STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Illinois Bell Telephone Company	)	
	)	
Filing to increase Unbundled Loop	)	02-0864
and Nonrecurring Rates	)	

INITIAL BRIEF OF SBC ILLINOIS

PUBLIC VERSION

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April 5, 2004

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INITIAL BRIEF OF SBC ILLINOIS

Illinois Bell Telephone Company ("SBC Illinois" or the "Company"), by its attorneys, hereby submits its Initial Brief.

I. Introduction and Summary of Position

A. Introduction

In the original 1998 TELRIC proceeding, this Commission, along with SBC Illinois, the Commission Staff and other parties, used their best efforts to develop UNE rates that were consistent with the TELRIC rules that had just been adopted by the Federal Communications Commission ("FCC") and that would be fair to both SBC Illinois and its competitors.[1] However, this Commission was operating in uncharted waters, with little concrete direction from the FCC or any other source. Six years have passed since then. This Commission can now assess those rates, and the methodologies used to develop them, in light of subsequent FCC orders clarifying its original rules, the collective experience of other states and the real world impact of both the specific rates approved in Illinois and the TELRIC regime in general on the business behavior of the Competitive Local Exchange Carriers ("CLECs"). The critical task in this proceeding is to adopt UNE rates that are reasonable, that will allow SBC Illinois to recover its costs and that will

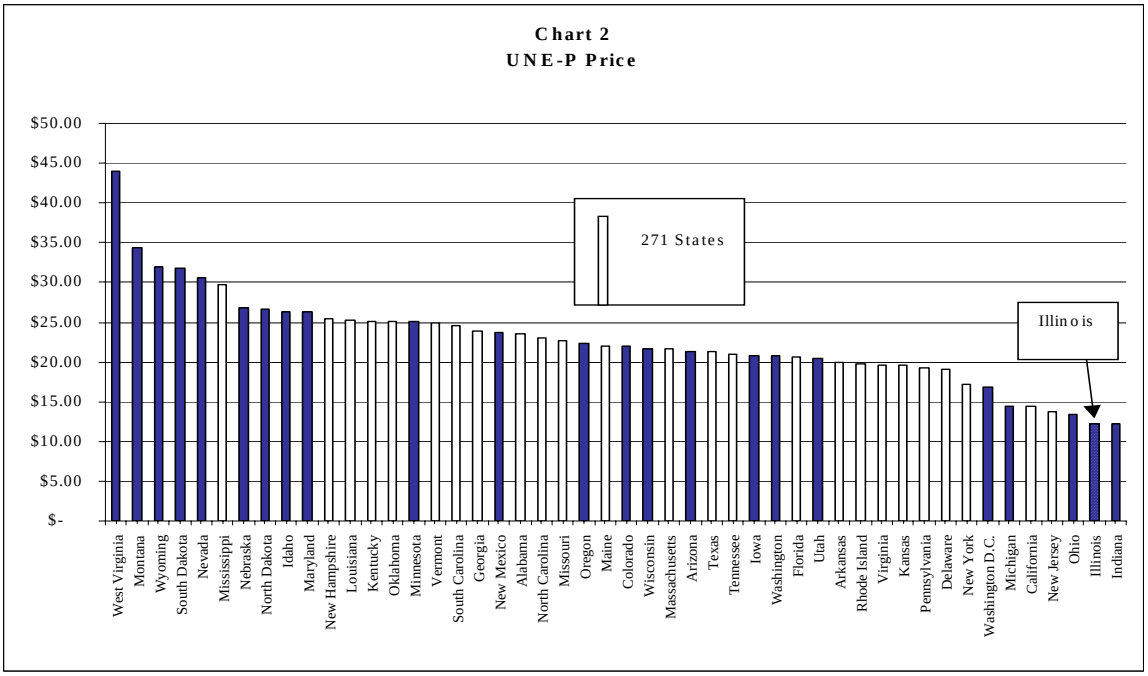
[1] *February 17, 1998 Second Interim Order*, Docket Nos. 96-0486/0569 ("1998 TELRIC Order"); *October 16, 2001 Order*, Docket No. 98-0396 ("TELRIC Compliance Order").

provide the competitive incentives intended by Congress when it enacted the Telecommunications Act of 1996 ("1996 Act").

The central goals of the 1996 Act are, and always were, to promote efficient competition, investment and innovation in all telecommunications markets. H. Rep No. 104-458 at 116 (1996) (Preamble to 1996 Act). Thus, the 1996 Act is a two-way street that requires a balancing of all relevant interests; it is not just a means to jump-start CLEC entry into the local exchange market. For example, the D.C. Circuit Court of Appeals vacated the FCC's second set of unbundling rules in 2002 for adopting an "open ended" view that imposing "more [burdens on the incumbent] is better," finding that such a one-sided approach ignored the limits in the 1996 Act and the goal of promoting facilities-based investment and innovation. *United States Telecom Ass'n v. FCC*, 290 F.3d 415, 422-29 (D.C. Cir. 2002) ("*USTA*"). In its recent TELRIC Notice of Proposed Rulemaking[2], the FCC recognized that UNE prices must be set at levels that are "conducive to efficient facilities investment" and send proper pricing signals to "create incentives" for investment by *all* carriers. *TELRIC NPRM*, ¶ 3. Although UNE prices that are too high may lead to unnecessary overbuilding of facilities, UNE prices that are too low may unduly discourage investment and cause CLECs to rely on UNEs even when the more efficient course would be to build their own facilities. *Id.*, ¶ 2. UNE prices that are too low also will discourage incumbent LECs from investing in their own network, because such prices prevent them from recovering their costs. *Id.* As the FCC recently warned, "understating [the incumbent's] forward-looking costs" in setting TELRIC-based prices would "distort [the FCC's] intended pricing signals" and thereby "thwart one of the central purposes of the Act: the promotion of facilities-based competition." *Id.*, ¶ 3.

[2] Notice of Proposed Rulemaking, *Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements*, WC Docket No. 03-173, FCC 03-224 (rel. Sept. 15, 2003) ("*TELRIC NPRM*").

It is undisputed that SBC Illinois' existing UNE loop and UNE-P prices are among the lowest in the country. These low prices were the product of what are now exceedingly old costs (the 1998 rates were themselves based on even older 1996 vintage data), cost models that were missing cost components, and cost input assumptions that were rooted in past regulatory practices and policies that did not take into account the marketplace changes that would result from implementing the 1996 Act. In fact, as the following chart demonstrates, the SBC Midwest states generally implemented the FCC's TELRIC standard differently than did the rest of the country:



Anna-Maria Kovacs et al., "The Status of 271 and UNE-Platform in the Regional Bells' Territories," Commerce Capital Markets Equity Research, November 8, 2002.
See www.fcc.gov/Bureaus/Common_Carrier/in-region_applications for FCC 271 approval listings as of December 19, 2002.

The SBC Midwest states are in the process of correcting this problem on a state-by-state basis. The Indiana Utility Regulatory Commission approved significant increases in SBC Indiana's UNE rates in an order dated January 5, 2004,[3] and the Public Utilities Commission of Ohio

[3] January 5, 2004 Order, Cause No. 42393 (Indiana Utility Regulatory Commission) ("*Indiana UNE Order*").

approved interim UNE rate increases pending completion of SBC Ohio's TELRIC proceeding on March 11, 2004.[4]

The UNE prices and TELRIC methodologies proposed by the parties in this proceeding are widely divergent. The following chart compares the UNE loop prices proposed by SBC Illinois, the Commission Staff, the Attorney General[5], the Joint CLECs and AT&T[6]:

	Current	SBC	Staff	AG	Jt CLECs	AT&T
Price per Loop	$9.44	$19.00	$9.82	$8.81	$7.64	$3.83
Investment per Loop		**[*********]**				**[**********]**
Operating Expense per Loop		**[*********]**				**[*********]**

When TELRIC cost estimates are this far apart, it is a sure indication that the TELRIC standards themselves are ill-defined and have become exactly the kind of hypothetical "black box" which led the FCC to issue its *TELRIC NPRM*. *See TELRIC NPRM*, ¶ 7. Therefore, it is essential that the Commission ground its assessment of the parties' proposals in objective, real world data so as to avoid setting rates based on costs that are pure fantasy.

SBC Illinois' UNE rate proposals are based on a TELRIC-compliant, forward-looking view of the costs to construct and operate a wireline telephone network. These projections reflect actual engineering practices and the manner in which a forward-looking network actually

[3] March 11, 2004 Finding and Order, Case No. 02-1280-TP-UNC (Public Utilities Commission of Ohio).

[5] The Attorney General essentially adopted Staff's proposed rates, while making certain additional adjustments which will be discussed in more detail *infra*. The Citizens Utility Board did not make specific rate proposals.

[6] Investment and operating expenses per loop are from SBC Ill. Ex. 20.0 (Sneed Rebuttal) at 5. Statewide average prices were computed using the following weightings: Zone A - 5.4% ; Zone B - 34.3% ; Zone C - 60.3%. Sources for the proposed prices are: SBC Ill. Ex. 4.1 (Silver Rebuttal), Schedule MDS-R2; Staff Ex. 22.0 (Staranczak Rebuttal) Schedule 6 (Revised); AG Ex. 1.3 (Regan Surrebuttal), Schedule WDA-RJ1; the Joint CLECs' rate was computed using TELRICs from SBC Illinois Cross Ex. 53P and the Joint CLECs' proposed Shared and Common Factor from AT&T/Joint CLEC Ex. 1.0 (Starkey-Fisher Direct) Attachment 5; AT&T Ex. 1.0 (Selwyn Direct), Attachment LLS-3.

could and would be built with currently available, most efficient technology. As the 7th Circuit Court of Appeals recognized, the real world is the appropriate starting place in determining TELRIC costs:

> The district judge also thought that any use of actual fill factors (or asset lives matching the company's financial reports) violates federal law because TELRIC is forward looking, while depreciation looks to the past and fill factors to the present. True enough, TELRIC calls for a projection, but it does not demand that every ingredient be hypothetical. How could one know the long-run costs of the most efficient technology without understanding the costs of today's most efficient producers? *AT&T Communications of Illinois, Inc. v. Illinois Bell Telephone Co.*, 349 F.3d 402, 410-11 (7th Cir. 2003) ("*AT&T Communications*").

SBC Illinois' TELRIC costs are forward-looking, but do retain a rational relationship to its actual investments and operating expenses. For example, the investment costs produced by SBC Illinois' cost models are **[*********]** lower than the costs on its books of account. In contrast, AT&T's proposed costs are pure fiction. For example, AT&T's proposed investment cost is **[*********]** lower than SBC Illinois' actual costs. No carrier could construct, operate and maintain a loop for $3.83 per month (which is what AT&T proposes). If loops could be built for such a small amount of money, CLECs would be tearing up the streets all across Illinois to install their own networks at half the cost than the UNE loop rates they are currently paying – and they are not.

SBC Illinois recognizes that there can be legitimate differences in views over what constitutes a forward-looking cost and that any study methodology can be improved based on inputs from other parties. Accordingly, SBC Illinois accepted cost study adjustments proposed by the parties that represented valid refinements over its existing methods and flowed those adjustments through to the rates shown in the chart above. The remaining adjustments proposed by the parties, however, are based on theoretical views of TELRIC requirements that are not supported by current FCC policies and do not constitute a realistic view of the costs of a

forward-looking network. In short, SBC Illinois' proposed UNE rates are valid representations of the costs an efficient carrier would incur to provide UNEs on a going-forward basis and are fully consistent with TELRIC.

Staff's proposed UNE loop rates would result in a *de minimis* increase over the rates approved in 1998. Although Staff was initially critical of SBC Illinois' cost study methodologies, these criticisms ultimately reduced to a discrete number of adjustments, many of which SBC Illinois accepted. The major remaining areas of difference between SBC Illinois and Staff involve cost of capital; depreciation; (to a lesser degree) fill factors (*i.e.*, the amount of spare capacity assumed in SBC Illinois' forward-looking network); and certain key factors in the loop recurring study (*e.g.*, the copper/fiber cross-over point and the cable installation factor). The relative impact of Staff's proposals with respect to these issues on their proposed UNE loop rates is shown in SBC Ill. Ex. 1.2 (Panfil Surrebuttal), Sch. ELP-S2. Staff's cost of capital and depreciation proposals are holdovers from how they would approach these issues in a traditional rate case involving a traditional public utility. For example, Staff's cost of capital does not take into account the FCC's direction in the *Triennial Review Order* to assume a competitive marketplace, with all the risk that implies. Similarly, Staff's depreciation rates do not reflect the "accelerated" methods endorsed by the FCC, that would fully account for technological and marketplace changes that are occurring at an ever-faster pace. [7] Instead, Staff relies on the same *1995* vintage depreciation rates that the Commission used in the 1998 TELRIC proceeding – and they were old *then*. No one could contend with a straight face that the world today is unchanged from 1995, the year *before* the Telecommunications Act was signed into law. Finally, although

[7] Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket Nos. 01-338 et al., FCC 03-36 (rel. Aug. 21, 2003) ("*Triennial Review Order*") at ¶¶ 680-81, 685, 690.

Staff's fill proposal appropriately starts with SBC Illinois' actual network utilization rates, Staff then departs from those premises by making adjustments that do not fully reflect the realities of planning and engineering a network.

The Joint CLECs urge the Commission to ignore everything that has happened over the last six years. They contend that the Commission should leave unchanged the TELRIC costs it approved in 1998 and simply update (and lower) the shared and common factor. This approach is simply not viable. *First*, it is premised on the assumption that the cost models used in the 1998 TELRIC proceeding were perfect. They demonstrably were *not*. *Second*, it is premised on the assumption that costs have not changed since 1998 (actually 1996). They demonstrably *have*. *Third*, it is premised on the assumption that one component of the TELRIC cost equation (*i.e.*, the shared and common factor) can be updated, while leaving the TELRIC base costs to which it is applied frozen in amber. This would constitute an impermissible mixing and matching of cost components. *Last*, their proposal flies directly in the face of the 7th Circuit's admonition that *all* costs underlying SBC Illinois' UNE rates must be updated, not just some of them:

> The ICC took as set in stone all ingredients of ratemaking from 1997, and it adjusted the rate only by changing fill factors and asset lives. That approach conflicts with the 1996 Act and the TELRIC methodology and is therefore preempted. *See Wisconsin Bell, Inc. v. Bie*, 340 F.3d 441 (77th Cir. 2003). Technology has changed since 1997; it cannot be that *every* rate-influencing consideration (other than fill factor and asset lives) has remained constant over the last six years. A rate for unbundling network elements generated by combining some factors that are six years out of date with two other factors that are not forward-looking cannot possibly satisfy the requirements of federal law. . .
>
> The ICC must attempt to produce a rate that complies with TELRIC as of 2003 – and if doing this entails use of SBC's current fill factors, the ICC is free to use them. And it must do this speedily. A rate that is long out of date, as this 1997 rate is, frustrates the goals of TELRIC every bit as much as does a rate generated under the flawed state legislation. SBC and its rivals alike are entitled to an

> updated rate that comports with federal law. *AT&T Communications*, 349 F.3d at 411.[8]

AT&T is the party most out-of-touch with reality and basic fairness. AT&T proposes use of its own unique "TELRIC" methodology to produce exactly the kind of excessively hypothetical results that prompted the FCC to issue the *TELRIC NPRM*:

> Part of the difficulty that states and interested parties have encountered springs from the excessively hypothetical nature of the TELRIC inquiry. Because of the general nature of our rules, state commissions have wide latitude in applying the "most efficient technology" standard under the current rules. This creates the potential for a TELRIC proceeding to become a "black box" from which a variety of possible rates may emerge. In the absence of more specific guidance, this can make network modeling opaque and make it difficult to understand how actual UNE rates are derived. The lack of predictability in UNE rates is difficult to reconcile with our desire that UNE prices send correct economic signals. *TELRIC NPRM*, ¶ 7.

It is simply not credible to suggest that SBC Illinois could rebuild its entire wireline network for **[**********]** per loop, and then operate it for **[**********]** per loop, per month. No competitor in the real world invests so little to serve their customers – not long distance companies, not wireless carriers, not cable companies and not the CLECs themselves. Given the patent unreasonableness of AT&T's end result, its proposed adjustments should be subjected to a high level of skepticism and scrutiny.

Finally, some parties claim that any changes to SBC Illinois's UNE rates will sound the death knell for competition in Illinois. This is nonsensical. What they fail to mention is that SBC Illinois' existing UNE-P rates afford the CLECs the highest profit margins *in the country*. Something is more than a little awry when SBC Illinois loses $8 in out-of-pocket costs every month on every UNE loop (and almost $18 on every UNE-P) it provides to the CLECs, while

[8] Notably, one of the Joint CLECs (Z-Tel) has publicly proposed a nationwide, flat rate for UNE-P service of $20. This rate is significantly higher than what the Joint CLECs are proposing in this proceeding. *See* "Z-Tel narrows gap with proposal for $20 UNE-P rate; MCI asks FCC to use mediators," TR Daily (April 2, 2004).

