

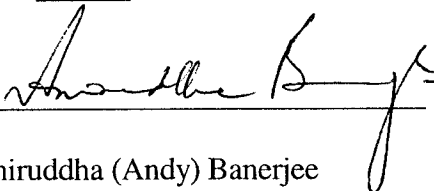
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STATE OF MASSACHUSETTS

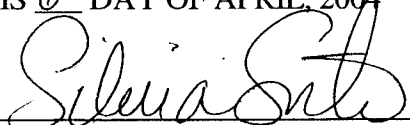
COUNTY OF MIDDLESEX

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared Aniruddha (Andy) Banerjee, who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Kentucky Public Service Commission in Case No. 2003-00379, Review of Federal Communications Commission's Triennial Review Order Regarding Unbundling Requirements for Individual Network Elements, and if present before the Commission and duly sworn, his surrebuttal testimony would be set forth in the annexed testimony consisting of 17 pages and 0 exhibits.


Aniruddha (Andy) Banerjee

SWORN TO AND SUBSCRIBED BEFORE ME
THIS 6th DAY OF APRIL, 2004

 Notary Public

SILVIA SANTOS
NOTARY PUBLIC
My commission expires Sept. 24, 2004

**BEFORE THE
KENTUCKY PUBLIC SERVICE COMMISSION**

In re: Review of Federal Communications Commission's	)
Triennial Review Order Regarding Unbundling	) Case No. 2003-00379
Requirements for Individual Network Elements	)

SURREBUTTAL TESTIMONY

OF

ANIRUDDHA (ANDY) BANERJEE, Ph.D.

ON BEHALF OF

BELLSOUTH TELECOMMUNICATIONS, INC.

APRIL 13, 2004

ON BEHALF OF BELL SOUTH TELECOMMUNICATIONS, INC.
SURREBUTTAL TESTIMONY OF ANIRUDDHA (ANDY) BANERJEE, Ph.D.
BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION
DOCKET NO. 2003-00379
APRIL 13, 2004

I. INTRODUCTION AND PURPOSE

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

A. My name is Aniruddha (Andy) Banerjee. I am a Vice President at NERA Economic Consulting located at One Main Street, Cambridge, Massachusetts 02142.

Q. HAVE YOU FILED TESTIMONY PREVIOUSLY IN THIS PROCEEDING?

A. Yes, I filed direct testimony (on March 10, 2004) and rebuttal testimony (on March 31, 2004) in this proceeding.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. My surrebuttal testimony responds to specific allegations and claims of an economic nature by witness Gary J. Ball on behalf of the Competitive Carriers of the South ("CompSouth").

II. RESPONSES TO COMPSOUTH

Q. MR. BALL CONTENDS [AT 44-45] THAT IT IS NOT CREDIBLE THAT "THERE ARE MORE THAN 48 TIMES MORE BUILDINGS THAT BELL SOUTH CLAIMS QUALIFY FOR POTENTIAL DEPLOYMENT THAN BELL SOUTH IDENTIFIED FOR SELF-PROVISIONING." DO YOU AGREE?

A. No. If I understand Mr. Ball's point correctly, he is alleging that the count of buildings that I identified in my direct testimony as meeting the potential deployment test is "more than 48 times" the count of buildings identified in BellSouth witness Shelley Padgett's direct testimony (see Exhibit SWP-4) as meeting the self-provisioning trigger test. This cannot

1 be true because Ms. Padgett identified one (1) building as meeting the self-provisioning
2 test, whereas I identified 48 buildings as meeting the potential deployment test. That is, the
3 multiple is exactly 48, rather than “more than 48.” However, that multiple—whatever it
4 is—is not inherently an issue of particular interest.

5 Mr. Ball’s broader point is that if, despite the “laborious efforts of individual
6 companies” over 10 years, CLECs did not actually end up providing service over their own
7 high capacity loops to the 48 buildings that meet the potential deployment test, then it can
8 only mean that the error lies entirely in my conduct of the potential deployment and that the
9 true count of buildings meeting that test should be zero. The manner in which he argues
10 against my findings suggests that Mr. Ball possesses some “inside” information (CLEC by
11 CLEC, building by building) that leads him to conclude that my findings are totally in
12 error. If that is indeed the case, then Mr. Ball’s argument would be more persuasive were
13 he to provide that information or evidence on a case-by-case basis, instead of making
14 generalizations—for the most part speculative—like “it is likely that the remaining
15 buildings ... are not attractive due to the type of customers in the building” or “in the
16 current financial environment, competitive carriers do not have the same level of available
17 financing as they did in the previous years ...”

