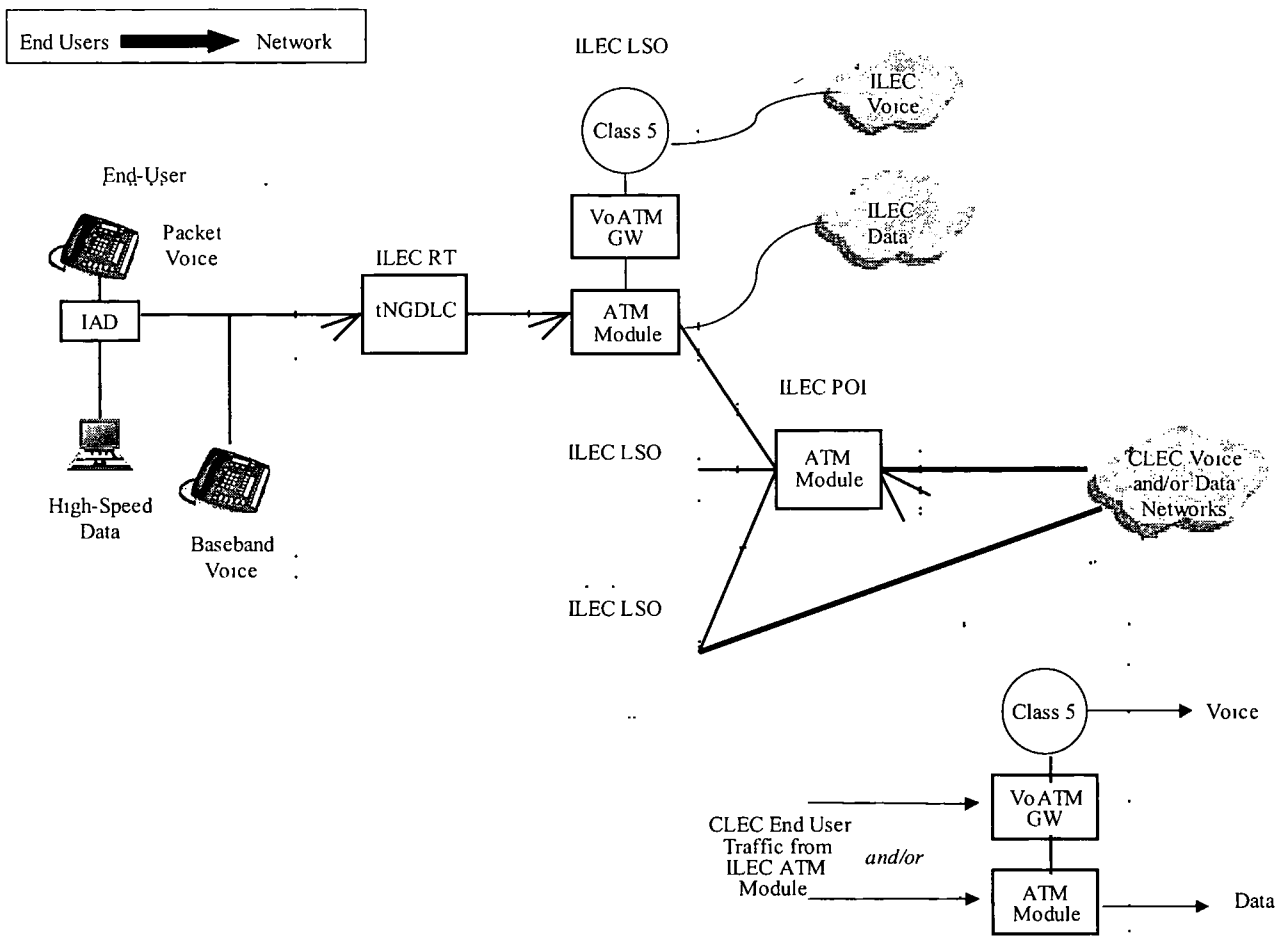
Legacy ILEC Network Topologies

Carrier Serving Architecture



ELP Network Architecture

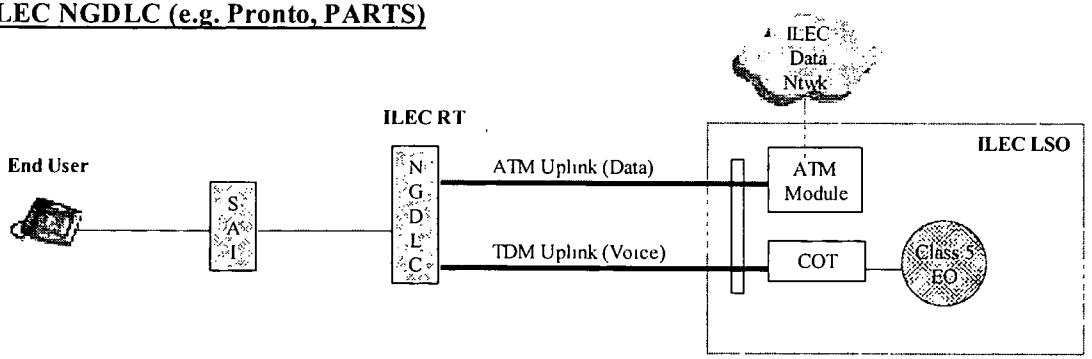
Base ELP Design



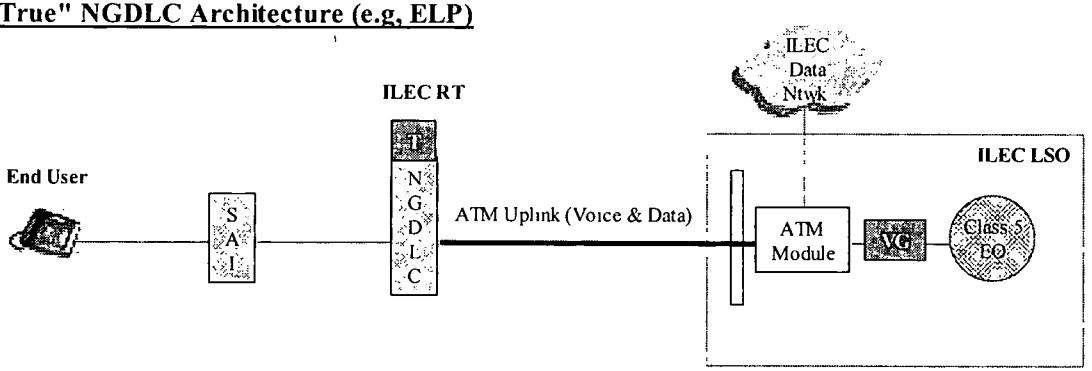
ILEC NGDLC vs. "true" NGDLC

Key Functional Differences

ILEC NGDLC (e.g. Pronto, PARTS)



"True" NGDLC Architecture (e.g, ELP)



Key

———	Copper Distribution
▬▬	Fiber Feeder
▭	Fiber Distribution Frame (FDF)
TNGDLC	NGDLC with Voice Packet Processor (VPP)
VG	Voice Gateway

CERTIFICATE OF SERVICE

I hereby certify that on March 17, 2004, a copy of the foregoing document was serviced on the parties of record, via US mail:

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