AT&T, by its own admission, enjoys a *56%* profit margin. UNE loop costs can be increased substantially, while still leaving the CLECs ample margin to cover their retailing costs and make a profit. Moreover, increases in the CLECs' retail rates to their customers need not, and should not, result from the proposed UNE rate changes. These same CLECs today offer business and residential service in many different states at prices similar to their offerings in Illinois, even though the underlying UNE loop and UNE-P prices in those states are significantly higher. Moreover, current retail prices in effect in Illinois today generate sufficient revenues for CLECs to compete at the UNE prices proposed by SBC Illinois, in both the residential and business markets, and in each UNE rate zone. There is no reason – other than politics – for the CLECs' prices to Illinois consumers to change if SBC Illinois' UNE rate proposals are approved by the Commission.

B. Summary Of Position

1. The TELRIC Standard Generally

The FCC's TELRIC pricing methodology requires that UNE prices be based on the incumbent's costs of providing service over a "forward-looking" network. *See* 47 C.F.R. § 51.505. A forward-looking network is one that takes as a given the actual locations of the incumbent LEC's wire centers and the actual locations of its customers, and then is presumed to be constructed with the most efficient technology that is currently commercially available for purchase. *Id.* § 51.505(b)(1); *First Report and Order*, ¶ 685.

The evidence show that the UNE cost studies presented by SBC Illinois in this case comply with this standard because they incorporate forward-looking technologies and forward-looking material costs. For example, SBC Illinois' UNE loop cost study for 2-wire analog loops is based on the forward-looking assumption that loops longer than a certain point (the copper-fiber crossover point) will be provisioned over fiber feeder with a digital loop carrier ("DLC")

system, even though SBC Illinois' current network includes loops longer than the assumed cross-over point that are not provisioned over fiber feeder. As result, the study captures productivity gains and maintenance efficiencies associated with extensive placement of fiber cable beyond what exists in the current loop network. In addition, the study assumes the use of forward-looking Litespan DLC technology, even though the DLC systems that currently exist in SBC Illinois' network are not 100% Litespan.

The CLECs' arguments that SBC Illinois' cost studies are not TELRIC-compliant are based on the assumption that TELRIC prohibits any reference to actual costs and existing network characteristics. The CLECs' interpretation of TELRIC lead them to make proposals that are based upon the assumption of a purely hypothetical network that could not be built, and on data which lack evidentiary support. For example, AT&T proposes an arbitrary and unsupported across-the-board reduction in cable lengths despite the fact that the existing cable lengths included in SBC Illinois' study reflect the efficient placement of cable given existing wire centers, customer locations and rights-of-way. As discussed in Section III.C, the CLECs' position is directly contrary to the FCC's own interpretation of TELRIC, which recognizes that a forward-looking network must look forward from somewhere, and the most logical and practical place to start is SBC Illinois' current costs and the "real-world attributes" of its existing network, which reflects the application of sound engineering and network planning principles.

2. Fill Factors

Fill factors in TELRIC studies determine how (and if) the cost of spare capacity deployed in the network to serve future demand will be recovered. Use of fill factors that reflect actual network utilization allow full recovery of the carrier's costs; use of fill factors that assume maximum utilization effectively disallows those costs.

The FCC's Section 271 decisions, the *TELRIC NPRM* and the 7th Circuit's opinion in *AT&T Communications* make clear that use of actual fill factors is fully consistent with the FCC's TELRIC rules.[9] As the court explained, "[i]f SBC's current fill factors are the efficient ones (or are within the range that a student of the subject might think a reasonable estimate of that figure), then they are exactly the figures to use." *AT&T Communications*, 349 F.3d at 411. Indeed, the FCC is considering making the use of actual fills *mandatory*. *TELRIC NPRM*, ¶ 74. The fill factors used in SBC Illinois's TELRIC studies reflect the engineering reality that any network – existing or forward-looking – will have substantial amounts of spare capacity and the fact that SBC Illinois' network has been efficiently engineered over the years. Therefore, its actual fill factors "are exactly the figures to use."

Staff agreed conceptually that SBC Illinois' actual fill rates were a reasonable starting place for the analysis. However, Staff then adjusted those fill rates upwards to ostensibly make them more "efficient" – specifically to remove the effect of "innocent mistakes" that SBC Illinois may have made in its planning decisions over the years because the future is always unpredictable. This adjustment is not supported by a reasonable interpretation of the FCC's TELRIC rules: the FCC does not require that the ILECs be omniscient, just efficient. Moreover, it is too high by any standard and would result in prudently incurred network costs going unrecovered in perpetuity.

The CLECs continue to insist on use of fill factors that no company could ever achieve in any world, real or forward-looking. In effect, the CLECs argue that TELRIC studies should assume that SBC Illinois' network has been reengineered to perfectly match the level of demand presented by its customers today, with no spare capacity for future needs. That is not how *any*

[9] *TELRIC NPRM*, ¶ 74; see *Georgia 271 Order*, 17 FCC Rcd. 9018, ¶¶ 68-69 (rel. May 15, 2002); *AT&T Communications*, 349 F.3d at 411.

network is designed. Efficient telephone companies install ample capacity for future use because: (1) it is far more cost effective to install capacity for the longer term, than to dig up streets and yards every time new service is required; (2) spare capacity is needed to meet regulatory quality of service standards; and (3) the fact that cable facilities are manufactured in fixed cable sizes makes it impossible to exactly match cable facilities to demand levels. Nothing in the FCC's TELRIC rules *permits* an approach that ignores future demand, service quality standards and cable sizing constraints, much less *requires* it, as the CLECs claim. [10]

3. Depreciation

The dispute here is whether the Commission should use depreciation lives based on what SBC Illinois uses for financial reporting purposes (which follow Generally Accepted Accounting Principles) or use the depreciation lives that the FCC prescribed in the mid-1990s for different, regulatory purposes. The Commission adopted the FCC-prescribed lives in 1998, at a time when that was a "safe harbor" designated by the FCC for Commissions faced with implementing TELRIC for the very first time. Of course, things have changed much since then. First, the FCC-prescribed lives are no longer a default choice, as the FCC made clear in its brief to the Supreme Court in *Verizon*. Second, the FCC and the Seventh Circuit have expressly declared that financial reporting lives are consistent with TELRIC. *Triennial Review Order*, ¶ 688; *AT&T Communications*, 349 F.3d at 411. Third, the Commission now must set depreciation lives by assuming a fully competitive market in which the ILEC faces significant facilities-based competition, which shortens the useful economic life of equipment. *Id.*, ¶ 689. Fourth, as SBC Illinois witness Dr. Vanston explained, technological change continues at a rapid pace, with the industry undergoing a dramatic shift to fiber and other facilities geared toward high-speed data

[10] *First Report and Order*, ¶ 682; *TELRIC NPRM*, ¶ 73.

transmissions. These factors and others, such as the general need to increase SBC Illinois' loop prices to be more in line with the rest of the nation, all support adoption of financial reporting lives, which far more accurately reflect the true decline in economic value of assets in the world assumed by TELRIC.

Staff and CLEC propose to continue using the FCC-prescribed depreciation lives. Those lives, however, are now long outdated. Moreover, they do not reflect the more rapid decline in the economic value of assets in the fully competitive market that must be assumed under TELRIC, nor do they account for the effects of ongoing and rapid technological change, as demonstrated in Dr. Vanston's testimony. The time has come to adopt a more market-based, economically realistic view of depreciation, as reflected in the depreciation lives that SBC uses for financial reporting purposes.

4. Cost Of Capital

The *Triennial Review Order* made clear for the first time that the cost of capital used to set TELRIC-based prices must reflect all the risk of the market TELRIC assumes, which is a fully competitive market with ubiquitous facilities-based competition. *Id*., ¶ 680-81. That presumption was not clearly required by the FCC's original TELRIC rules, and the Commission did not apply that assumption when establishing the current cost of capital in 1998. Because increased risk means an increased cost of capital, the *Triennial Review Order* (and other factors) require that the cost of capital be increased. SBC Illinois proposes a cost of capital that is in line with those recently adopted by the FCC's Wireline Competition Bureau and the Pennsylvania PUC and with those recommended by leading investment experts such as Moody's, Value Line, Ibbotson Associates, and others – sources that *all* of the cost of capital witnesses view as authoritative.

Staff and the CLECs, however, irrationally propose costs of capital *lower* than the Commission adopted in 1998, when local competition was in its infancy. Staff, for example, outright defies the *Triennial Review Order* by refusing to account for the risks of the fully competitive market that TELRIC assumes. And both Staff and the CLECs rely on concepts (such as using book values rather than market values to establish a capital structure) that are mere relics from the old way of setting the cost of capital for traditional rate-regulated utilities. Reliance on such concepts is inconsistent with Section 251(d)(2) of the Act (which eschews rate-of-return concepts) and with the FCC's TELRIC rules (which call for a departure from historical ratemaking practice).

The unreasonableness of the Staff and CLEC proposals is illustrated in many ways. For example, although Staff's proposed cost of common equity is far more reasonable than that proposed by the CLECs, Staff would have SBC Illinois adopt a completely hypothetical capital structure that includes a percentage of common equity that is more than 30 percentage points lower than the market-based equity ratio that the FCC requires (51% vs. the 86% that the market demands). Adopting such a debt-heavy capital structure in the face of a highly competitive, risky market would cause SBC's investment rating to drop from single-A to triple-B, the lowest investment grade rating there is and the equivalent of a junk bond. The CLECs, in turn, propose a cost of capital that would have SBC Illinois paying investors less than the return paid by heavily regulated traditional utilities such as gas and electric companies, despite the significantly greater risks faced by incumbent LECs. Investors are well aware of those higher risks and thus demand higher returns from ILECs than from traditional utilities. Staff's and the CLECs' proposals defy the law, common sense, and the numerous objective benchmarks for an appropriate cost of capital in a competitive market like that which *must* be assumed under

TELRIC. Accordingly, the Commission should approve SBC Illinois' conservative 12.19% cost of capital, which is very close to the 11.25% benchmark used by the FCC and consistent with general market returns for the past several decades.

5. Loop Recurring Study

The cost model used by SBC Illinois to develop its proposed recurring loop costs is called the Loop Cost Analysis Tool ("LoopCAT"), which produces an investment per loop and operating expenses per loop that are consistent with the recent investments and expenses incurred by SBC Illinois and with the costs that SBC Illinois would incur in a forward-looking network. As previously discussed, the loop recurring cost studies developed using LoopCAT incorporate forward-looking network designs, forward-looking technologies, and forward-looking material costs, all consistent with the TELRIC standard.

In addition to its proposed adjustments to fill, depreciation and cost of capital, summarized above, Staff proposed four contested adjustments to other inputs and assumptions used in LoopCAT.[11] In particular, Staff proposed to change the copper/fiber crossover point (the point in the overall length beyond which the feeder portion of the loop is provisioned over fiber cable rather than copper cable) from 12,000 feet to 18,000 feet. Staff's proposal represents a significant departure from the study used to develop the existing rates in Docket 96-0486/0569, which assumed a crossover point of between 9,000 and 12,000 feet. Staff has pointed to no technological advances since that time which would support the adoption of a longer crossover point in this case. To the contrary, the evidence demonstrates that a 12,000 foot crossover point is called for by current industry network design guidelines and is required for the efficient design of forward-looking network capable of handling multiple service needs, including voice and

[11] SBC Illinois accepted Staff's proposed adjustments for multiple dwelling units and the mix of the residential and business terminators. Accordingly, there is no issue between Staff and SBC Illinois with respect to those issues.

advanced data services. Moreover, it is apparent that Staff's proposal was based on a fundamental misconception, *i.e.*, that SBC has no plans to offer in Illinois the types of higher speed, advanced services that cannot be supported by an 18,000 foot crossover point. In fact, SBC not only plans to offer such higher speed advanced services in Illinois, *it already does*. Accordingly, Staff's proposal for an 18,000 foot crossover point should be rejected.

Staff also proposed an adjustment to reduce the forward-looking costs of installing cable facilities. SBC Illinois calculated cable installation factors based on actual audited accounting data from SBC Illinois' general ledger for a recent three year period (1999-2001) to develop a quantitative, normalized relationship between material costs and installation costs. The factors derived in this manner were then applied to the current cost of the cable equipment included in the LoopCAT model to develop a forward-looking total installed cost of such equipment. Staff, on the other hand, proposed that each cable installation factor be calculated based on data for whichever one of the three years (1999, 2002 or 2001) produces the lowest result. Staff attempted to justify its proposal on the grounds that the data used to calculate the factors included, in part, costs associated with projects to "reinforce" or "augment" the network. Because no carrier can forecast with absolute certainty the level of future demand in every area of the network, however, there will always be a need to augment and reinforce facilities on a forward looking basis, even in an efficient network, such as SBC Illinois', which includes a reasonable amount of spare capacity. For these and other reasons, there is no justification for Staff's selective use of data for the particular year that happens to produce the lowest number.[12]

[12] Staff proposed two other contested adjustments to the results of SBC Illinois' loop cost study (*i.e.*, reduce the investment in DLC remote terminals by 25% and reduce travel times assumed in the development of installation costs for premises termination equipment), which also should be rejected for the reasons discussed in this brief.

AT&T proposed a myriad of adjustments to the recurring loop cost studies. As will be discussed, these proposed adjustments are based on incorrect interpretations of the TELRIC standard and ignore reality. For example, AT&T objected to the use of installation factors to develop the installed cost of cable and DLC facilities, even though that is the method that was used to develop the currently effective loop costs in Docket Nos. 96-0486/0569. AT&T instead proposed a so-called "bottoms-up" approach, which is unworkable for a number reasons, including the fact that it does not account for all the necessary installation activities and the different variables that can affect costs on each job. As a result, AT&T's approach does not come close to developing a realistic estimate of the forward-looking costs of installing cable and DLC equipment.

6. Non-Recurring Cost Studies

SBC Illinois' nonrecurring cost studies appropriately identify the TELRIC-compliant costs that SBC Illinois incurs to process and provision UNE orders from CLECs. The CLECs and Staff propose a number of adjustments that are unwarranted, unsupported, and inconsistent with the TELRIC methodology. Perhaps most significantly, the CLECs and Staff propose to eliminate a number of manual tasks and to assume a sky-high "flow-through" rate of 98% based on pure speculation that somewhere, somehow, and at some unknown cost, someone could design electronic systems that, when implemented, would enable 98% of electronically submitted UNE orders, both simple and complex, to flow through an ordering system without any manual handling. But that kind of speculation is not consistent with TELRIC ratemaking. As the FCC recently confirmed, in performing a "TELRIC analysis," "it is *not* appropriate to consider technologies that may be available in the future but are not currently available." *Triennial Review Order*, ¶ 670 n.2020 (emphasis added).

The CLECs, and to a lesser extent Staff, also propose adjustments to a number of "activity times" (estimates of the average time for a technician to complete various UNE order processing and provisioning tasks). These adjustments too must be rejected. Several of the proposed adjustments rest on speculation that future technologies might permit the elimination or reduction of certain activity times; as explained above, such speculation is not consistent with TELRIC. Other proposed adjustments (*e.g.*, proposed adjustments to technician travel times) rest on a series of hypothetical assumptions about the number of jobs a technician might perform at the same time or the distance between jobs; hypothetical assumptions that the record establishes are just that – hypothetical, with no basis in fact. Finally, the CLECs propose a bevy of random adjustments supported only by vague references to their paid experts' "experience" – experience that never included working for an ILEC performing the particular tasks at issue. SBC Illinois' estimates, on the other hand, were developed by the very experts that perform the relevant activities day-in and day-out, and that have done so on thousands of occasions.

7. Shared And Common Cost Factors

SBC Illinois' shared and common cost factors are based on accepted methodologies and produce an overall value that is lower than what the Commission approved in the 1998 TELRIC proceeding. Merger savings have been flowed through to the CLECs as required in the Commission's SBC/Ameritech Merger Order.[13] Although these factors are based on 2001 data, SBC Illinois made appropriate adjustments to ensure that the data are forward-looking and they represent SBC Illinois' best estimate of shared and common costs that will be incurred in the future.

[13] September 23, 1999 Order, Docket No. 98-0555.

Staff's proposed adjustments to the shared and common factor are not warranted. The principle areas of disagreement between SBC Illinois and Staff involve shared costs. Staff initially proposed to eliminate wholesale marketing expense based on a misimpression that it represented advertising and other promotional activities. In fact, virtually all wholesale marketing expenses are incurred to provide information and assistance to the CLECs, and Staff's concerns should now be resolved. With respect to uncollectible expense, Staff took the position that it should be recovered in a separate, revenue-related factor, rather than as a cost in the shared cost factor. SBC Illinois believes that uncollectible expense is more appropriately treated as a cost; the effect of Staff's approach is to assign uncollectible expense resulting from CLEC bankruptcies to other wholesale customers, such as the long distance companies. Staff also disagreed with SBC Illinois' methodology for developing the shared cost "denominator." Although SBC Illinois believes that its approach is reasonable, it is also willing to work with Staff to implement Staff's alternative methodology, which would more closely parallel the Commission's approach in the 1998 TELRIC proceeding. It should also be noted that, if the Commission adopts Staff's view that support asset costs should be removed from the nonrecurring cost studies, they need to be added to the common cost factor, thereby increasing it.