18 Mr. Ball’s argument, presented as “evidence” that CLECs remain impaired and
19 involuntarily precluded from serving certain buildings or customer locations, cannot be
20 taken as serious criticism of either the potential deployment test itself (as devised by the
21 FCC) or how I have conducted it. Contrary to what Mr. Ball appears to imply, the potential
22 deployment test is *not* a gauge or barometer of what a CLEC *would* do; rather, it is
23 intended to demonstrate what it *could* do. That is, the mere fact that CLECs have not *yet*
24 made the effort to serve certain customer locations cannot be considered dispositive
25 evidence that they would not do so at the “right” time. Again, for the potential deployment
26 test for loops, it suffices only to demonstrate that, given what we know about specific
27 building or customer locations and the circumstances that any carrier would face to serve
28 them, at least two CLECs could profitably serve each such location.

29 **Q. COULD THERE BE OTHER EXPLANATIONS FOR THE FAILURE OF CLECS**

**TO SERVE SO MANY BUILDINGS USING THEIR OWN HIGH-CAPACITY
LOOPS EVEN IF, UNDER THE GIVEN CONDITIONS CONSIDERED BY THE
POTENTIAL DEPLOYMENT TEST, THEY COULD DO SO?**

A. Yes. I question the premise that CLECs are unlikely to have chosen voluntarily to pass up profitable business opportunities presented by the buildings that are identified by my potential deployment test. Entry and expansion decisions by firms are dictated by a variety of factors including the availability of alternative deployment strategies, the appropriate scale of efficient operations relative to the level of available demand, access to capital markets (to which Mr. Ball alludes), and (frequently) the business models and objectives of those firms regarding the scope and timing of their activities. In the environment in which CLECs operate in Kentucky, the availability of unbundled network elements (“UNEs”) at regulated prices is likely to have an important bearing on CLEC choices because the relative economics of leasing UNEs and deploying owned facilities may well prompt CLECs to choose to expand through the use of UNEs rather than by deploying their own facilities. As a result, although the presence of facilities that meet the self-provisioning triggers test is indeed evidence of non-impairment, the *absence* of such facilities is *not*, however, automatically evidence of impairment. The advantage of having a potential deployment test in addition to the triggers analysis is that this fact is properly recognized.

**Q. ARE THERE CUSTOMER LOCATIONS, AMONG THE 48 IDENTIFIED BY
YOUR POTENTIAL DEPLOYMENT ANALYSIS, AT WHICH CLEC LOOP
DEPLOYMENT HAS ALREADY OCCURRED (ALTHOUGH NOT ENOUGH TO
SATISFY THE SELF-PROVISIONING TRIGGER TEST)?**

A. Yes, the number of customer locations at which at least one CLEC has deployed its own high-capacity loop in order to serve business customers is four (4). This answers the question raised on the matter by Mr. Ball [at 59-60].

**Q. PLEASE RESPOND TO MR. BALL’S INFERENCE [AT 47] THAT YOU HAVE
CONDUCTED “THE WRONG ANALYSIS” BECAUSE, IN HIS VIEW, YOUR
SETTING A MONTHLY \$5,000 FLOOR FOR END-USER SPENDING AT**

**CUSTOMER LOCATIONS MAY HAVE LED YOU TO IDENTIFY LOCATIONS
AT WHICH AT LEAST THREE DS3S ARE IN USE.**

A. In attempting to discredit my potential deployment analysis in this manner, Mr. Ball appears to be grasping at straws. My direct testimony [at 4] clearly explains that the aim of my exercise is to identify customer locations in Kentucky to each of which at least two CLECs are capable of deploying services at the DS3 capacity level if no CLEC presently meets the self-provisioning trigger, or at least one CLEC is so capable if one CLEC presently meets the self-provisioning trigger. Under my test, I have sought exactly two CLECs in the former case and exactly one CLEC in the latter case.

In addition, I note that Mr. Ball considers only the revenue from the DS3-level high-capacity loop itself. This sleight of hand borders on the disingenuous. When a CLEC provides service to business customers over its own facilities, it clearly expects to earn revenues from the delivery system itself (the DS3-level loop) *as well as* from all the retail services that it can provide over that loop. Thus, the reference to “end-user spending” in my potential deployment analysis is to the aggregate spending by business customers who are, or could be, served by CLECs deploying their own facilities. From either a tactical or a business standpoint, it would make no sense for the CLEC to disregard *any* source from which it could expect to earn revenue by deploying a DS3-level high-capacity loop (or, equivalently, deploying an OC(n)-level facility and channelizing down to the DS3 level).

**Q. ON THIS MATTER, MR. BALL REITERATES HIS POSITION [AT 51] THAT
“THE ONLY REVENUES THAT SHOULD BE CONSIDERED ARE THOSE
SPECIFIC TO THE BUILDING OF INDIVIDUAL DS3S OR DARK FIBER
LOOPS.” IS THIS A TENABLE POSITION?**

A. Not at all. This statement is followed in Mr. Ball’s testimony [at 51] by the following passage:

This is consistent with the FCC’s determination as mentioned above that “the potential revenue stream associated” with lower-capacity facilities “is many times smaller than that” of a higher-capacity facility. *TRO* ¶ 320 n.945. Notably, the view here must be of a carrier that has the opportunity to obtain access to UNEs (otherwise an impairment review is unnecessary). Thus, since a requesting carrier may only obtain up to 2 DS3s at UNE rates per customer location, the

question is whether that carrier – not a carrier seeking to serve a larger demand – could afford to self-deploy its own facilities to serve at that level. Accordingly, any reference to a “total building revenue” is inappropriate.

It is evident from these statements that Mr. Ball has confused two entirely distinct propositions, namely, (1) the cost of the high-capacity loop should be fully recovered in the price charged for the loop (to avoid a subsidy), and (2) the cost of deploying and providing service over a high-capacity loop should be recovered in the revenue available from the end-user. This proceeding is certainly not concerned with the first of these issues, although Mr. Ball’s argument very closely resembles the line of thinking that is associated with the avoidance-of-a-subsidy issue. Rather, this proceeding—at least the potential deployment part of it—is about whether a CLEC could, in a financially viable manner, deploy its own high-capacity loops (in place of leased UNE loops) in order to provide service to end-users at a customer location.

It is important to note that the demand for high-capacity loops is what economists call a “derived demand.” That is, end-users do not inherently demand loops; rather they demand *services* that can be delivered over those loops. If those same services could be provided through other means, e.g., wireless technologies, then we would be concerned instead with the deployment of wireless facilities, and the deployment of loops at the DS3 or higher level would not be an issue. Therefore, the proper calculus here has to be one that attempts to determine whether the revenues available from the services that end-users demand are sufficient to recover, over a given period of time, all of the costs incurred to provide those services (by whatever means). If the deployment of high-capacity loops is judged to be the optimal way to provide those services, then the full cost of that deployment should figure in that calculation. However, there is no compelling economic logic for confining the cost-revenue comparison to the loops alone, as Mr. Ball suggests it should be.

Q. IF YOUR POTENTIAL DEPLOYMENT ANALYSIS CONSIDERS “TOTAL” TELECOM REVENUES FROM END-USERS, THEN SHOULDN’T YOU ALSO TAKE INTO ACCOUNT—AS MR. BALL SUGGESTS [AT 52]—“ALL OF THE COSTS OF PROVIDING ALL SERVICES OVER SUCH FACILITIES”?

1 A. My analysis does exactly that. As detailed in my direct testimony [at 14-15], I take into
2 account all capital and non-capital costs (whether fixed or variable), including other
3 network costs (besides the cost of the loops themselves), the cost of goods sold (“COGS”),
4 and costs associated with sales and marketing, billing and customer care, customer churn,
5 and overhead expenses. In other words, my analysis considers the whole gamut of
6 wholesale and retail costs of providing service to end-users at a customer location over
7 self-deployed high-capacity loops.

8 **Q. DOES IT MATTER THAT YOUR POTENTIAL DEPLOYMENT ANALYSIS**
9 **ASSUMES THAT CLECS PLACE OC(n)-LEVEL FACILITIES (WHICH ARE**
10 **SUBSEQUENTLY CHANNELIZED DOWN TO THE DS3 LEVEL) RATHER**
11 **THAN UP TO TWO INDIVIDUAL DS3-LEVEL LOOPS (AS MR. BALL**
12 **BELIEVES YOU SHOULD)?**

13 A. No. First, in the real world, it is highly unlikely that a CLEC, even when faced with
14 demand that could be served by the capacity equivalent of one or two individual DS3
15 loops, would install anything less than an OC(n)-level facility that can then be channelized
16 down to provide the requisite capacity. This is simply the more economical way to deploy
17 high-capacity facilities, particularly when demand for services is expected to grow. CLECs
18 themselves readily acknowledge that fact. For example, AT&T believes that “[m]ost
19 customer building connections are at the OC-3 level.”¹