The CLECs propose a bevy of adjustments to SBC Illinois' shared and common cost factors that produce an end result that is, on its face, unreasonably low. The CLECs ask the Commission to apply accounting-driven conventions to forward-looking cost studies (use of regulated vs. non-regulated data), to ignore cost causation principles in determining shared costs (using revenues to apportion wholesale marketing expenses between UNEs and other wholesale products and services), to use embedded data to develop a forward-looking cost factor (use of book data for the common cost denominator), to use unrepresentative data and inappropriate

sources to determine uncollectible costs, and to chop a massive 22% off of SBC Illinois' common costs to remove "retail" costs that, in fact, do not need to be removed.

8. Annual Cost And Other Factors

SBC Illinois' annual cost and other factors appropriately recover costs associated with maintenance, capital support assets and inflation over the period that the proposed UNE rates will be in effect. Staff's proposal to move support asset costs out of the development of labor costs and into the common cost factor ignores principles of cost causation. These costs are incurred in activities such as service ordering and provisioning, and should be borne by the customers that cause those activities, not all customers. The CLECs' proposal to offset SBC Illinois' inflation factor with a productivity factor is inappropriate, in that it double-counts the productivity improvements which are already inherent in SBC Illinois' forward-looking studies.

9. Imputation and Price Squeeze

The UNE loop rate increases proposed by SBC Illinois will not have a negative impact on competition in Illinois or on SBC Illinois' retail customers. If an imputation test is required – and it is far from clear that one *is* required – SBC Illinois' retail business rates pass with ample margin to spare. Staff and the CLECs claim that a massive business rate restructure is required, only because they are insisting on a form of imputation that is not required by law or the relevant policy considerations. In addition, the proposed changes in SBC Illinois' UNE rates will not harm competition. The CLECs' margins in Illinois today are exceedingly high and they will still have ample margins following the proposed price changes.

II. General Issues

A. Legal Requirements for Setting Rates

This case was initiated as a tariff investigation under 220 ILCS 5/9-201 and is being conducted procedurally as a Section 9-201 case. At the same time, however, and regardless of

the label attached to the case, the proceeding is substantively a proceeding to establish UNE prices under Section 252 of the 1996 Act and the FCC's TELRIC pricing rules, and thus is also a generic ratemaking proceeding under Section 252. *See* ALJ's Feb. 4, 2004 Memorandum to the Commission, at 7. The Commission is also acting in this case pursuant to the Seventh Circuit's directive in *AT&T Communications* to establish new TELRIC-compliant rates in an expeditious manner. Once those rates are established, they will be incorporated into SBC Illinois' existing tariffs prior to an orderly transition away from those tariffs consistent with the Seventh Circuit's decision in *Wisconsin Bell, Inc. v. Bie*, 340 F.3d 441 (7th Cir. 2003).

B. Economic/Policy Issues Associated With UNE Pricing (Including Benchmarking Analyses And Trends In Communication Costs)

The ultimate goal of TELRIC-based pricing is to "replicate[], to the extent possible, the conditions of a competitive market." *First Report and Order*, ¶ 679. By "simulat[ing] the conditions in a competitive marketplace" (*id*.), TELRIC-based prices can "provide[] appropriate economic signals for competitive and investment purposes." *TELRIC NPRM*, ¶ 2. The FCC sought to provide the proper economic signals because "UNE prices in excess of forward-looking costs would encourage competitors to build facilities when the more efficient course might be to lease facilities from the incumbent LEC, while price below forward looking costs might encourage them to rely on the incumbent's facilities when the more efficient course might be to construct their own facilities." *Id.* "To the extent that the application of [the] TELRIC pricing rules distorts [the FCC's] intended pricing signals by understating forward-looking costs, it can thwart one of the central purposes of the Act: the promotion of facilities-based competition." *Id*., ¶ 3. Thus, the purpose of TELRIC-based pricing is not simply to set the lowest non-confiscatory price possible, but rather to send the proper pricing signals to achieve the goals of the 1996 Act and to adequately compensate the ILEC. Setting the proper price is

therefore extremely important. SBC Illinois recognizes that a range of rates may ultimately be consistent with TELRIC and that the Commission has discretion to pick within that range. In doing so, however, the Commission should keep the overall goals of the Act in mind. Just as the courts have repeatedly found that too much unbundling is as harmful or more harmful than too little unbundling, UNE prices that are too low are just as harmful or more harmful to competition and the goals of the Act as prices that are too high.

Unfortunately, the current loop prices in Illinois are not sending the right economic signals or adequately compensating SBC Illinois or incenting facilities investment by CLECs. To the contrary, SBC Illinois witness Dr. Aron showed that, at current prices, SBC Illinois does not even recover its out-of-pocket cash costs of providing unbundled loops. Instead, SBC Illinois loses more than $8 in out-of-pocket cash costs on *every* UNE loop leased by a CLEC, *every* month, and $19 cash on every UNE-P. SBC Ill. Ex. 2.1 (Aron Direct) at 27. Given the tens of thousands of loops and UNE-Ps leased by CLECs, these ongoing cash losses are significant.

Dr. Aron also explained how this pricing regime has impeded the goals of the 1996 Act by reducing SBC Illinois' incentive and ability to invest in and maintain its network, and also reduced the CLECs' incentive to invest in their own facilities. SBC Ill. Ex. 2.0 (Aron Direct) at 5-6. As she demonstrated, the number of facilities-based CLECs in Illinois has declined since widespread use of the UNE-P began in 2001, while the number of UNE-P based CLECs has expanded dramatically. *Id.* at 42-45. Below-cost loop prices mean that CLECs make no real investment in Illinois (because it is cheaper to lease loops) and SBC Illinois has less money to make investments in its own network. Ultimately, businesses and consumers suffer from the lack of innovation and new offerings and the general drain on the Illinois economy. *Id.* at 35-39.

In addition to Dr. Aron's analysis, SBC Illinois witness Mr. Sneed discussed a number of benchmarks showing that SBC Illinois' proposed loop costs are reasonable and forward-looking. For example, he showed that SBC Illinois' proposed investment per subscriber is in line with, and even lower than, the comparable investment of other network-based providers such as long distance, wireless, and cable companies, all of which are more than four times higher than AT&T's proposed investment per subscriber. SBC Ill. Ex. 20.0 (Sneed Rebuttal) at 7-8. Similarly, Mr. Sneed showed that SBC Illinois' proposed TELRIC investment per loop was far below the actual cost of building a loop today, both for itself and for other ILECs in states with similar line densities. *Id.* at 8-9. The CLEC-proposed investment figure, on the other hand, is not even in the same ballpark. *Id.*

Finally, SBC Illinois witness William Palmer further demonstrated the unreasonableness of the CLECs' and Staff's proposals (and the reasonableness of SBC Illinois' proposals) by comparing them to the results derived from the FCC's Hybrid Cost Proxy Model ("HCPM"). The analysis at pages 37-38 of his rebuttal testimony (SBC Ill. Ex. 14.0) shows that SBC Illinois' proposals are generally close to the cost produced by the HCPM, whereas the CLECs' proposals are, again, so low as to be "off the charts," and that the Staff's proposals are far less in line with the HCPM than SBC Illinois'. This is yet more objective evidence in support of SBC Illinois' proposals, which are the only ones that comport with the numerous validity checks that help tell whether a proposal is even within a range of reasonable outcomes.

The CLECs have no meaningful response to this benchmarking evidence, more of which is discussed throughout this brief in support of various aspects of SBC Illinois' proposals. Instead, they resort to the mantras that costs with any tie to reality are irrelevant under TELRIC and that telecommunications in general is a declining cost industry so that even though SBC

Illinois loses $8 a month on every loop it leases to a CLEC at the current rock-bottom prices, the price should be reduced even more. Specifically, AT&T witnesses Messrs. Pitkin and Turner assert that declines in equipment costs, merger savings, technological advancements, and growth in the overall demand on SBC Illinois' network have resulted in decreasing costs, and thus, SBC Illinois' loop costs should be lower than those previously approved. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 9-19; AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 7-8. AT&T is wrong, and its contentions are not supported by the evidence in this proceeding.

First, the record conclusively demonstrates – and the CLECs do not deny – that *labor* costs, not equipment costs, account for the majority of loop costs. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 36-37. And the evidence in this proceeding demonstrates that labor costs are, in fact, increasing, and will continue to do so. *See, e.g.*, SBC Ill. Ex. 7.1 (Barch Reply) at 52, 58. The CLECs, however, wholly ignore the evidence of increasing labor costs and their impact on the cost of the loop.

Second, Messrs. Pitkin and Turner's high-level assertion that telecommunications in general is a "declining cost industry" misses the point. At issue are cost studies that address very specific, *particular* costs – loop costs. Even if, in general, the industry is a "declining cost industry," that does not mean that *loop* costs are declining. And Pitkin and Turner point to nothing to show that *loop* costs have been declining. To the contrary, WorldCom has admitted to the United States Supreme Court that loop costs are in fact increasing. In its brief to the Supreme Court in *Verizon Communications, Inc. v. FCC*, WorldCom stated that "[a]lthough the

computer-based elements of the network (such as switches) may be characterized by declining costs, *other elements (such as the loop) are not declining; for many elements costs are rising*."[14]

Similarly, while Messrs. Pitkin and Turner claimed in their direct testimony that several state commissions have recognized telecommunications as a decreasing cost industry, as evidenced by those states' UNE-P rate reductions, they conceded at the evidentiary hearing that such rate reductions involved the UNE-P, which is a combination of the loop, switching and shared transport, and not rate reductions for the stand-alone loop. Tr. 1620-1624. In particular, Mr. Pitkin testified that in Illinois, Indiana, and Michigan, the reduction in the UNE-P rates involved the costs of unbundled local switching and/or shared transport alone, whereas the cost of the *loop* actually remained the same. *Id.* Indeed, as discussed above in Section I.A, the Indiana Commission recently approved a significant increase in UNE loop rates (with a corresponding increase in UNE-P prices) and rejected the much lower rates proposed by Pitkin/Turner. Tr. 1633-28.

Third, even if SBC Illinois has realized reductions in equipment costs due to merger savings or advancements in technology, such savings are already accounted for in the cost studies that it has presented in this proceeding. For example, Mr. Smallwood testified that while SBC Illinois has negotiated discounted prices for certain types of equipment in recent years, those discounted prices are already accounted for in its cost studies. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 33-34. In addition, SBC Illinois' cost studies account for any cost decreases that are projected for specific categories of equipment by adjusting the capital costs for the planning period of the cost study through the use of TPI factors. *Id.* at 34. With respect to

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14 Reply Brief of WorldCom, Inc., The Association for Telecommunications Services, and Competitive Telecommunications Association, in the Supreme Court of the United States, Docket No. 00-555, July 23, 2001, at p. 6 (emphasis added) (quoted in SBC Ill. Ex. 4.1 (Smallwood Reply) at 37-38) (emphasis added).

merger savings, such savings are typically realized in reductions in the overhead costs of a firm, increased operating efficiencies, and better purchasing power with vendors. *Id.* And, as noted above, SBC Illinois' cost studies *already* reflect greater purchasing power with vendors that has been experienced as a result of the merger. *Id.* SBC Illinois' cost studies also incorporate any operating efficiencies that have been achieved as a result of the merger via the shared and common cost factor, and through the application of expense factors, which are both based on the most recent year's data available. *Id.*

Fourth, AT&T's claim that SBC Illinois' costs have decreased, and that its loop price should therefore be lower, is illogical in its own right, because the declining cost nature of an industry is no guarantee that any particular firm's costs will also decline. A decreasing cost industry is one in which average costs are lower at higher levels of industry output at a given point in time, *i.e.*, an industry characterized by economies of scale. SBC Ill. Ex. 2.1 (Aron Rebuttal) at 59. If the telecommunications industry is a decreasing cost industry according to AT&T's definition, then an increase in competition in that industry could cause the average costs of a particular firm (such as SBC Illinois) to actually *increase*. This phenomenon occurs because, although a single firm in a market can produce output at a low average cost, introduction of other firms into the market causes each firm to have lower output than the single firm, resulting in higher average costs for each firm. *Id.* at 60.

And SBC Illinois has experienced lower output; specifically, it has experienced a *decrease* in demand for switched access lines as a result of competition. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 35. From 1996 to 2002, SBC Illinois switched access lines decreased from 6.32 million and 5.97 million. *Id.* at 36. While AT&T insists that when non-switched digital special access lines are included in the count, SBC Illinois experienced an increase in line

demand over that period (*see* AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 8-9), AT&T is simply wrong. The "increase" identified by AT&T was not an increase at all, but merely reflects a change in the way high-capacity digital lines are counted (*e.g.*, a DS3 is now counted as 672 DS0-equivalent lines, not as one single line). SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 35-36. At the same time, the ARMIS data reveal a significant *increase* in per-loop investment in Illinois (and in other states with a similar population density) in the last decade. *Id.* at 37.

AT&T's argument also assumes that the current UNE loop rates, set in 1998, complied with TELRIC. As demonstrated by Dr. Aron's and Mr. Sneed's real-world analysis and throughout this brief, however, that is incorrect. Among other things, the FCC has now made clear that TELRIC requires the cost of capital and deprecation inputs, which have a major impact on cost, to be established based a fully competitive environment, which the Commission did not do in 1998. Those rates also were based on a cost study that did not reflect all the relevant costs. Thus, even if AT&T's declining cost claims were correct (which they are not) costs would not be declining from the artificially low costs set in 1998.

III. UNE Loop Recurring Cost Studies

A. Compliance With TELRIC Generally (including SBC Illinois' loop cost analysis tool)

1. Explanation Of The TELRIC Standard

The 1996 Act requires UNE rates to be "just and reasonable" and "based on the cost . . . of providing the . . . network element," and they may "include a reasonable profit." 47 U.S.C. § 252(d)(1). The FCC implemented this statutory provision by adopting the TELRIC pricing methodology. "TELRIC" stands for "Total Element Long-Run Incremental Cost." TELRIC is designed to establish prices based on the incumbent's costs of providing service over a "forward-looking" network. *See* 47 C.F.R. § 51.505. A forward-looking network is one that takes as a

given the actual locations of the incumbent LEC's wire centers and the actual locations of its customers, and then is presumed to be constructed with the most efficient technology that is currently commercially available for purchase. *Id.*§ 51.505(b)(1); *First Report and Order*, ¶ 685.

The goal of TELRIC's forward-looking methodology is to mimic the price that the incumbent would be able to charge for access to its network in a competitive marketplace. *First Report and Order*, ¶ 179; *TELRIC NPRM*, ¶ 16. In such an environment the incumbent's prices would be constrained by the possibility that, if the incumbent set prices for access to its network too high, another competitor would be able to make use of current technology to provide the same thing at lower prices. *See* FCC Reply Br. in Verizon at 8, 2001 WL 881216, *8.

The forward-looking network under TELRIC, however, is not entirely hypothetical. The FCC considered three approaches to designing a network for TELRIC purposes. The first was a purely hypothetical network. The FCC rejected that approach because it would "discourage facilities-based competition by new entrants" because they could never build a more efficient real-world network on their own. *First Report and Order*, ¶ 683; accord *TELRIC NPRM*, ¶ 53. At the other end of the spectrum was a proposal to rely entirely on the incumbent's existing network and equipment. The FCC chose not to use that approach because it could include "inefficient or obsolete network design and equipment." *Id.*, ¶ 684. The third approach, which the FCC adopted, included aspects of both an existing network and a hypothetical forward-looking network. *Id.*, ¶ 685. The FCC described this as a "hybrid of 'existing' and 'most efficient' design," and explained that it selected the "hybrid" approach to "serve multiple purposes." FCC Reply Br. in Verizon, at 5, 2001 WL 881216, *5. Among these purposes are to "mitigate incumbents' concerns that TELRIC would not reflect the additional costs attributable

to past decisions regarding the most fundamental aspects of their existing networks" and to "encourage new entrants to design and build networks of their own." *Id.* On the latter point, the FCC found that a hybrid approach "encourage[s] facilities-based competition" because it sets prices at a level such that, if a CLECs can "design[] more efficient network configurations" and thus "provide the service at a lower cost than the incumbent LEC, it will have an incentive to do so." *First Report and Order*, ¶ 685. In other words, the FCC wanted to encourage CLECs to actually "build a better mousetrap" if they thought they could do so, rather than relying indefinitely on leasing the incumbent's network.