20 Second, my potential deployment analysis accounts fully for the capital and operational
21 costs of deploying an OC(n)-level facility, *even if* the revenue on offer from a customer
22 location would more likely approximate that expected from one or two DS3-level loops
23 being utilized as fully as possible. Thus, given that the customer location-specific revenues
24 are what they are (*actual*, not hypothetical, revenues taken from the TNS database), there is
25 no question of my analysis understating costs or overstating the deployment potential. If
26 anything, because the *total* costs of OC(n)-level facilities exceed those of individual DS3-

¹ See, e.g., a document called “Estimating the Cost of Loop Construction,” Exhibit GJB1b attached to Mr. Ball’s rebuttal testimony.

level loops, my analysis may *understate* the number of customer locations to which CLECs could potentially deploy their own high-capacity loops.

Q. ON A RELATED MATTER, DO YOU ACCEPT MR. BALL'S ASSERTION [AT 46 AND ELSEWHERE] THAT YOU RELY ON "HYPOTHETICAL COST" ASSUMPTIONS IN YOUR POTENTIAL DEPLOYMENT ANALYSIS?

A. No. As I explained in my direct testimony, my analysis makes every effort to conform to the nine FCC-specified factors for both loops and transport facilities. Also, as stated above, beyond the investment cost associated with loops and associated equipment, I also include two categories of cost: "COGS and other network cost," and SG&A:

1. "COGS and other network cost" includes all network-related expenses beyond the cost of the loop, including any potential capacity upgrades to the CLEC's existing network that would be necessary to provide retail services to *new* customer locations. For example, this category of cost includes the cost of voice switches (both operating expenses and depreciation), switched access and other interconnection costs, various transport, transit, and peering costs, cost of data network equipment, etc.
2. "SG&A" includes all CLEC expenses, including sales and marketing, billing, customer care, and overhead expenses.

These categories are more than sufficient to account for CLECs' expenses. The basis for these inputs is detailed in the direct testimony of BellSouth witness Dr. Debra Aron in this proceeding (under Mass Market Switching). The expenses in the two categories above, which are based on actual CLEC experiences, amount to more than 50% of retail revenue. In addition, sales and marketing expenses are adjusted for assumed annual rates of churn as well as other gross customer additions.

As I explain in my direct testimony [at 17-18] and, again, later in this testimony, my potential deployment analysis makes a reasonable and good faith effort to comply with the FCC's requirements for such an analysis. For this, where exact cost data either do not exist or are impossible to gather timely through a reasonable expenditure of resources and effort, I rely on reasonable assumptions to produce acceptable estimates of cost. For example, complying *literally* with the FCC's instruction to account for local topographical conditions could have meant spending an enormous amount of time and effort to take note of *every* topographical detail (big or small) in the likely paths between every CLEC fiber

node and the nearest qualifying customer location. It is extremely doubtful that such an exercise—which is what Mr. Ball appears to demand—could have been completed in time for this proceeding or even in the foreseeable future. Therefore, as a reasonable alternative, I have chosen to compensate for not observing every possible topographical peculiarity by conservatively over-estimating distances between fiber nodes and customer locations (using a right-angle distance measurement methodology). If anything, in so doing, I over-estimate the CLEC’s cost and possibly understate the number of buildings to which CLECs could deploy their own loops without impairment. Although Mr. Ball characterizes such a good faith effort as one relying on “hypothetical costs,” it must be remembered that conducting any potential deployment analysis would be impossible within the schedule set for a proceeding of this sort if Mr. Ball’s literal interpretation of the FCC’s instructions were accepted.

Q. MR. BALL INSISTS [AT 50] THAT YOUR POTENTIAL DEPLOYMENT ANALYSIS IS FLAWED BECAUSE IT FAILS TO ACCOUNT FOR THE POSSIBILITY THAT TOTAL END-USER TELECOM SPENDING IN A GIVEN BUILDING COULD SURPASS \$60,000 ANNUALLY WITHOUT REQUIRING THE DEPLOYMENT OF DS3-LEVEL LOOPS. DO YOU AGREE?