Once a forward-looking network has been designed under TELRIC, one must compute the costs of providing an unbundled network element on that network. TELRIC allows both recurring (monthly) and nonrecurring (one-time) charges. Recurring costs typically include three separate components: operating costs, depreciation expense, and return on capital.

> Operating costs. "Operating costs are the non-capital costs associated with operating a network, including maintenance expense, administrative expense, and an allocation of common and overhead costs." *TELRIC NPRM*, ¶ 11. Operating costs may be estimated in a variety of ways. One of the most common, and the one used by SBC Illinois here, is to multiply the projected investment by an Annual Cost Factor ("ACF") or other factors. *Id.*
>
> Depreciation expense. Depreciation expense allows the incumbent to recover the value of its capital assets over time. Under TELRIC, depreciation expense reflects the annual decline in economic value of a capital asset. 47 C.F.R. § 51.505(b)(3); *TELRIC NPRM*, ¶ 12. To compute depreciation expense one must determine the depreciation "life" of various pieces of equipment. The length of this life is determined by estimating the likely decline in the economic value of an asset over time in light of expected improvements in technology and increased competition. *Id.*; *Triennial Review Order*, ¶ 685.
>
> Cost of capital. Also referred to as "rate of return" or "return on capital," this element represents the amount the incumbent must earn simply to pay back to its debt investors and to compensate its equity investors for the risks associated with the use of their money. The cost of capital is defined as "the cost a firm will incur in raising funds in a competitive capital market" and is generally estimated by using "a weighted average of the cost of equity and the cost of debt." *TELRIC NPRM*, ¶ 13. The cost of capital must be reflect "the risks of a competitive

> market" faced by the incumbent, because "increased competition . . . warrant[s] an increased cost of capital." *Triennial Review Order*, ¶ 680-81.

As Mr. Smallwood explained, the development of all TELRIC recurring cost studies follows the same general methodology. *First*, the forward-looking design for the UNE being studied is identified. *Second*, after the design is identified, the next step is to determine the dollar amount of capital investment that would be required by SBC Illinois to build that network element. In addition, other significant inputs, such as the expected utilization of the element (*i.e.*, fill factor), must be identified to determine the investments. *Third*, once the investments are determined, those investments are converted to annual costs through the application of annual cost factors ("ACFs"). These annual cost factors capture the cost of capital, depreciation, income taxes, maintenance expenses, and other miscellaneous expenses associated with the investment required to provide the network element being studied. *Fourth*, after the investment is converted to an annual cost, this annual cost is divided by 12 to obtain the monthly recurring cost of the element. *Fifth*, the final step to arrive at the TELRIC rate is to apply the shared and common cost factor to the monthly recurring cost. This factor accounts for the overhead costs that are not directly attributable to the rate element being studied but must instead be recovered from all UNEs. SBC Ill. Ex. 4.0 (Smallwood Direct) at 5-6.

TELRIC-based prices are recovered on a per-unit (per-UNE) basis by dividing the total costs of a given element by all current and reasonably projected future demand for the element. *TELRIC NPRM*, ¶ 18. The factors with the largest impact on recurring prices are the cost of capital, depreciation, and fill factors (which are used to compute operating expenses and per-unit costs).

2. SBC Illinois' Loop Cost Model

The cost study supporting most of SBC Illinois' proposed loop recurring rates is presented in Schedule JRS-R1 (Proprietary) sponsored by Mr. Smallwood in his Rebuttal Testimony (SBC Ill. Ex. 4.1).[15] The cost model used by SBC Illinois to develop its proposed recurring loop costs is called the Loop Cost Analysis Tool ("LoopCAT"). Mr. Smallwood explained that LoopCAT produces an investment per loop and operating expenses per loop that are consistent with the recent investments and expenses incurred by SBC Illinois and with the costs that SBC Illinois would incur in a forward-looking network. SBC Ill. Ex. 4.0 (Smallwood Direct) at 17, Sch. JRS-3. Therefore, LoopCAT is consistent with the TELRIC methodology adopted by the FCC.[16]

LoopCAT is a flexible, auditable, and easy to use cost-development tool. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 26. As Mr. Smallwood explained, LoopCAT is essentially the same model as its predecessor model, the SBC Loop Cost System ("SLCS"), updated to accommodate modeling and input changes. *Id.* at 25. The SLCS model was, in turn, a spreadsheet-based version of SBC's previous mainframe-based loop model, Loopvst. *Id.* Mr. Smallwood testified that Loopvst, which has the same conceptual methodology as LoopCAT, was the UNE loop model used to develop costs approved by state commissions throughout the Southwestern Bell Telephone Company region. *Id.* at 26. In recent case involving SBC Indiana, the Indiana Utility Regulatory Commission approved new UNE loop rates using the LoopCAT model. *Id.*

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[15] The cost study in Schedule JRS-R1 develops the recurring costs for the following UNE loop rate elements: 2-wire analog; 2-wire ground start; coin line; electronic key line (EKL) interface; 4-wire analog; ISDN/Basic Rate Interface (BRI); DS1 (1.544 Mbps) digital; 2-wire xDSL; and 4-wire xDSL.

[16] A separate study, which does not rely on LoopCAT, was performed to develop TELRIC recurring costs of the UNE DS3 loop element. SBC Ill. Ex. 4.1 (Smallwood Rebuttal), Sch. JRS-R2 (Proprietary). With one exception that will be discussed below (the calculation of installation costs), no party contested the study used to develop DS3 costs, which is described generally at pages 21 to 23 of Mr. Smallwood's Direct Testimony (SBC Ill. Ex. 4.0).

LoopCAT calculates a composite loop cost for each of SBC Illinois' three UNE rate zones by using a Microsoft Excel workbook that consists of a spreadsheet which contains input data, loop investment calculations, and cost output. SBC Ill. Ex. 4.0 (Smallwood Direct) at 14. Loop costs consist of the costs for cables and equipment and the labor to install the cables and equipment, the prices for which are obtained from current vendor contracts. *Id.* The quantities for such materials are taken from a combination of company databases and commonly accepted forward-looking engineering guidelines. *Id.* Mr. Smallwood explained that labor costs are derived from company accounting records and through the application of labor times and labor rates. *Id.* LoopCAT then aggregates this information and calculates the forward-looking investments for the various pieces of a loop: (i) premises termination equipment, (ii) distribution plant, (iii) feeder distribution interface, (iv) feeder plant, and (v) main distribution frame. *Id.* at 14-15.

The inputs to LoopCAT are developed using Illinois-specific data. SBC Ill. Ex. 4.0 (Smallwood Direct) at 17. When actual data are not available, SBC Illinois relied on the input of experienced network personnel to provide the technical input assumptions. *Id.* Developing cost inputs in this manner is the best way to develop forward-looking costs for an Illinois-specific network that is consistent with TELRIC principles. *Id.*

The UNE loop cost studies developed using LoopCAT incorporate forward-looking network designs, forward-looking technologies, and forward-looking material costs, all consistent with the TELRIC standard. For example, SBC Illinois' UNE loop cost study for 2-wire analog loops is based on the forward-looking assumption that loops longer than a certain point (the copper-fiber crossover point) will be provisioned over fiber feeder with a DLC system, even though SBC Illinois' current network includes some loops longer than the assumed copper-

fiber crossover point that are not provisioned over fiber feeder. The result of this assumption is that SBC Illinois' UNE loop cost study includes extensive placement of fiber loop plant well beyond what exists in the current loop network. This is appropriate in a TELRIC study because a higher incidence of fiber facilities versus copper facilities characterizes the design of SBC Illinois' forward-looking loop network. The UNE loop cost study, in turn, applies maintenance factors for fiber cable, which are much lower than corresponding maintenance factors for copper cable. Therefore, the UNE loop cost study captures productivity gains and maintenance efficiencies associated with pervasive placement of fiber cable in the forward-looking loop network. Further, the cost development for the 2-wire analog UNE loops assumes the use of forward-looking Litespan DLC technology, even though SBC Illinois does not currently have 100% Litespan DLC systems in its existing network. SBC Ill. Ex. 4.0 (Smallwood Direct) at 5; SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 9.

3. Response To General Criticisms Of SBC Illinois' Loop Cost Methodology

The overriding theme of AT&T's testimony (and a theme echoed in varying degrees by witnesses for the Joint CLECs) is that TELRIC prohibits any reference to or reliance on "embedded" or "historical" costs, no matter how recently they were incurred or how reflective they may be of forward-looking practices. They argue that any past cost, even one incurred yesterday, is "embedded." The CLECs also apply this view to the design of a forward-looking network, in that they consider any current or established engineering and design principles as almost *per se* inefficient. Thus, the CLECs suggest that the real-world impact of TELRIC-based prices and the question whether a new entrant could actually build and operate its own network at such prices is irrelevant.

The CLECs have it wrong. As the FCC told the D.C. Circuit, if CLECs are "claiming that TELRIC precludes consideration of historical costs in calculating forward-looking costs, they are wrong. Indeed…the FCC itself [has] used historical data to estimate forward-looking costs. . . . And [AT&T] could not plausibly contend that the 'cost' standard of Section 252(d)(1)…prohibits taking such data into account." FCC Br. to D.C. Circuit in *AT&T Corp. v. FCC*, Nos. 99-1538 and 99-1540, at 17-18 (D.C. Cir. filed March 6, 2000); see also FCC Reply Br. in *Verizon* at 6 (S. Ct. filed June 2001), 2001 WL 881216, *6 (rejecting assumption that TELRIC forbids reference to actual costs and stating that "[t]he costs measured by TELRIC are nonetheless those of the incumbent itself."). A forward-looking network has to be developed by looking forward from somewhere, and actual costs are a logical reference point. Nothing in TELRIC prohibits referring to those costs or, where appropriate, relying on them as the best estimate of forward-looking costs. To the contrary, the FCC recently reached the "tentative conclusion[]" that it should interpret TELRIC to be "more firmly rooted in the real-world attributes of the existing network, rather than the speculative attributes of a purely hypothetical network." *TELRIC NPRM*, ¶¶ 4, 52.

In any event, the evidence demonstrates that the costs modeled by LoopCAT are not "embedded" costs. As Mr. Smallwood explained, SBC Illinois' "embedded" costs would represent the cumulative, historical investment in cable, loop electronics, and other facilities that SBC Illinois has placed over the years. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 23. LoopCAT, however, does not rely on such embedded costs. Rather, LoopCAT incorporates forward-looking network designs, forward-looking technologies, and forward-looking material costs. *Id.* For example, contrary to AT&T's assertions, the cost of the loop facilities modeled in LoopCAT does not include the historical "embedded costs" of installing those facilities. Rather, as

discussed in Section III.C.1, below, installation costs are developed by using recent data to calculate factors that represent a reasonable, going-forward *relationship* between material costs and installation costs. Those factors are then multiplied by the current prices of the equipment in the study (which reflects the most efficient currently available technology) to obtain forward-looking, installed costs. *Id.* at 16, 51.

Similarly, LoopCAT's use of existing network data on cable length does not, contrary to the CLECs' suggestions, mean that LoopCAT improperly relies on "embedded data." To the contrary, using existing network characteristics simply reflects the fact SBC Illinois' engineers have efficiently placed cable, that the existing rights-of-way (which determine cable lengths) would be the same rights-of-way that would exist in a forward looking network, and that speculating about hypothetical changes in cable placements and routing is unwarranted. The existing network data is then combined with the forward-looking equipment designs and forward-looking equipment costs to develop TELRIC loop cost. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 16.

In short, the fact that LoopCAT uses current operational, maintenance, and labor costs as inputs does not mean that SBC Illinois' cost studies are inconsistent with TELRIC principles. Indeed, a forward-looking network must look forward from somewhere, and the most logical and practical place to start is SBC Illinois' current costs and practices, which are based on sound engineering principles and reflect actual network characteristics. By contrast, and as further demonstrated by the discussion in Section III.C, below, AT&T's proposals with respect to LoopCAT reflect a network that could not be built, and are based on data which wholly lack evidentiary support.

Another premise underlying many of the CLECs' criticisms is that TELRIC requires an assumption that the entire network is built instantaneously from scratch. Based on this premise, for example, AT&T argues that, under TELRIC, there will never be the need to augment or reinforce network facilities and that all facilities needed to extend services to all customers will be installed at exactly the same time, thereby reducing installation costs. Once again, TELRIC does not require such unrealistic assumptions. To the contrary, as the FCC has expressly recognized, "the UNE pricing methodology, while forward-looking, must be representative of the real world and should not be based on the totally hypothetical cost of a most-efficient provider building a network from scratch." *TELRIC NPRM*, ¶¶ 50, 53.

Mr. Smallwood succinctly refuted the CLECs' assertions that SBC Illinois' loop cost model "relies exclusively on embedded data" and that the network design reflected in that model is not forward-looking, as follows:

> LoopCAT uses current contract prices for all cable and equipment in the loop cost study. That is not "embedded" data. LoopCAT uses a forward-looking network design for the feeder plant that places fiber and DLC in the feeder for all loops longer than 12kft, and the DLC system included is SBCI's forward-looking Litespan DLC system. That is not "embedded" data. The LoopCAT model calculates the forward-looking cable gauging for the copper cable remaining in the loop plant. That is not "embedded" data. What is the "embedded" data in LoopCAT? The loop lengths in LoopCAT are based on the existing loop lengths in the network. Does that assumption violate TELRIC? Absolutely not, given that TELRIC calls for the wirecenter locations and customer locations to remain fixed. Furthermore, TELRIC does not assume that streets, buildings, and geographic features change. Therefore, it is unreasonable to assume that existing rights-of-way would change in any significant way. This makes SBCI's modeling assumption of existing loop lengths reasonable. LoopCAT also uses the mix of existing cable inventory to develop its forward-looking cable prices. Is this violative of TELRIC? Again, absolutely not. One must assume some mix of cables. Therefore, the question becomes "what mix?" SBCI's position is that the mix of cables that were placed after qualified engineers studied a particular project under budget constraints and made a reasoned decision is the best mix of cables to use. Using a different, theoretical assumed mix, such as placing fewer, larger cables would require more forecasting that necessarily introduces more errors and more costs into engineering a network. In short, SBCI has

> incorporated forward-looking engineering assumptions and forward-looking equipment costs, but it has not engaged in speculative engineering that has the potential for actually increasing costs. SBCI's approach is reasonable and should be adopted. SBC Ill. Ex. 4.1 (Smallwood Surrebuttal) at 15.

While critical of the LoopCAT model, the Joint CLECs did not present their own cost study or propose any specific adjustments to the LoopCAT model. Instead, they argued that Commission should rely on the results of the AFAM model used to establish the currently effective loop recurring rates in Docket Nos. 96-0486/0569. As will be discussed in Section III.C.9, below, the Joint CLECs arguments regarding the relative merits of the AFAM and Loop CAT models are unsupported.

AT&T, on the other hand, proposed numerous modifications to LoopCAT in order to correct what it considered to be methodological flaws. Each of these proposals is discussed in Section III.C, below. As a general matter, however, AT&T's proposed modifications are based on its incorrect interpretation of the TELRIC standard and ignore reality. Moreover, although AT&T witnesses Pitkin and Turner proposed a number of adjustments reflecting engineering-driven recommendations (as further addressed below) concerning the construction of a forward-looking network, they are not qualified to second-guess SBC Illinois' network engineers, who have day-to-day responsibility for designing and operating an efficient, reliable, multi-service network. Mr. Pitkin is not an engineer, has never worked for a telephone company, and has no hands on experience in designing, planning or installing any portion of a telephone network. Tr. 1604-05 (Pitkin). While Mr. Turner does have an engineering degree, he had only approximately 10 months of outside plant engineering experience with AT&T, he has never been employed as a member of a group responsible for the actual installation of outside plant facilities and has no experience with respect to the installation or maintenance of outside copper cable facilities. AT&T Ex. 3.0 (Turner Direct), App. SET-1; Tr. 1605-09 (Turner). By comparison,

SBC Illinois' evidence in support of LoopCAT and the forward-looking network configuration underlying it was presented by Mr. Randall White, General Manager of Installation and Repair for SBC Illinois, who has 17 years of experience in outside plant engineering and construction, and Mr. James Smallwood, both of whom are supported by SBC Illinois' full engineering staff. If anyone is qualified to make recommendations concerning the proper configuration of a forward-looking network, it is SBC Illinois' witnesses.

B. Major Inputs To Cost Studies

1. Fill Factors

The FCC has made clear that fill factors based on the *actual* utilization of a carrier's network are a permissible choice for TELRIC pricing purposes. In fact, it has indicated that it is considering making use of actual fills mandatory nationwide. *TELRIC NPRM*, ¶ 74. If there were any ambiguity in this regard, it was resolved by the 7th Circuit Court of Appeals' decision in the litigation over Senate Bill 885 last year. In rejecting the District Court's conclusion that use of actual fill factors violated federal law, the 7th Circuit expressly affirmed their use:

> True enough, TELRIC calls for a projection, but it does not demand that every ingredient be hypothetical. How could one know the long-run costs of the most efficient technology without understanding the costs of today's most efficient producers? If SBC's current fill factors are the efficient ones (or are within the range that a student of the subject might think a reasonable estimate of that figure), then they are exactly the right figures to use. *AT&T Communications*, 349 F.2d at 411.