A. I take no position on the possibility that, in any given building, the scenario described by Mr. Ball could be true. However, that is completely beside the point. There is nothing magical, nor particularly significant, about the \$60,000 spending level. As explained in my direct testimony [at 6], I selected that spending threshold merely as a device to simplify and make more manageable my search for customer locations to which CLECs may potentially deploy high-capacity loops of their own (by filtering out the sizeable number of locations at which total telecom spending falls below that threshold). It is *not* intended to represent a crossover point between the deployment of high-capacity loops at the DS3 level and the deployment of such loops at a lower capacity level.

My analysis needed to demonstrate whether, given \$60,000 in total annual telecom spending at a customer location and certain assumptions about market shares achievable by CLECs, the deployment of the requisite number of DS3-level high capacity loops *could*

(again, not *would*) be profitable over a 10-year period of operation. That is, my analysis demonstrates that, upon taking into account costs specific to the deployment, use, and maintenance of DS3-level loops, there are at least 48 customer locations in Kentucky with a minimum of \$60,000 in annual total end-user telecom spending that the requisite number of CLECs *could* profitably serve using their own DS3-level loops.

Q. HOW DO YOU RESPOND TO MR. BALL’S SUGGESTION [AT 48] THAT YOUR ANALYSIS SHOULD “ATTEMPT TO LOCATE BUILDINGS SUCH THAT A CLEC’S ANNUALIZED COST OF DEPLOYING LOOPS ... DOES NOT EXCEED \$30,000”?

A. Mr. Ball either misunderstands my potential deployment analysis or mischaracterizes what ought to be done with the approach I have taken. Again, the \$60,000 annual spending threshold per building is merely a filter to keep the analysis at a manageable level, not a statement about the minimum revenue that must be on offer for CLECs to potentially deploy their own high-capacity loops. Given that, by design, my analysis is limited to only those customer locations in Kentucky where at least \$60,000 in annual telecom spending is available, the question my analysis asks is whether the deployment by CLECs of the requisite number of high-capacity loops can be profitable over a 10-year period, *regardless* of the *actual* amount of annual spending in any given building (or the portion of that is assumed to accrue to the CLECs that deploy their own facilities).

Mr. Ball’s suggestion that the maximum annual revenue a CLEC could receive for two DS3s be pegged at \$30,000 makes little sense in this context. My analysis makes no unnecessary (or unsupportable) assumption about how much annual revenue a CLEC deploying its own facilities can expect to make. Although Mr. Ball characterizes my analysis [at 48] as a “misguided approach,” at least it has the virtue of letting actual revenue and cost figures speak for themselves. Mr. Ball would rather *assume* a fixed level of maximum revenue (uniformly across all CLECs and all customer locations) with no empirical justification whatsoever. Furthermore, my analysis does *not* rule out the possibility that a CLEC’s share of the annual revenue on offer at any given customer location may *exceed* \$30,000. Where that happens, the prospects could actually be better

for CLECs to deploy their own high-capacity loop facilities.

Q. MR. BALL ASSERTS [AT 49] THAT YOUR POTENTIAL DEPLOYMENT ANALYSIS HAS FAILED TO FOLLOW THE FCC'S REQUIREMENT (IN THE TRIENNIAL REVIEW ORDER) THAT THE ANALYSIS BE GRANULAR AND APPLIED ON A CUSTOMER-BY-CUSTOMER LOCATION BASIS. DO YOU AGREE?

A. No. It is more than a little ironic that Mr. Ball should make this allegation when it is he that suggests pegging the maximum annual revenue on offer to a CLEC at any customer location at \$30,000, quite regardless of the *actual* telecom spending at that location. In contrast, my potential deployment analysis is as faithful as it is possible to be to the instructions of the *Triennial Review Order*. As exhibit AXB-2 attached to my direct testimony clearly shows, *specific* customer locations are identified as being profitable for the requisite number of CLECs to serve. These locations are actual and readily identifiable by their addresses or latitude-longitude parameters. For *each* such location, my analysis examines the 10-year net present value of CLEC entry, conditional on the nine factors that the FCC requires be taken into account.

As pointed out in my direct testimony [at 17-18], my potential deployment analysis of CLEC high-capacity loops follows the FCC's instructions in various ways. First, I count actual loops deployed to the customer location towards the two carriers required to show competitive supply. That is, if one actual carrier currently serves a location, a finding of non-impairment would only require the demonstration that one more carrier could potentially deploy facilities to that location.

Second, I account fully for the costs of building the network and setting up service to every individual customer location in Kentucky (more precisely, those locations that offer at least \$60,000 in annual telecom revenue). The costs themselves are detailed in the testimony presented by BellSouth witness A. Wayne Gray in this proceeding.

Third, to determine the cost of deploying a fiber cable to a customer location, I assume conservatively that the fiber loop follows a right-angle path from the CLEC's fiber node to the customer location. Because the locations for which potential deployment is viable are

mainly in urban commercial areas with few topography concerns, and since CLECs already have fiber nodes relatively close to these locations, the right-angle methodology is a conservative way to account for local topography. That is because this methodology most likely over-estimates, rather than under-estimates, the distances over which CLECs have to deploy their loops and, hence, under-estimates their costs of deployment as well. In turn, my analysis likely under-estimates the number of customer locations that CLECs could serve profitably out of their own loops.

Fourth, although Mr. Ball implies [at 50] that the availability of rights-of-way is absent from my analysis, I take costs associated with rights-of-way into account explicitly, along the lines depicted by Mr. Gray's direct testimony.

Fifth, although the FCC instructs that building access restrictions and costs be taken into account (an issue about which Mr. Ball expresses concern, at 50), I understand that few building access restrictions or costs constitute a material barrier to loop deployment in BellSouth's service territory in Kentucky. It is also my understanding that building owners in BellSouth's service territory typically do not charge access fees and, in the limited situations in which they do, those costs are passed directly on to end-user customers.

Finally, although the *Triennial Review Order* provides the flexibility to consider alternative transmission technologies that may be more cost-effective for particular customer locations, my analysis develops costs for a fiber-optics network architecture similar to the one BellSouth uses when deploying loops to high-capacity buildings.

Q. PLEASE RESPOND TO MR. BALL CONCERN [AT 52] THAT CUSTOMERS AT LOCATIONS TO WHICH CLECS HAVE NOT DEPLOYED LOOP FACILITIES MAY BE TIED UP IN MULTI-YEAR CONTRACTS WITH BELL SOUTH.

A. Mr. Ball's concern in this respect is almost certainly exaggerated. While contracts are a standard business arrangement that minimizes risk and raises the certainty of financial commitments of buyers and sellers alike, there is no reason to believe—and neither Mr. Ball nor any of the other parties provides any evidence—that BellSouth has employed such contracts as an entry deterrent. Contracts are not of indefinite or unduly long durations, and they probably do not run concurrently for every business customer in a building. That

1 is, some of the customers in a building may be in contracts that are likely to expire
2 imminently or in the near term, and opportunities for CLEC entry into the building may
3 certainly exist for those customers. Moreover, when CLECs signal an interest in bidding
4 for a customer's *future* business, that customer may itself be reluctant to sign long-term
5 contracts that would effectively preclude it from seeking alternatives to an incumbent
6 carrier like BellSouth. Competitive pressures may increase the prospects for a variety of
7 contracts, including various shorter-term contracts designed to entice customers away from
8 the incumbent by offering specific advantages and incentives.

9 **Q. MR. BALL ALSO CONTENDS [AT 43] THAT THE POTENTIAL DEPLOYMENT**
10 **TEST MUST DEMONSTRATE THAT THE REVENUE AVAILABLE TO A CLEC**
11 **AT A PARTICULAR LOCATION MUST BE SUFFICIENT TO “OVERCOME**
12 **THE FIXED AND SUNK COSTS OF CONSTRUCTING A FACILITY AT THAT**
13 **LOCATION.” DOES YOUR ANALYSIS MAKE THAT DEMONSTRATION?**

14 A. Yes. In fact, my analysis is even more comprehensive than that suggested by Mr. Ball.
15 The revenues available to CLECs must be shown to compensate them not only for their
16 fixed and sunk costs but also for all of the variable operational costs associated with a 10-
17 year period of operation. The revenue assumptions are developed carefully by reference to
18 expert reports on actual CLEC experiences in the marketplace. Again, because the burden
19 carried by the potential deployment test is only to demonstrate that the CLEC *could* earn
20 enough revenues to recover its various costs, it is not necessary to prove somehow that
21 actual CLEC deployments would occur. My analysis and the assumptions on which it rests
22 are consistent with that predicate.

23 **Q. HOW DO YOU RECONCILE YOUR ASSUMPTION THAT TWO CLECS CAN**
24 **EACH GAIN A 15% REVENUE SHARE IN A BUILDING WITH THE**
25 **POSSIBILITY (CITED BY MR. BALL) THAT CUSTOMERS MAY BE TIED UP**
26 **IN LONG-TERM CONTRACTS WITH THEIR CURRENT SUPPLIERS?**

27 A. This is a reasonable assumption because, when selecting buildings from the TNS Telecoms
28 database, all the buildings with fewer than three tenants are first removed from

consideration, leaving only buildings with a large enough pool of potential customers to be targeted by CLECs. Also, customers in the enterprise market typically have multiple telecommunications suppliers in order to negotiate better contracts and to obtain redundancy to protect against network failures. This multiple supplier environment, together with the filter on number of tenants per building, assures that opportunities exist for CLECs to gain market share in a building.