The Commission Staff agreed with SBC Illinois that actual network design practices are the right starting point in determining fill rates. As Dr. Liu explained, carriers must be allowed to recover the costs of their forward-looking, TELRIC-complaint networks:

> Although the 1996 Telecommunications Act and the FCC's pricing rules may have established a different set of costs to be used for purposes of setting UNE rates (forward looking economic costs rather than historical embedded costs), it is beyond dispute that a carrier be allowed to recover the costs of its forward-looking network. The UNE prices set based on the FCC's TELRIC principle

> should allow a carrier to recover the costs of the FCC prescribed hypothetical forward-looking network, which is built today using the incumbent LEC's actual network topography and using the most efficient technology available. The fill factors, which are used as multipliers in the development of UNE loop prices, should thus reflect this fundamental principle. Staff Ex. 25.0 (Liu Rebuttal) at 12.[17]

To accomplish this end, Staff stated that fill assumptions should be based on the sizing and design parameters that an efficient carrier would utilize in the real world. In other words, if an efficient carrier would deploy substantial amounts of spare capacity to serve long-term demand, then spare capacity is properly included in a TELRIC study and, in fact, *must be* included for the carrier to recover the costs of its forward-looking network. *Id.* at 12-13, 27-28.

a. SBC Illinois' Proposal

Consistent with the plain language of the FCC's *First Report and Order*, the FCC's *TELRIC NPRM*, and the 7th Circuit's decision, SBC Illinois proposed use of its actual (January 2002) fill factors for use in its UNE loop TELRIC studies. In fact, SBC Illinois' current fill factors *are* efficient ones and, therefore, are "exactly the right figures to use." *AT&T Communications, supra*.

First, SBC Illinois' existing network has been efficiently designed and deployed. SBC Illinois' engineers use rigorous planning methods to ensure that facilities are installed in a timely and economical manner. SBC Ill. Ex. 8.0 (White Direct) at 6-10. SBC Illinois' engineering practices are driven by the CSA/SAC concept for network design, which has been the industry standard for decades. SBC Ill. Ex. 8.1 (White Direct) at 5-6. There is no evidence that SBC Illinois, or any other carrier, would depart from these network design practices in a forward-looking environment.

[17] Staff ultimately recommended use of a "forward-looking actual fill" approach. Since the information required to develop hypothetical fill factors for the FCC's hypothetical network does not exist, Ms. Liu recommended use of SBC Illinois' actual fill rates, subject to certain adjustments. SBC Illinois will discuss those adjustments *infra*.

Second, SBC Illinois has engineered an efficient amount of spare capacity into its network. Spare capacity is crucial in any network to account for future growth in demand, service quality needs, and engineering constraints. For example, SBC Illinois' engineers deploy enough distribution capacity to serve long-tem ("ultimate") anticipated demand in any given geographic area.[18] SBC Ill. Ex. 8.0 (White Direct) at 7-9. This is standard practice in the industry: it is far more cost effective to initially place all the distribution facilities needed to satisfy long-term demand, than to constantly reinforce exhausted capacity. SBC Ill. Ex. 8.0 (White Direct) at 9. Because most of the costs associated with installing distribution facilities are labor-related, it is, for example, far more efficient to place a 200-pair cable at the outset than to place a 100-pair cable and later dig new trenches, cut trees and shrubs, and restore damaged driveways and property to lay a second 100-pair cable once capacity in the first cable has been exhausted. SBC Ill. Ex. 8.0 (White Direct) at 16-20; SBC Ill. Ex. 2.0 (Aron Direct) at 50-51. Feeder facilities, on the other hand, can be more economically reinforced on a periodic basis, so SBC Illinois designs feeder facilities to meet projected demand for a fixed period (generally five years). SBC Ill. Ex. 8.0 (White Direct) at 7-8. Thus, feeder fill levels are typically higher than distribution fill levels.

Spare capacity is also essential if SBC Illinois is going to meet this Commission's service quality standards. Substantial lead times are required to add capacity to feeder or distribution routes (*i.e.*, to design the job, order cable from the equipment vendor, obtain any necessary permits or property owner consents and actually construct the facilities). SBC Ill. Ex. 8.0 (White

[18] Distribution and feeder facilities are the two major components of SBC Illinois' outside plant network. Starting from the central office, feeder facilities extend from the central office mainframe to a feeder distribution interface ("FDI"). Distribution facilities extend from the FDI to terminals close to customer residences or businesses which serve multiple customers. Drop wire or entrance cable provides the final connection from the terminal to the customer's premises. SBC Il. Ex. 8.0 (White Direct) at 3. If outside plant is analogized to a tree, feeder facilitates constitute the trunk of the tree and the main branches off the trunk, while distribution facilities constitute the smaller branches off the main branches.

Direct) at 11-13. SBC Illinois simply could not meet this Commission's stringent installation standard (90% within five days) or repair standard (95% within 24 hours) without substantial spare capacity. Spare capacity also includes facilities used for testing.

Finally, spare capacity is unavoidable because cable facilities are only manufactured in standard sizes (*i.e.*, cable "breakage"). For instance, if an engineer determines that a certain route requires 150 pairs, a 200-pair cable must be placed because 150-pair cables are not manufactured. SBC Ill. Ex. 8.0 (White Direct) 20-21; SBC Ill. Ex. 2.0 (Aron Direct) at 51; SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 45. Thus, there is no dispute in the record that, in the real world, an efficient telecommunications provider would have significant amounts of spare capacity in its network.

SBC Illinois' existing fill levels are a reasonable projection of forward-looking, efficient fills. The fill levels for the distribution and feeder component of SBC Illinois' network plant have been very stable over time. SBC Ill. Ex. 8.0 (White Direct) at 24. SBC Illinois' engineers have used efficient planning models for decades and have exercised their best faith judgment to install exactly what will be required to serve SBC Illinois' customers, no more and no less. SBC Ill. Ex. 8.1 (White Rebuttal) at 4-5. Since SBC Illinois' fills have remained relatively stable, they *do* represent an efficient, forward-looking estimate of network utilization.

The actual fill rates in SBC Illinois' network are consistent with those of other network providers and with those used by other states in TELRIC studies. The following chart compares SBC Illinois' proposed fill factor for copper distribution facilities with those approved in other state proceedings:

COPPER DISTRIBUTION FACILITIES	
STATE	**FILL FACTOR**
Mississippi	35%
West Virginia	35%
California	38%
Kentucky	38%
Alabama	40%
Missouri	40%
Louisiana	41%
South Carolina	41%
SBC Illinois Actual	**[**********]**
North Carolina	45%
Florida	47%
Georgia	48%
New York, Maine, Pennsylvania, Rhode Island, Tennessee, Vermont, and Virginia	50%
1998 ICC-Ordered Fill	**80%**
Source: SBC Ill. Ex. 14.0 (W. Palmer Rebuttal), Sch. WCP-R2	

The CLECs contend that SBC Illinois' actual fill data do not represent an efficient level of operations, in part on the grounds that rate-of-return regulation could have provided incentives to "gold-plate" the network. Joint CLEC Ex. 1.3 (Starkey/Fischer Supplemental Surrebuttal) at 14-16. Their position is premised on a theoretical proposition that is at odds with the facts. As Mr. White, SBC Illinois' network engineer with 17 years experience explained, deployment decisions have always been based on strict economic analyses and capital budgets have always been constrained. SBC Il. Ex. 8.0 (White Rebuttal) at 4-5. As a result, nothing has been built that was not needed. Furthermore, SBC Illinois has now been operating under price cap regulation for almost 10 years, which has provided it with every incentive to operate its network in the most efficient manner possible and to use up any inefficient spare capacity arguably left over from its days under rate-of-return regulation.[19] SBC Ill. Ex. 2.1 (Aron Rebuttal) at 85-86; SBC Ill. Ex. 2.2 (Aron Surrebuttal) at 30-31; Tr. 304-305 (Aron). Finally, Dr. Liu explained that

[19] As Dr. Aron noted, approximately *one-third* of SBC Illinois' existing loop plant has been constructed since 1994, after the Commission approved the Alternative Regulation Plan. Tr. 304-306 (Aron).

this theoretical "gold-plating" argument is not even supported by the realities of the regulatory process. Staff Ex. 25.0 (Liu Rebuttal) at 23-25.

The CLECs separately contended that SBC Illinois' actual fill data were not representative of efficient operations. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Surrebuttal) at 95-129. The CLECs are incorrect. For example, the CLECs contended that these fill data are distorted as a result of either the FCC's *SBC/Ameritech Merger Order* (which required SBC Illinois to maintain 95% of its copper mainframe–terminated plant for three years) or Project Pronto (which increased the deployment of fiber facilities throughout the network). *Id.* at 108-09, 128-29. In fact, the FCC's *SBC/Ameritech Merger Order* did not impact fill, because copper cables terminating on a mainframe are rarely retired in any event. SBC Ill. Ex. 8.2 (White Surrebuttal) at 10. SBC Illinois' fiber feeder utilization was not impacted by Project Pronto, because the fill data used in this proceeding was pulled in January of 2002, prior to the deployment of Project Pronto in Illinois. *Id.* The CLECs' concerns about the accuracy of the LEIS/LEAD data used to determine actual fill rates were also misplaced. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Surrebuttal) at 100-01. LEIS/LEAD is an active database used by SBC Illinois' engineers in their day-to-day jobs and the source data that feeds into LEIS/LEAD is used in the daily assignment of service orders; SBC Illinois would not be able to function effectively if there were a high rate of errors in either database. SBC Ill. Ex. 8.2 (White Surrebuttal) at 8-9. Finally, the CLECs' contention that SBC Illinois' defective pair rate is too high is based on no facts and no engineering analysis. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Surrebuttal) at 12. Mr. White testified that they were *not* too high, because defective pairs are only recovered when economically appropriate. SBC Ill. Ex. 8.2 (White

Surrebuttal) at 6-7.[20] In short, SBC Illinois' actual fill rates are appropriate for use in its TELRIC studies and the CLECs have not demonstrated otherwise.[21]

b. Staff's Proposal

Staff proposed what it termed a "forward-looking actual fill" approach. Staff Ex. 17.0 (Liu Rebuttal) at 35. To implement this concept, Staff began with SBC Illinois' actual fill rates and then adjusted them to "correct" for certain "inefficiencies". Dr. Liu's adjustment was premised on the assumption that "*ex post*" inefficiencies will inevitably occur when a carrier builds a network: *i.e.*, that even where SBC Illinois has made its best effort to size its network efficiently for the future ("*ex ante*" efficiency), the future is always uncertain and "innocent mistakes" will inevitably be made ("*ex post*" inefficiency). Staff Ex. 25.0 (Liu Rebuttal) at 25-28, 32. Therefore, Staff recommended a 15% upwards adjustment in distribution plant fills and a 7.5% upwards adjustment in feeder plant fills. The different adjustment levels reflected the different planning horizons used to size and install distribution and feeder plant, respectively. *Id.* at 27-28, 38. Notably, Staff rejected any approach to fill rates that did not measure network utilization as required by the FCC standard of a "reasonable projection of the total actual usage on the network." Staff Ex. 25.0 (Liu Rebuttal) at 7-8. In addition, Dr. Liu contended that a TELRIC fill factor must allow the carrier to recover the costs of its forward-looking network and, therefore, that a realistic amount of spare capacity must be included.

SBC Illinois agrees with Staff that actual fill rates should be the starting point for the analysis and that any fill rate adopted by the Commission should allow full recovery of its network costs. However, the adjustments proposed by Dr. Liu are not grounded in FCC

[20] As the CLECs pointed out, certain defective pairs are totally unrepairable and are classified as "Universal Bad Pairs." These pairs, however, represent less than 0.03% of the total available pairs in the network and do not impact SBC Illinois' overall fill factors. SBC Ill. Ex. 8.2 (White Surrebuttal) at 7.

[21] Notably, Mr. Gildea, testifying on behalf of the DOD/FEA, supported use of a 45% fill rate for distribution plant (and 70% for copper feeder). DOD/FEA Ex. 1.0 (Gildea Direct) at 24.

requirements, would deny SBC Illinois the ability to recover legitimate network costs and are, in any event, too high from an engineering perspective.

Nothing in the FCC's orders to date suggests that fill factors should be adjusted to remove *ex post* inefficiencies, as that term is used by Dr. Liu. Dr. Liu explicitly accepts the proposition that SBC Illinois engineers its network efficiently "*ex ante*," *i.e.*, when measured against the information available at the time the network is designed. Staff Ex. 25.0 (Liu Rebuttal) at 22-25. In other words, Dr. Liu acknowledged that *ex post* "inefficient" spare capacity is the result of "innocent mistakes" that flow from the fact that customers move, factories unexpectedly shut down in one location or open in another and so forth. However, the FCC's rules only require "*ex ante*" efficiency and this is generally how TELRIC models are developed. In other words, the forward-looking model required by the FCC is not the same thing as an omniscient or "perfect" model. SBC Illinois is not aware of any provisions under the FCC's rules under which "*ex ante*" assumptions are at some point in the future reconciled to actual events and TELRIC estimates "trued up" to remove innocent mistakes. SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 5-7. Even if SBC were to redesign its network today so as to match its facilities perfectly with its customers, immediately thereafter customers would start to move again and factories would close or change locations. Thus, "innocent mistakes" are really not mistakes at all, but instead represent a legitimate component of both an existing and a forward-looking network. Therefore, they should not be removed from the fill calculation. SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 7-8; SBC Ill. Ex. 8.1 (White Rebuttal) at 8-9; SBC Ill. Ex. 8.2 (White Surrebuttal) at 2.

Dr. Liu's approach would also lead to underrecovery of SBC Illinois' forward-looking network costs, contrary to her own policy objective. By definition, any upwards adjustment of

SBC Illinois' actual fill levels effectively removes that plant capacity from the TELRIC cost recovery process. In rate case parlance, these costs have been "disallowed." There is no basis in equity or the FCC's TELRIC policies for disallowance of spare capacity costs prudently incurred at the time the network facilities were deployed. SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 14-15.

Finally, even if the Commission were to agree with Dr. Liu's approach on a conceptual basis – which it should not – her adjustment is too high. Although SBC Illinois has not conducted any analysis of its "innocent mistakes" (and does not know how it would go about performing such an analysis), SBC Illinois' experienced network engineer testified that the geographic areas where one would expect "*ex post*" inefficiencies, *i.e.*, where demand has fallen off because of demographic or business changes, are not nearly as significant or widespread as Dr. Liu's factor would suggest. SBC Ill. Ex. 8.2 (White Surrebuttal) at 3. Staff also failed to recognize the offsetting circumstances: *i.e.*, where SBC Illinois underestimated demand and underbuilt its facilities, leading to uneconomically high fill rates (or expensive relief jobs). SBC Ill. Ex. 14.1 (W. Palmer Rebuttal) at 7-8. Moreover, Staff's proposed adjustment did not take into either account cable "breakage" or the different characteristics of plant investment and installation costs (each of which contribute to the overall costs of a loop and which is treated separately in SBC Illinois' cost studies). In other words, a 15% error in estimating demand could have had far less than a 15% impact on loop costs on a particular route if the same cable size would have been required anyway. Similarly, even if SBC Illinois would have installed a smaller cable had it had "perfect" knowledge of the future, installation costs (a significant component of loop costs overall) would have declined very little. That is because it costs almost as much to install a 3600-pair cable as the next smaller size. SBC Ill. Ex. 8.2 (White Surrebuttal)

at 4; SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 9-12. SBC Illinois performed an analysis of Dr. Liu's adjustments, taking these factors into account, and they would have to be substantially reduced before being used in a TELRIC study. SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 10-11.

c. The Joint CLECs' Proposals

Rather than join the mainstream of regulatory and economic thought on the subject of fill factors, the CLECs cling stubbornly to highly theoretical, hypothetical models that bear no relationship to network planning and design in either a real or forward-looking world. The CLECs' fundamentally rejected any approach to fill factors that recognizes that spare capacity is inherent in any network. Rather, they contended that the TELRIC rules require the abandonment of established engineering practices – even if they are perfectly efficient and the industry norm. In other words, the Joint CLECs contend that SBC Illinois must assume a redesigned network with nearly perfect utilization based on *known* demand, and make no allowance for future demand. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 197.