Q. PLEASE COMMENT ON MR. BALL'S CRITICISM [AT 56-57] OF YOUR CHOICE OF A 10-YEAR PERIOD OF OPERATION FOR THE POTENTIAL DEPLOYMENT ANALYSIS.

A. Mr. Ball claims:

Typically, customers are unwilling to commit to contracts greater than 5 years, especially as prices of telecommunications services tend to decline over time due to competition and technological innovation.

Hence, Mr. Ball infers that the assumption of a 10-year recovery period is inappropriate. This confuses two completely separate issues. My analysis makes no assumption regarding the length of time a CLEC would be able to serve a given customer. Rather, it only assumes that the CLEC evaluates the net present value of its entry into a building occupied by multiple business customers over a 10-year period, a standard time period in financial analysis that is used, e.g., in the AT&T study (that Mr. Ball attaches to his rebuttal testimony as Exhibits GJB1, GJB1a, and GJB1b) which amortizes costs for digital circuit equipment over 10.24 years. Over this period, the CLEC may end up serving different customers or even several customers at a time. All that matters is that, on average, it be able to secure at least 15% of the revenue available from the building as a whole.

Q. PLEASE COMMENT ON MR. BALL'S CRITICISM [AT 57] OF YOUR CHOICE OF A DISCOUNT RATE OF "ONLY" 10.8% FOR THE POTENTIAL DEPLOYMENT ANALYSIS.

A. Mr. Ball claims [at 57] that the 10.83% discount rate used in my potential deployment analysis is "actually significantly lower than that proposed by BellSouth for itself in [the recent Florida UNE] proceedings." He then goes on to state [at 58] that BellSouth witness

1 Dr. Randall Billingsley had testified in Florida Docket No. 990649-TP that “BellSouth’s
2 actual cost of capital ranges from 14.61% to 14.91%.” Based on these, Mr. Ball criticizes
3 my use of 10.83% for the appropriate discount rate as being too low. This criticism is
4 invalid for the following reasons.

5 First, Mr. Ball should refer to Dr. Billingsley’s testimony on the cost of capital for *a*
6 *representative CLEC* in the *present* proceeding in Kentucky (the Mass Market Switching
7 phase), rather than to a Florida proceeding from several years ago. In his direct testimony
8 of February 11, 2004 in this proceeding, Dr. Billingsley testified [at 4-5]:

9 The average cost of equity ... is ... 17.55%. ... The average cost of debt ... is
10 9.92%. ... The average capital structure is ... 58.50% debt and 41.50% equity.
11 Combining this average capital structure with the ... average costs of debt and
12 equity produces an average pre-tax overall cost of capital for the *representative*
13 *CLEC* of 13.09%. [emphasis added]

14 Second, Dr. Billingsley also noted [at 5] that “this overall cost of capital, *after being*
15 *adjusted to be on an after-tax basis*, should be used to produce the NPVs ...” [emphasis
16 added] In other words, the 10.83% discount rate that Dr. Ball finds to be too low is really
17 the *after-tax* cost of capital (marked down by the adjustment from the pre-tax rate of
18 13.09%) which, Dr. Billingsley (as the cost of capital expert) testified, is the appropriate
19 discount rate to use in net present value calculations. This principle is widely known and
20 implemented in project finance and selection decisions (such as those employing the net
21 present value method).²

22 Finally, Mr. Ball cites approvingly the AT&T study of the cost of network construction
23 (attached as exhibits to his rebuttal testimony). This study itself undercuts his criticism of
24 my choice of the discount factor. Mr. Ball’s Exhibit GJB1b (a document titled
25 “Attachment B: Estimating the Cost of Loop Construction”) reports the AT&T study’s
26 calculations in which the actual *pre-tax* cost of money (equivalent to the weighted average

² See, e.g., the standard text by Richard E. Brealey and Stewart C. Myers, *Principles of Corporate Finance*, 7th edition, New York: McGraw Hill, 2003. See especially Chapter 19, in which it is explained that, because interest payments on debt are tax-deductible, the appropriate discount rate to use in net present value calculations is not the pre-tax weighted average cost of capital but rather that cost of capital in which the cost of debt portion is first adjusted by the marginal corporate tax rate.