That is not what the FCC's rules require, and all the CLECs' wishing will not make it so. To the contrary, to the extent the FCC has made anything clear about fill factors, it is that they *must* account for future demand. In its recent *TELRIC NPRM*, the FCC stated that its *First Report and Order* and TELRIC rules "provide[] no guidance to state commissions on this specific issue [of fill factors] beyond the general requirement that the network should be sized to meet *reasonably foreseeable demand*." *TELRIC NPRM*, ¶ 73 (emphasis added); *see also, id.*, ¶ 18 ("The TELRIC methodology assumes that the relevant increment of output is all current *and reasonably projected future demand*.") (emphasis added); *Virginia Arbitration Order*, ¶ 37 ("the rates for each UNE must . . . [be] based on current and reasonably projected future demand").

That is how SBC Illinois sizes its network today, and how it would size any forward-looking network.

The CLECs resort to the FCC's *Universal Service Inputs Order* and the *Virginia Arbitration Order* in an attempt to support their claim that TELRIC fill factors must exclude spare capacity. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Surrebuttal) at 77-78. While the FCC decided in the *Universal Service Inputs Order*[22] that it would base fill factors "on current demand, . . . rather than on ultimate demand," it did *not* conclude that an efficient carrier would not deploy capacity for ultimate demand. Rather, it merely determined that *for universal service purposes* such capacity should be excluded. *See TELRIC NPRM*, ¶ 73; *Id.* at n.118 ("'[T]he fact that the industry may build distribution plant sufficient to meet demand for ten or twenty years does not necessarily suggest that these costs should be supported by the federal universal service support mechanism'" (quoting *Universal Service Inputs Order*, ¶ 199). The FCC took pains to contrast its determination in the *Universal Service Inputs Order* with its TELRIC fill factor rules, making clear that its TELRIC rules do not foreclose establishing fill factors based on projected future demand. *See id.*, ¶ 73; *see also Kansas 271 Order*, 16 FCC Rcd. 6237, ¶ 78 (rel. Jan. 22, 2001) ("If a fill factor is set too high, the particular element will have insufficient capacity to accommodate *anticipated increases in demand* or service outages.") (emphasis added). Moreover, the FCC has cautioned that universal service subsidies are based on a special model that "should not be relied upon to set rates for UNEs." *Kansas 271 Order*, ¶ 84. Indeed, the

[22] Tenth Report and Order, CC Docket No. 96-45, 97-160 (FCC rel. October 21, 1999) ("*Universal Service Inputs Order*"); Memorandum Opinion and Order, Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration, CC Docket No. 00-218, DA 03-2738 (rel. Aug. 29, 2003) ("*Virginia Arbitration Order*").

D.C. Circuit has chastised AT&T for attempting to apply the *Universal Service Inputs Order* to TELRIC rates. *AT&T Corp. v. FCC*, 220 F.3d 607, 619 (D.C. Cir. 2000).[23]

The *Virginia Arbitration Order* is no more dispositive of this issue. There, the FCC's Wireline Competition Bureau conducted an arbitration, standing in the shoes of the Virginia state commission. The Bureau decided, based on the facts before it, to reject Verizon's actual fill proposal and adopt the CLECs' fill approach because the CLECs' proposal "comport[ed] with the Commission's treatment of fill factors in the [*Universal Service*] *Inputs Order*." *Id.* at 87 (quoting *Verizon Pricing Order*, ¶¶ 246-247). However, that decision is not a ruling by the FCC itself and carries no more weight than any ruling from another state commission. In fact, the FCC itself has since spoken on this very issue in its *TELRIC NPRM*, where the FCC made it clear that the treatment of fill factors in the *Universal Service Inputs Order* is inconsistent with the TELRIC fill factor rule. *TELRIC NPRM*, ¶ 73; SBC Ill. Ex. 14.1 (Palmer Surrebuttal) at 16-18. Moreover, the distribution fill factor that the CLECs proposed there, and that the Bureau approved, was 53.5% – much closer to the distribution fill SBC Illinois proposed here than the CLECs' 85% proposal. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 18-19. Notably, AT&T and MCI have recommended lower distribution fills in many other states than they are recommending here. SBC Ill. Ex. 14.1 (W. Palmer Rebuttal) at 16-19. In short, the CLECs' view of the required TELRIC standard is shared by no one else – not the FCC, not other state commissions and not the 7th Circuit.

[23] The Attorney General originally supported Staff's fill factor proposals, when Staff advocated continued use of the fill factors approved by the Commission in the 1998 TELRIC proceeding. AG Ex. 1.3 (Dunkel Surrebuttal) at 11-12. In the final Surrebuttal round, the Attorney General suddenly shifted position and now recommends use of the fill factors that the FCC uses in its universal service fund model. AG Ex. 1.4 (Regan Surrebuttal) at 12-14. The Commission should disregard this proposal. *First*, it comes way too late in the proceeding. The Attorney General could have, but did not, propose their use of earlier when the parties would have had an opportunity to respond. Having failed to do so, the Attorney General should not be permitted to inject yet another proposal into the record. *Second*, as noted above, the FCC has been very clear that the universal service fund model is *not* TELRIC-compliant and should not be used to develop TELRIC costs.

Not surprisingly, the fill factors that the CLECs proposed for use in the case bear no relationship to any reasonable view of a capacity utilization in a forward-looking network. The CLECs' primary proposal is to adopt the fill factors established in the Commission's rules for retail LRSIC studies, *i.e.*, maximum "usable capacity." The "usable capacity" approach assumes that the network is totally utilized and includes only enough spare capacity for maintenance, testing or administrative purposes. In other words, it excludes all spare capacity deployed for future demand. This is exactly the same proposal which the CLECs made in the 1998 TELRIC proceeding and which the Commission rejected *then* on the grounds that it was not TELRIC-compliant. *1998 TELRIC Order* at 34; Staff Ex. 17.0 (Liu Rebuttal) at 20. It has not improved with age.

Basing fills on maximum usable capacity violates the FCC's pricing rules because no efficient carrier operating even a hypothetical network could operate at maximum usable capacity: maximum usable capacity fill factors would exclude even the spare capacity that is due to "breakage" (*i.e.*, the fact that cables are available only in certain standard sizes), making the achievement of such fill levels operationally and technically *impossible*. Second, no efficient carrier would actually operate its network at maximum usable capacity, because it would literally be digging up streets and yards every time a customer ordered a second line or every time a new service request came in. SBC Ill. Ex. 8.0 (White Direct) at 20-21; SBC Ill. Ex. 14.0 (W. Palmer Rebuttal at 6-7). The Commission Staff agrees that the Commission got it right the first time when it rejected the usable capacity standard, because it is *not* consistent with the FCC's rules or the relevant policy considerations. Staff Ex. 17.0 (Liu Rebuttal) at 26-35.

As a fallback argument, the CLECs urged that the LRSIC and TELRIC fill standards must be the same to ensure consistency between retail and wholesale cost studies. The CLECs

are incorrect, as a matter of law and policy. *First*, TELRIC studies for UNEs must conform to the cost standards established by the FCC – not this Commission's policies for retail service cost studies. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 12; Staff Ex. 17.0 (Liu Rebuttal) at 21-22. *Second*, LRSIC and TELRIC cost studies serve very different purposes. LRSIC studies are used as a price *floor* for retail services; SBC Illinois can and does price its retail services above LRSIC to generate contribution that recovers its total costs, including the costs associated with spare capacity in the network. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 11-13. In contrast, TELRIC costs (including the shared and common cost allocation) constitute a price *ceiling* for UNEs. If network costs (such as spare capacity) are not recognized in TELRIC studies, they go unrecovered forever. *Id.* at 12-13; SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 14-15.

The CLECs' next alternative is to use the same fill factors adopted by the Commission in the 1998 TELRIC proceeding, which are somewhat lower than the LRSIC "usable capacity" fill factors. This approach was probably not TELRIC-compliant even when it was adopted in 1998 and regulatory developments since then underscore its inadequacies. As explained by both SBC Illinois and Staff, the "target fill" approach approved by the Commission in the 1998 TELRIC proceeding is not, and never was, a measure of network utilization. At best, "target fills" identify the economic cross-over point at which SBC Illinois would reinforce its outside plant, rather than continue to operate at that utilization rate. Staff Ex. 17.0 (Liu Rebuttal) at 5; SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 5-6. In any event, the Commission did not adopt target fills, but rather usable capacity fills, adjusted downwards slightly to account for increased maintenance, testing and administration. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 4-5; Staff Ex. 17.0 (Liu Rebuttal) at 4-5. As the Commission recognized, it did not consider an actual fill-based approach in that proceeding, because no party had recommended it. SBC Ill. Ex. 1.0 (Panfil Direct) at 19; SBC

Ill. Ex. 14.0 (W. Palmer Rebuttal) at 7. Even at the time, the Commission Staff was unsure that its approach (which the Commission adopted) complied with TELRIC principles. Staff Ex. 34.0 (Liu Rebuttal) at 45-46. Regulatory developments since that time have demonstrated that it was, in fact, *not* TELRIC-compliant. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 8-9.

Apparently recognizing the weakness in their first two recommendations, the CLECs offered yet a third alternative – *i.e.*, to start with Dr. Liu's "forward-looking actual fill" methodology but to adjust it upwards based on *their* view of "efficiency." Essentially, the CLECs determined the utilization levels for SBC Illinois' 20 wire centers showing the highest fill rates for each of the four major loop components (copper distribution, copper feeder, DLC chassis and DLC plug-ins), averaged them and claimed that these fill rates represented efficient utilization rates that can and should be expected across SBC Illinois' entire network. AT&T/Joint CLEC Ex. 1.3 (Starkey/Fischer Supplemental Surrebuttal) at 22-23. Their approach does not withstand even cursory scrutiny.

First, the CLECs provided no evidence that 20 wire centers constituted a meaningful sample. Mr. Starkey was unable to provide any basis other than judgment for choosing 20 offices, rather than 30 or 40. Tr. 1763-67 (Starkey).[24] Even at best, these wire centers would have accounted for only 7% of SBC Illinois' 278 total wire centers. However, the wire centers actually *pulled* by the CLECs in their analysis were skewed heavily in the direction of tiny, rural offices. SBC Ill. Starkey/Fischer Cross Ex. 48P; Tr. 1782-1787. As a result, for copper distribution and fiber feeder facilities, the CLECs' samples represented only 2.1% and 2.8% of the usable pairs in SBC Illinois' network, respectively – not even the paltry 7% which they

[24] Although Mr. Starkey congratulated himself for being "conservative" by increasing Ms. Liu's sample office data requested in discovery from 13 to 20 wire centers, the difference hardly seems significant. AT&T/Joint CLEC Ex. 1.3 (Starkey/Fischer Surrebuttal) at 22; Tr. 1764 (Starkey).

should have produced. Moreover, in each sample, a handful of the 20 offices dominated the weighted average. For example, for copper distribution plant, *two wire centers* accounted for almost 75% of the lines. Tr. 1782-83 (Starkey). Two offices do not a network make.

Second, the CLECs made no attempt to control for demographic or other factors that could have contributed to these wire centers' high utilization levels. For example, all else being equal, one would expect higher utilization rates in mature communities with no capacity for growth, than in young communities that have not yet "grown into" their capacity; similarly, one would expect higher utilization rates in small rural communities with stable demand. Tr. 1758-59, 1762 (Starkey). The wire centers that ended up in the CLECs' "Top 20" samples exhibited both characteristics. Moreover, the CLECs contended that they had reviewed these samples to ensure that they "did not represent only small/rural offices or large/urban offices." AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Supplemental Surrebuttal) at 23. What they failed to mention is that their samples included *no* large/urban offices (Access Area A offices, by their definition) and only a token appearance by *any* Chicago or other urban wire center. Tr. 1790-91 (Starkey); SBC Ill. Starkey/Fischer Cross Ex. 48P.

Third, their approach of evaluating distribution, copper feeder, fiber feeder, and DLC plug-in fill factors separately was inappropriate. The decision to develop a unique set of top 20 offices for each network component necessarily rested on an implicit assumption that they are engineered and managed separately from one another. This is inherently implausible. For example, copper feeder and fiber feeder are typically installed side-by-side along the same routes. Tr. 1795 (Starkey). SBC Illinois may well be able to tolerate higher fill rates on (for example) copper feeder if there is ample spare capacity in the companion fiber feeder facilities. A comparison of the top 20 copper and fiber feeder offices shows very little overlap; in fact, high

copper feeder utilization is typically accompanied by lower (in some instances, much, *much* lower) fiber feeder utilization in the same wire center. SBC Ill. Starkey/Fischer Cross Ex. 49P. The CLECs' analysis ignores all such interrelationships.

Finally, the CLECs made a separate adjustment for defective pairs, capping defective pair rates at 1% of usable pairs. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Supplemental Surrebuttal) at 21. This adjustment was based solely on the fact that, according to the CLECs, defective pairs constitute 1% of usable capacity ". . . in a number of wire centers." *Id.* However, the CLECs made no attempt to evaluate whether a 1% defective pair rate is sustainable or prudent on an overall network basis. In the real world, reclaiming defective pairs costs money: SBC Illinois does not spend that money unless defective pairs would solve an immediate capacity problem. Even Mr. Starkey acknowledged that it was not his position that SBC Illinois should go out "willy-nilly" and reclaim all defective pairs, whether they are needed or not. Tr. 1810-12 (Starkey). Therefore, it was arbitrary on the CLECs' part to simply exclude all defective pairs above the 1% level.

In short, the CLECs' alternative analysis does not provide useful information that could be used in evaluating the efficiency of SBC Illinois' actual fill rates. All it demonstrates is that some wire centers have higher fills than other – not that all wire centers could or should be expected to operate at that level.

2. Depreciation

Depreciation expense is a core element of any TELRIC-based price and is used to allow the incumbent to recover the "true changes in the economic value of an asset" over time. *First Report and Order*, ¶ 703. There are two components of depreciation – the economic life of the asset, and the rate at which the asset is depreciated over its useful life. *Triennial Review Order*, ¶ 686.

SBC Illinois uses a straight-line depreciation rate, so the only issue here is the proper method of determining an asset's useful economic life. Rather than relying on outdated asset lives developed a decade ago, SBC Illinois proposes to use financial reporting lives to make this determination, *i.e.*, the lives it uses for financial reporting purposes with the Securities and Exchange Commission, which are based on Generally Accepted Accounting Principles ("GAAP"). Use of financial reporting depreciation lives both reflects and encourages the use of new and efficient technologies, as well as investment in infrastructure, by accurately accounting for the *true decline in value of an asset* due to competition and ongoing technological advances, as the *Triennial Review Order* requires.[25] *Triennial Review Order*, ¶ 689. As the FCC explained, "[i]n calculating depreciation expense . . . the rate of depreciation over the useful life should reflect the actual decline in value that would be anticipated in the competitive market that TELRIC assumes. In this way, *our 'economic depreciation' requirement is designed to replicate the results that would be anticipated in a competitive market.*" *Id.* (emphasis added). The *Triennial Review Order* thus makes perfectly clear that competition and technological advancement are critical considerations in developing forward-looking, TELRIC-compliant depreciation lives. *Id.*, ¶¶ 685-689. SBC Illinois' proposed financial lives take these factors into account; the CLECs' suggested lives do not.

In the 1998 TELRIC Order, the Commission adopted FCC-prescribed depreciation lives from a 1995 proceeding. At that time the Commission chose not to "abandon the traditional engineering and economic principles which [it had] utilized in the past." 1998 TELRIC Order at 27. As explained in the *Triennial Review Order*, ¶ 689, however, the FCC, consistent with

[25] In fact, the telecommunications industry adopted separate financial reporting lives for the very purpose of ensuring that the books of the company reflected the value of its assets *in a competitive environment*. SBC Ill. Ex. 13.0 (Vanston Direct) at 11.

Section 252(d)(1) of the 1996 Act, now requires state commissions to look past historical approaches to setting rates for heavily regulated utilities and, instead, to approach depreciation in the context of the fully competitive marketplace that TELRIC presumes. In such a competitive market the ILEC faces significant facilities-based competition, which shortens the useful economic life of its equipment, as Dr. Vanston demonstrated in detail. *Id.*, ¶ 689. Technological change also continues at a rapid pace, with the industry undergoing a dramatic shift to fiber and other facilities geared toward high-speed data transmissions, and that change also must be taken into account. These factors all support adoption of financial reporting lives.

a. SBC Illinois' proposal to use financial reporting lives.

The FCC's rules give little guidance on how to compute depreciation expense. In particular, the FCC "recognize[d] no particular useful life as a basis for calculating depreciation costs." *Verizon*, 535 U.S. at 521. This gives state commissions "considerable discretion" in this area and "leaves plenty of room for differences in the appropriate depreciation rates." *Id.* at 519, 521. However, the FCC has specifically approved the use of financial reporting lives as one TELRIC-compliant approach. *Kansas 271 Order*, 16 FCC Rcd. 6237, ¶ 76 (2001). And the FCC recently reiterated that TELRIC permits the use of financial reporting lives for depreciation purposes. *Triennial Review Order*, ¶ 688; *TELRIC NPRM*, ¶ 96. It is thus beyond question that the Commission's adoption of financial reporting lives would be fully consistent with TELRIC principles.