cost of capital) is 17.09% (see footnote 5 of this document). The same study employs a marginal corporate income tax rate of 39.25%; this implies that the *after-tax* weighted average cost of capital ought to be $0.1709 \times (1 - 0.3925) = 0.1038$ or 10.38%.³ This is very much in the vicinity of (and, in fact, even lower than) the 10.83% recommended by Dr. Billingsley and adopted by BellSouth witnesses in potential deployment analyses in both the Mass Market Switching and High Capacity Loops and Transport phases of this proceeding. Parenthetically, I note that Mr. Ball believes that the discount factor ought to be higher for CLECs than for BellSouth because CLEC investments are “perceived” to be relatively more risky. This is a questionable assumption because incumbents like BellSouth face significant stranding and competitive risks that CLECs do not. Consider, e.g., that those incumbent carriers (1) are regulated, (2) have to—under the carrier of last resort obligation—maintain ubiquitous networks and provide service upon demand anywhere within their service territories, and (3) are often obliged to charge heavily averaged retail prices that bear little connection to underlying costs. In these circumstances, Mr. Ball’s assertion that the discount rate for CLECs should be higher than that for BellSouth cannot be entertained seriously.

Q. MR. BALL SUGGESTS [AT 52] THAT YOUR POTENTIAL DEPLOYMENT ANALYSIS OF LOOPS IS DEFICIENT IN THAT IT DOES NOT REFLECT A “BUY OR BUILD” CHOICE FOR THE CLEC. DO YOU AGREE?

A. No. Loops deployed to business customer locations in buildings are part of a retail facilities-based local exchange service, the revenue from which accrues in the form of spending on that service by end-user business customers. With such a retail service, no “build or buy” decision is involved. That is, I do *not* consider the circumstance of a CLEC that is currently running a special access line obtained from BellSouth into a customer location and has the option to replace that line with its own facilities. Rather, my analysis focuses on buildings that are presently not served *by any means* by the CLEC and asks

³ This uses the formula for calculating the cost of capital in footnote 5 of the AT&T study cited.

1 under what revenue and cost circumstances would up to two CLECs find it profitable to
2 deploy their own loops into those buildings.

3 On the other hand, a “buy or build” analysis may be appropriate when the service in
4 question is a *wholesale* service, where the CLEC has a choice of deploying either its own
5 facilities or purchasing/leasing them from the ILEC. The “revenue” in this instance is the
6 cost saved from the forgone option. My potential deployment analysis of transport
7 facilities (as detailed in my direct testimony) is based on the logic of the “buy or build”
8 choice, although that analysis finds that a no transport route in Kentucky could be served
9 by a CLEC’s own transport facilities without impairment.

10 **Q. MR. BALL CLAIMS [AT 58] THAT THE AT&T STUDY ATTACHED TO HIS**
11 **REBUTTAL TESTIMONY “PRESENTS A MORE THOROUGH AND REALISTIC**
12 **ANALYSIS OF THE COSTS ... AND THE REVENUES THAT WOULD BE**
13 **CONSIDERED BY A CLEC IN DETERMINING WHETHER TO EXTEND [ITS]**
14 **NETWORK INTO A NEW BUILDING.” PLEASE COMMENT.**

15 A. The AT&T study is irrelevant for the potential deployment test as defined in the *Triennial*
16 *Review Order*. First, almost everything in that study (including distances and prices of
17 wholesale alternatives) appears to reflect national averages for AT&T’s network, rather
18 than the specific conditions that prevail for the buildings in Kentucky in my analysis.
19 Second, the AT&T study is a “buy or build” analysis for loops and, therefore, not suitable
20 for the potential deployment test required by the *Triennial Review Order*. As explained
21 above, while it may be more profitable to purchase UNEs or special access service from the
22 ILEC, that does not mean that a CLEC could not profitably deploy its own facilities to a
23 building. In summary, even if the inputs in the AT&T study are accurate (a matter I have
24 not investigated), the study itself is non-granular (a matter on which Mr. Ball is
25 understandably silent), contrary to the FCC’s requirements. The AT&T study does not
26 address whether a CLEC could profitably deploy its own facilities to provide retail services
27 at various customer locations. It is, therefore, irrelevant to the purposes of the building-
28 specific analysis defined by the FCC in the *Triennial Review Order*.

1 **Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

2 A. Yes.