The *Triennial Review Order* makes clear that the 1996 Act and UNE prices set under that Act are supposed to encourage the deployment of new technologies as they become available. As other commissions have realized, adopting financial reporting lives will promote this goal. In 1998, when technological advancement was moving more slowly than it is today, the Indiana Utility Regulatory Commission held: "we anticipate technological advances to continue at a

rapid pace for the foreseeable future. Because we expect Ameritech to take full advantage of the efficiencies such developments are expected to represent, then at least for the limited purpose of establishing the forward-looking cost of UNEs we are prepared to accept economic lives which are less than prescribed by the FCC." IURC Order in Cause No. 40611, at 11. Even more significantly, the Indiana Commission recently reiterated its view that financial reporting lives are the most appropriate depreciation input, relying on the *Triennial Review Order*'s mandate that "depreciation should reflect *any* factors that would cause a decline in asset values, such as competition or advances in technology." *Triennial Review Order*, ¶ 685 (emphasis added). As the Indiana Commission recognized, competition and technological innovation continue to grow at a rapid-fire pace.

SBC Illinois' depreciation expert, Dr. Lawrence Vanston, and his company, Technology Futures, Inc., have been making quantitative forecasts of the timing by which new technology replaces old for more than 25 years. SBC Ill. Ex. 13.0 (Vanston Direct) at 1-4. Dr. Vanston explained that the use of financial reporting lives is especially appropriate where, as in telecommunications, the obsolescence of old technology is driven by technology change and competition. *Id.* at 3. For example, as broadband subscribership and bandwidth needs increase, the advantage of fiber optics over metallic cable will become insurmountable and metallic cable – which is still the technology of choice today – will be driven out of use. *Id.* at 39. Contrary to claims of the opposing witnesses, Dr. Vanston's study takes into account the current role of DSL in predicting the financial life of copper plant and circuit switching. To meet the advanced services needs that customer will have in the future, however, will require upgraded circuit equipment and fiber much deeper into the network. SBC Ill. Ex. 13.1 (Vanston Rebuttal) at 20. Much of the fiber currently in use, moreover, is becoming obsolete because it does not take

advantage of dense wavelength division multiplexing, a technology that today greatly increases capacity by allowing many wavelengths to be simultaneously carried on the same fiber. SBC Ill. Ex. 13.0 (Vanston Direct) at 48. Even with this evidence, however, SBC Illinois has taken a conservative approach to depreciation, electing to propose depreciation lives that are longer than what Dr. Vanston found to be appropriate. *Id.* Schedule LKV-2 at 5.

Furthermore, increased intermodal competition will reduce the number of access lines provisioned by SBC Illinois, stranding a large amount of network equipment. *Id.* at 27-35. The Staff witness's argument that facilities-based competition is "not a viable threat in the short run" or "likely in the long run" (Staff Ex. 2.0 (Staranczak Direct) at 29), is not just unsupported, but also violates the federal standard for depreciation. The FCC has made clear that state commissions must establish depreciation lives based on how fast depreciation would occur in the market that TELRIC assumes (*Triennial Review Order*, ¶ 689), which is a fully competitive market characterized by ubiquitous "facilities-based competition." *Id.*, ¶ 680. And in that kind of market, depreciation lives would undeniably be shortened both by facilities-based competition and by technological change (since carriers in the TELRIC world are always assumed to be using the latest, most efficient technology available).

The use of financial reporting depreciation lives is, by nature, economic-based and forward-looking because it reflects future changes in the value of assets based on all these kinds of factors. SBC Ill. Ex. 13. 1 (Vanston Rebuttal) at 4. SBC Illinois' suggested depreciation lives take into account the need for implementation of new technology as well as current and growing competition. Accordingly, SBC Illinois' proposed lives are fully TELRIC-compliant and should be adopted.

b. The CLECs' and Staff's proposal to continue using FCC-prescribed lives.

The lives that the ICC adopted in 1998, and which all but one of the opposing witnesses advocate, are now too long because they do not "reflect the actual decline in value that would be anticipated in the competitive market that TELRIC assumes." *Triennial Review Order*, ¶ 689. These FCC-prescribed lives are out of date and out of line with economic reality. UNE lives must reflect competitive risks and the expected decline in value of assets placed today. The FCC-prescribed lives, however, harken back to an era of minimal competition when faster adoption of new technology to remain competitive and loss of market share were not pressing issues. By way of contrast, SBC Illinois now faces very real competition, which is growing rapidly, from cable telephony (which could achieve 25% or more market share within a few short years), broadband services (which already have reached 40% penetration in many Chicago suburbs), and cellular communication (which will replace wireline communication completely in over 20% of households by 2005). SBC Ill. Ex. 13.0 (Vanston Direct) at 29-31. Further, the current rates do not account for technological advances. For example, the current 25-year life for underground metallic cable is unrealistically long considering that much metallic wire has already been replaced by fiber, and all broadband networks will have to be 100% fiber feeder. *Id.* at 38-48. The FCC-prescribed rates also rely considerably on physical mortality – a factor that was important in the past but that has been replaced by technological obsolescence and competition as driving factors in determining economic lives. *Id.* at 17-18. Physical retirement is a poor indicator of the future decline in the *economic value* of an asset, which TELRIC-compliant depreciation lives must reflect. *Triennial Review Order*, ¶ 689.

There is no reason for the Commission to renew the FCC-prescribed lives that it adopted in 1998. In the first round of TELRIC rate proceedings after passage of the 1996 Act, the ICC,

along with many other state commissions, adopted the FCC's regulatory lives for depreciation purposes. At the time those lives were just a few years old, and at the time the FCC had referred to them as a sort of safe harbor for that first round of rate proceedings. *See First Report and Order* ¶ 702; *TELRIC NPRM*, ¶ 95. As the FCC explained to the Supreme Court, the reference to regulatory depreciation lives in the *First Report and Order* "merely offer[ed] tentative guidance at a time when state commissions had to make large numbers of ratemaking determinations under the short time frames established in Section 252." FCC Reply Br. in *Verizon* at 11, 2001 WL 881216, *11. Times have changed. The recent *Triennial Review Order* requires the reflection of a competitive environment. *Triennial Review Order*, ¶ 689. As the Indiana Commission recently found:

> [W]e reject any claim that we are somehow bound to adopt regulatory lives, or even that they must be used as a starting point. *Whatever the merit of such an argument may have been in 1996, it carries no weight in 2003.*
>
> Despite the frequent use of regulatory lives by other states in the first round of TELRIC proceedings, this Commission led the way toward a more progressive view of depreciation, tied more closely to the ongoing development of new technology and the growth of competition. The FCC has endorsed that approach as being TELRIC compliant (Kansas 271 Order, ¶ 76) and more recently made clear that the development of new technology is a critical consideration for depreciation. (Triennial Review Order, ¶ 685).
>
> We believe that our decision was correct in 1998 and is even more appropriate today. Technological advancement continues at a rapid pace, leading to faster obsolescence of all types of telecommunications equipment. If anything, the pace of technological advancements should only increase as unbundling and pricing determinations are brought more in line with the goals of the 1996 Act in the wake of the 1999 Biennial Order, the Triennial Review Order, and the TELRIC NPRM, and as the incentive for facilities-based investment and innovation increases.
>
> We want to encourage SBC Indiana to take advantage of and deploy technological advancements, and one way to do that is to allow it to use reasonable depreciation lives based on criteria SBC employs for financial reporting purposes. We also note the increase in competition faced by

> SBC Indiana, both intermodal and intramodal, compels use of shorter depreciation lives. (*Triennial Review Order*, ¶ 685). SBC Indiana also has now "fully and irreversibly opened" the local market to competition, as evidenced by the FCC's grant of Section 271 long-distance authority, and such approvals often accelerate the pace and level of competition for the ILEC. For all of these reasons, we adopt SBC Indiana's proposal to use financial reporting lives in computing depreciation expense. [26]

The Indiana Commission understood that improvements in technology will render current equipment obsolete much faster, and increased competition will render some of SBC Illinois' equipment worthless because there will be no demand for it. Both factors lower asset lives. Like the Indiana Commission, this Commission should reject all proposals to base forward-looking depreciation on outdated regulatory lives, which were prescribed to respond to circumstances as the existed back at that time.

The use of financial reporting lives takes into account the competitive environment and rapid technological change that has already begun in the telecommunications industry and is certain to expand dramatically in the future. FCC-prescribed lives, quite simply, do not. Staff and intervenors ask the Commission to turn a blind eye to the market and to the rapidity of technological obsolescence. Finally, the adoption of financial lives would encourage the use of new and efficient technologies, as well as investment in infrastructure, by accurately accounting for the true decline in value of assets. For these reasons, the Commission should adopt the financial reporting depreciation lives proposed by SBC Illinois.

3. Cost of Capital

Cost of capital, sometimes referred to as cost of money, reflects the return that SBC Illinois must provide to investors in order to attract sufficient investment in the business line at issue. *First Report and Order*, ¶ 700. Here, that means the investor-required rate of return to

[26] *Indiana UNE Order* at 60-66.

encourage investment in SBC Illinois' UNE business line. The main consideration in the development of an appropriate forward-looking cost of capital is the risk inherent in that line of business. SBC Ill. Ex. 12.0 (Avera Direct) at 4-6. This is because investors expect higher returns for riskier businesses: it is a "fundamental tenet of finance that, as risk increases, so do investors' required rates of return." SBC Ill. Ex. 12.1 (Avera Rebuttal) at 38-39. Similarly, because the goal of TELRIC is to "replicate[] the price that would exist in a market in which there is facilities-based competition" (*First Report and Order*, ¶ 703; *Triennial Review Order*, ¶ 680), the FCC requires that the cost of capital also "reflect the risk of a competitive market," which the state commission does by assuming the existence of a market in which "all facilities-based carriers would face the risk of losing customers to other facilities-based carriers." *Triennial Review Order*, ¶ 680. Thus, the Commission must assume that SBC Illinois faces "widespread facilities-based competition" from "ubiquitous competitor[s]." *Virginia Arbitration Order*, 32, 93. This new mandate requires a higher cost of capital than was set in the first round of TELRIC proceedings in 1998, because such "increased competition would lead to increased risk, which would warrant an increased cost of capital." *Triennial Review Order*, ¶ 681.

The FCC requires that the cost of capital compensate the ILEC for the increased risk of a fully competitive market because a failure to do so "would reduce artificially the value of the incumbent network and send improper pricing signals to competitors." *Id.*, ¶ 682. This, in turn, "would discourage competitive LECs from investing in their own facilities and thus slow the development of facilities-based competition." *Id.* Likewise, "[e]stablishing UNE prices based on an unreasonably low cost of capital would discourage competitive LECs from investing in their own facilities and thus slow the development of facilities-based competition." *Id.* Thus,

the cost of capital—and associated risk—represents a critical part of any TELRIC-based price. *Id.*, ¶ 677.

In its 1998 TELRIC Order, the Commission established an overall cost of capital of 9.52%. At that time, however, the FCC had not yet clarified that the cost of capital must fully reflect the risks inherent in a fully competitive market, as it did in the *Triennial Review Order*. That represents one significant, and binding, change since 1998. Further, even AT&T and MCI admit that "SBC faces very different financial and economic conditions today that those it faced in 1998." AT&T/MCI Jt. Ex. 2 (Murray Direct) at 53. SBC Illinois faces ever-increasing competition from UNE-P based CLECs, facilities-based CLECs, and bypass technologies such as Voice over Internet Protocol ("VoIP"), cable telephony, and wireless. SBC Ill. Ex. 12.0 (Avera Direct) at 4-5. Investors have taken note of this significantly more risky environment, resulting in downgrades to SBC's investment rating and dramatic decreases in its stock price. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 30-32, 38, 50-51, 54. Investment industry leaders like Standard & Poor's, Moody's, Value Line, *Business Week*, and the *Wall Street Journal* all have recognized the significant increase in the risks faced by ILECs in a world with ever-growing intermodal and intramodal competition – risks that investors take into account and expect to compensated for before they will invest in an ILEC. *Id.* at 30-31, 38. For these reasons, and as explained further below, SBC Illinois proposes a cost of capital of 12.19%, which is undeniably reasonable and, if anything, conservative.

Despite the FCC's mandate to assume the risk of a fully competitive market and the undeniable real-world increase in risk for ILECs, Staff and the CLECs propose a cost of capital that is *lower* than the Commission approved in 1998. Staff proposes a cost of capital of 8.62% and the CLECs propose a cost of capital of 7.54%. These proposals lack common sense. As Dr.

Avera put it, the "conclusion that SBC's cost of capital has fallen to unprecedented lows in the face of soaring uncertainty violates the risk-return tradeoff principle that is fundamental to finance theory and underlies' investors' behavior in capital markets." SBC Ill. Ex. 12.1 (Avera Rebuttal) at 35. Moreover, the *only* way the Commission could decrease the 9.52% cost of capital adopted in 1998 would be if it found that the risks faced by SBC Illinois in a market filled with ubiquitous facilities-based competition would somehow be *less* than the risk SBC Illinois faced in 1998.

Neither the law nor the facts permit such a result. To begin with, while the *Triennial Review Order* and the *Virginia Arbitration Order* make crystal clear that TELRIC requires a cost of capital based on the assumption of a fully competitive market, Staff has refused to abide by that governing standard, asserting that "the cost of capital adopted in this proceeding should *not* reflect a fully competitive market." Staff Ex. 31.0 (McNally Rebuttal) at 6 (emphasis added). That refusal to follow the governing federal standard, which is manifested most clearly in Staff's unreasonable capital structure, dooms Staff's proposal from the outset as being both unlawful and too low. And if Staff's 8.62% proposal is too low (because it fails to assume the risks of a fully competitive market), then the CLECs' even lower proposal must also be rejected. (Staff tried to justify its defiance of the federal standard by asserting that SBC Illinois' cost models "reflect a level of efficiency less than that of the TELRIC ideal." *Id.* at 4. That fails for two reasons. First, SBC Illinois' cost models are fully TELRIC-compliant, as demonstrated by SBC Illinois' witnesses herein and by other states' adoption of those models for setting UNE prices. Second, if the Commission believes there are problems with the cost models it must make specific, defensible changes to the models themselves, not try to "fix" the models by irrationally reducing the cost of capital.)

Stark evidence that Staff's and intervenors' proposals are too low comes from the fact that the cost of capital they propose would give SBC Illinois a cost of capital similar to that of heavily regulated gas and electric utilities. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 34-35. TELRIC does not allow ILECs to be treated like traditional utilities under traditional ratemaking regimes, and no one could seriously claim that an ILEC's UNE business is less risky than the regulated utility operations of local gas and electric companies. *Id.* at 6-7, 35-36. Rather, TELRIC requires the cost of capital to reflect the risks of a fully competitive market, one "without a twist of regulation or a dash of incumbent monopoly." SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 5. Any other approach is unlawful.

The ultimate test in setting a cost of capital is what investors will buy. Thus, the Commission must ask itself whether a proposed cost of capital will provide investors with a sufficient return so that, in light of the risks inherent in the fully competitive market assumed under TELRIC, they still would provide enough capital to the ILEC to allow it to maintain its financial integrity. If SBC Illinois' cost of capital were set at the low levels proposed by Staff and CLECs, SBC Illinois would be unable to raise the capital needed to run its business and its credit rating would almost certainly be downgraded. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 29; SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 6-7. This would violate TELRIC, which requires that the cost of capital be set high enough to allow the ILEC to maintain a reasonable level of financial strength.

By contrast, several real-world benchmarks support SBC Illinois' proposed 12.19% cost of capital and, in fact, show that it is conservative. First, the FCC has designated 11.25% as the starting point for a cost of capital analysis. *First Report and Order*, ¶ 702. While a state commission can adjust that figure up or down based on the evidence, SBC Illinois' proposal is

leagues closer to the FCC's default value than the existing cost of capital or the even lower proposals of Staff and the CLECs. Second, in the first major TELRIC cases decided after the *Triennial Review Order* clarified the law on cost of capital, the FCC's Wireline Competition Bureau adopted a 12.95% cost of capital for Verizon, and said that it would have gone higher if it could. *Virginia Arbitration Order*, ¶ 104. Third, the Pennsylvania Public Utilities Commission, after seeing the *Triennial Review Order* and recognizing what it meant for cost-of-capital determinations, revisited its own prior decision and raised Verizon's cost of capital from 9.83% to 12.37%, which it held to be "more reflective of a competitive market." Final Opinion and Order, Docket No. R-00016683, at 15, 61 (Penn. Pub. Utils. Comm'n, Dec. 11, 2003) ("*Pennsylvania UNE Order*"). Fourth, in a fully competitive market one would expect the risks faced by ILECs and CLECs to be about the same (with the ILECs still a bit higher as a result of its regulatory risk). When SBC told the FCC that the CLECs' cost of capital should be about 12.19%, however, AT&T claimed that it was "*too low*" and should actually be "15%, and possibly much higher." SBC Ill. Ex. 12.1 (Avera Rebuttal) at 36 (quoting FCC *ex parte* to FCC dated Feb. 4, 2003). All of these benchmarks demonstrate the reasonableness of SBC Illinois' proposed cost of capital and show that the other proposals are out of touch with the *Triennial Review Order* and the expectations of real-world investors.

There are three main aspects of the cost of capital: the capital structure, the cost of debt, and the cost of equity.

a. Capital Structure

Cost of capital is a function of the cost of equity and the cost of debt, apportioned based on the applicable capital structure. The capital structure, accordingly, drives the mix of equity and debt that constitutes cost of capital. Consistent with TELRIC and forward-looking considerations, SBC Illinois proposes a capital structure of 86% equity and 14% long-term debt.

SBC Ill. Ex. 12.0 (Avera Direct) at 7. SBC Illinois derived its debt-to-equity ratio based on a market value capital structure, which reflects the competitiveness of the telecommunications industry and the fact that investors in this field, as in any competitive industry, focus on market value capital structures. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 62. Staff, by contrast, proposes a capital structure of 51% equity and 49% debt (a mix of short and long term) and the CLECs propose a capital structure of 66% equity and 44% debt (a mix of short and long term). Neither proposal is tenable in a market with full competition, and adopting either proposal would have the real-world consequence of likely downgrading SBC's overall investment rating and significantly reducing SBC Illinois' ability to raise necessary capital.

The main dispute here is whether capital structure should be based on market values (as SBC Illinois proposed), or a "hybrid" of market and book value (as the CLECs proposed), or on a "hypothetical" structure having nothing to do with market or book values (as Staff proposed). Investment experts and the FCC agree that market values alone are the proper measure under TELRIC because they are the proper measure for determining the forward-looking cost of capital for companies operating in a competitive environment. SBC Ill. Ex. 12.0 (Avera Direct) at 30. As Dr. Avera explained, while the historical practice in traditional regulated utility rates cases has been to base the capital structure on book values, and the Commission followed that historical practice in its 1998 TELRIC decision, that is not appropriate under the *Triennial Review Order*'s requirement to set the cost of capital based on the risks of a fully competitive market:

> The change to market value capital structures is necessary because telephone companies are operating primarily in a competitive world, where investors focus on market value capital structures. Indeed, regulated utilities have always been an exception to the general rule of financial theory and practice, in which market values are the appropriate indicia of capital structure. As noted earlier, to be able to raise capital, telephone companies, like other competitive firms, must pay

> returns that are competitive at the current market price of their securities, not the embedded book value of the mix of stock and bonds. Accordingly, if the prescribed rate of return is based on weights different from current market values, it will not measure the actual capital costs required to raise capital in today's capital markets. Equity can only be obtained at current market values and unless the cost of capital is based on a market value capital structure, it will fail to provide a competitive, market-determined rate of return sufficient to attract capital. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 62-63.

The use of market values to determine capital structure also is consistent with Section 251(d)(2) of the 1996 Act, which "specifically prohibit[]s the use of traditional rate-base, rate-of-return ratemaking," *i.e.*, the ratemaking that relies on book values to establish capital structures. *Virginia Arbitration Order*, ¶ 102. And as the Supreme Court recognized, the TELRIC methodology "specifically permits more favorable allowances for costs of capital and depreciation than were generally allowed under traditional ratemaking practice." *Verizon Comms. Inc. v. FCC*, 535 U.S. 467, 520 (2002). Thus, market values rather than book values must be used to establish the ILECs' capital structure in TELRIC proceedings. As the FCC's Wireline Competition Bureau explained:

> In calculating TELRIC prices, the theoretically correct capital structure is based on market values of debt and equity, not book values. . . . The book value of Verizon's existing network is [this] irrelevant for these purposes [of establishing a cost of capital under TELRIC]. Investors would not earn the return that they require if a cost of caop8tal that is based on book value is applied to the economic value of their assets, given that rational investors value these assets at market value. Thus, the use of a capital structure based on market values, rather than book values, represents a departure from traditional ratemaking, but one that is entirely appropriate under the Act. *Virginia Arbitration Order*, ¶ 102 (emphasis added).

For these same reasons, the Bureau gave "no weight to the portion of AT&T/WorldCom's proposal that is based on incumbent LECs' book value capital structure." *Id.*, ¶ 103. This Commission should do the same and reject the CLECs' and Staff's proposed capital structure.

Similarly, Ibbotson Associates, a source repeatedly relied on by AT&T/MCI witness Murray, finds that market values must be used in setting a capital structure: "The importance of

using an appropriate capital structure in your WACC [weighted average cost of capital] calculation cannot be stressed enough. . . . *Financial theory unambiguously states that market values are required to calculate the weights for a WACC correctly*." SBC Ill. Ex. 12.1 (Avera Rebuttal) at 64 (quoting Ibbotson Associates, *Industry Analysis Guide* (2003)) (emphasis added). Likewise, Professors Eugene F. Brigham and Louis C. Gapenski concluded in *Financial Management, Theory and Practice* that "[w]e are absolutely convinced that . . . firms should focus on market value capital structures and based their cost of capital calculations on market value weights." SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 37-38. Thus, the market value approach is the only one consistent with financial theory and practice, which recognize that market values are the only valid basis on which to establish a capital structure in a competitive marketplace. SBC Ill. Ex. 12.0 (Avera Direct) at 30-31; SBC Ill. Ex. 12.1 (Avera Rebuttal) at 62-65; SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 13.

Staff witness McNally, by contrast, proposed a cost of capital based neither on market value (as required by the FCC's staff and established financial practice) or book value (the method historically used for non-competitive regulated utilities). Instead, Mr. McNally devised a novel hypothetical cost of capital based on the single factor of interest coverage ratios. There is no support for such an approach in any past practice or in financial publications. *See* SBC Ill. Ex. 12.1 (Avera Rebuttal) at 19-20. The root flaw in Mr. McNally's analysis is that that he knowingly ignored the FCC's requirements for setting the cost of capital. Specifically, he rested his recommendation on the premise that the risks associated with providing UNEs lie somewhere between those of a rate-regulated utility with little or no competition and the risks faced by firms in a competitive market. The *Triennial Review Order*, however, *requires* state commissions to assume a fully competitive market when establishing a capital structure or cost of capital.

Triennial Review Order, ¶¶ 680-83. When establishing capital structure in competitive markets, investors and others look to the market value of debt and equity, not anything else, and certainly not just the isolated factor of interest coverage ratios.

In addition to this fundamental error, Mr. McNally erred by trying to postulate a capital structure indirectly (by comparing the interest coverage rations of his Telecom Sample to the now-defunct and outdated capital structures of rate-regulated telephone utilities and to unregulated industrial firms) and then working backwards (Staff Ex. 12.0 (McNally Direct) at 30), even though the information was available for him to look directly at the capital structures of telecom companies and other industrial companies that share SBC's single-A bond rating. That approach flatly ignores the FCC's requirement to "establish a price that replicates the price that would exist in a market in which there is facilities-based competition." *Triennial Review Order*, ¶ 680. It also ignores the numerous direct benchmarks that support SBC Illinois' proposed capital structure. To begin with, SBC Communications Inc.'s market-value capital structure in September 2003 was 81% equity and 19% debt – very close to SBC Illinois' 86%/14% proposal here and very far from the competing proposals. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 21. Similarly, Standard & Poor's recent review of more than 900 companies found that, on a market value basis, other single-A rated companies like SBC had capital structures of 82% equity and 18% debt. *Id.* at 22 (indeed, Standard & Poor's shows that even *book value* capital structures for single-A rate industrial firms are well above Staff's proposal of 51% equity, but rather are 70% equity and 30% debt). In addition, Value Line's most recent 3-5 year projections for BellSouth, SBC, and Verizon applied market value equity ratios of 86%, 83%, and 76%, respectively, for those companies. *Id.* at 68. And those values are in line with the capital structure adopted by the FCC's Wireline Competition Bureau of 80% equity and 20%

debt. *Id.* at 68 and Ex. WEA-6. Both the Nevada and Connecticut commissions also have approved market-value based capital structures with 86% equity. SBC Ill. Ex. 12.0 (Avera Direct) at 8-9. All of these benchmarks demonstrate the reasonableness of SBC Illinois' proposed market-value based cost of capital and the unreasonableness of proposals that rely heavily on book values (such as AT&T/MCI's) and on the Staff's recommended 51% share of equity.

Staff's proposal rests on mathematical artifact and is completely unrelated to the capital structure needed to maintain even SBC's current single-A bond rating. Indeed, Staff's proposed capital structure *would not even support a rating of triple-B, the lowest possible investment grade rating.* SBC Ill. Ex. 12.1 (Avera Rebuttal) at 23; SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 17. A capital structure that leads to a downgraded credit rating obviously cannot be sufficient to attract capital and it obviously does not provide compensation for investment in a competitive market. Such a capital structure would therefore be inconsistent with TELRIC. Staff's implicit assumption that SBC can attract capital and maintain the network through junk bond-level financing, as SBC would have to do under Staff's proposed capital structure (SBC Ill. Ex. 12.1 (Avera Rebuttal) at 23) is both illogical and unrealistic, not to mention a recipe for financial disaster.

The CLECs' and Staff's inclusion of short-term debt in their capital structure also is out of place. SBC Ill. Ex. 12.1 (Avera Rebuttal at 66). Short-term debt is used to meet *temporary* capital requirements or to finance capital improvements until it is feasible for a company to issue common stock or long-term debt. *Id.* That is not the case here. The facilities that SBC must install to provide UNE services are long-lived assets, which do not correspond to short-term debt maturities of less than one year. *Id.* Staff's attempt to link the recovery of capital through

depreciation expense with an appropriate capital structure are entirely misguided and Staff's average debt maturity is biased downward and inconsistent with its depreciation rate. SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 19. The forward-looking capital structure should consist, therefore, of long-term debt and equity. *Id.* The CLECs try to gloss over this inconsistency by noting the existence of short-term financing that can roll over. AT&T/MCI Jt. Ex. 2 (Murray Direct) at 75. Even these "balloon payments," however, require investors to consider the cost of rolling over the debt. In any event, the CLECs' proposed short-term debt ratio is hopelessly distorted because it is the artificial result of inter-company borrowing arrangements. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 66-67. Further, the CLECs have repudiated their short-term debt ratio in recent testimony before other commissions. SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 37. Long-term interest rates, like those used by SBC Illinois, provide the best estimate of average cost into the future. SBC Ill Ex. 12.1 (Avera Rebuttal) at 66. Long-term interest rates provide the best estimate of the average cost into the future. *Id.* Further, the CLECs' 5.6% and the Staff's 4.99% long-term debt cost estimates are understated and are based on a yield spread far below those reported by Moody's. *Id.* at 60.

b. Cost of Debt

SBC Illinois proposed 7.18% as the cost of long-term debt, based on the average of the March 1999 yields on single-A and double-A bonds reported by Moody's, as was consistent with SBC's debt ratings. SBC Ill. Ex. 12.0 (Avera Direct) Schedule WEA-1 at 20. This calculation was used because it conservatively represents the cost of raising new debt funds in the marketplace. *Id.* SBC Illinois also presented current evidence from U.S. government agencies and recognized financial forecasting services to demonstrate that its proposed cost of debt remains in line with investors' forward-looking exp3ectations and therefore is TELRIC-compliant. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 17. Specifically, these sources – which are the

exact same sources that Staff witness McNally referenced and relied on in his testimony (*id.*) forecast the cost of debt at 7.3% and 7.35% over the next ten years, precisely in line with SBC Illinois' proposal. *Id.*

By contrast, the CLECs' 5.6% and Staff's 4.99% proposals for long-term debt are understated, are based on a yield spread far below those reported by Moody's, and fall far short of investors' forward-looking expectations. *Id*. at 17, 60. Indeed, AT&T/MCI witness Murray unrealistically predicts further significant declines in the cost of debt from what are already historically low levels. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 60. This runs counter to the basic expectation that interest rates will rise and the economy strengthens and to widely referenced forecasts published by government agencies and investment guides. *Id.*

Furthermore, and once again, other regulators support SBC Illinois' proposed cost of debt of 7.18%. The FCC's Wireline Competition Bureau recently adopted a cost of debt for Verizon Virginia of 7.86% -- higher than what SBC Illinois proposes here. *Virginia Arbitration Order*, ¶ 67. Significantly, that cost of debt adopted by the Bureau was higher than the rate proposed by Verizon and was, in fact, proposed by AT&T and WorldCom – the same carriers who now propose a cost of debt for SBC Illinois of just 5.6%. *Id*. Those CLECs are either being disingenuous in their proposal here or else believe, somehow, that Verizon Virginia's cost of debt is 50% greater than SBC Illinois'.

c. Cost of Equity

SBC Illinois' proposed cost of common equity is 13%. The company based this number on market data analyses for SBC and for comparable firms. SBC Ill. Ex. 12.0 (Avera Direct at 7). SBC Illinois' expert, Dr. Avera, determined the cost of equity by applying two alternative quantitative analyses. SBC Ill. Ex. 12.0 (Avera Direct at 7). Dr. Avera first utilized a non-constant Discounted Cash Flow ("DCF") approach, which attempts to replicate the market

valuation process that investors use to determine the price they would pay for a share of stock. *Id.* Next, Dr. Avera applied two applications of the risk premium method, including the Capital Asset Pricing Model ("CAPM"), which directly estimate the cost of equity by adding a risk premium to observable bond yield. *Id.* That is, Dr. Avera determined the additional return investors require to invest in common stock instead of in the more conservative bond market, and added this risk premium to the current yield on bonds. *Id.*, Schedule WEA-1 at 15. These approaches yielded costs of equity ranging from 12.03 % to 14.30%. *Id.* at 7. Dr. Avera then considered the relative strengths and weaknesses of each approach and concluded that a 13% return on equity represented a conservative estimate of investors' required rate of return for SBC's ILECs. *Id.*

As with the other aspects of SBC Illinois' proposed cost of capital, the observable benchmarks all confirm the reasonableness of its proposed cost of equity. The FCC's Wireline Competition Bureau recently adopted a cost of equity for Verizon of 14.37%. *Virginia Arbitration Order*, ¶ 99; SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 32-33. The Pennsylvania Commission recently found that "[a]n appropriate common equity cost rate, in this case, should . . . reflect those risks associated with a firm engaged solely in a competitive market for facilities-based telecommunications service. . . . We will adopt a 14.75% common equity cost rate . . . based upon the parameters associated with a competitive entity and the attendant risks as clarified in the *FCC TRO*. This is consistent with the weighted cost of common equity position of Verizon PA." *Pennsylvania UNE Opinion* at 61. And the state commissions in Connecticut, Missouri, and Wisconsin all have adopted Dr. Avera's proposed cost of capital for SBC ILECs. SBC Ill. Ex. 12.0 (Avera Direct) at 8-9 (citing cases). In addition, updated versions of the constant DCF analysis and risk premium analysis yield costs of equity of 14.2% and 14.42%,

respectively. *Id.* at 26-28. Similarly, Value Line, a source cited and respected by all the cost of capital witnesses here, expects investors to realize annual total returns for the companies in Staff witness McNally's Telecom Sample of approximately 13.1%, which again is in line with SBC Illinois' proposal and shows the unreasonableness of other proposals. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 8.

Staff's proposed 12.44% cost of equity recommendation was based on the constant-growth form of the DCF together with a forward-looking CAPM analysis. The Staff's DCF analysis was applied to a group of incumbent LECs, which means that it inherently understates the specific risks associated with providing UNEs in the fully competitive market assumed by TELRIC. *Id.* at 6. Staff's analysis led to cost of equity estimates that fell below returns for regulated utilities and do not represent the necessary return for a UNE business where facilities-based competition is assumed. *Id.* at 8. The non-constant growth DCF model that SBC Illinois used in its proposal leads to a more realistic appraisal of investors' required return by capturing the expectations of future share price appreciation that investors have incorporated into current stock prices. *Id.* at 11.

Although its DCF analysis is flawed, however, Staff's approach to determining the equity risk premium for the CAPM analysis at least attempts to be reasonable and forward-looking. SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 27. The same cannot be said for the CLECs' recommended 9.27% cost of equity, which does not reflect the rate of return required by investors in SBC Illinois' UNE business. Capital markets have become increasingly attuned to the risks associated with investing in the telecommunications industry. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 49. Moreover, as the FCC's Wireline Bureau affirmed, the risks of providing UNEs exceeds those of incumbent LECs in general. Among other things, a stand-alone provider of

UNEs is exposed to the challenges of a competitive market while also remaining constrained by regulation and regulatory uncertainty, which increases its risk. SBC Ill. Ex. 12.0 (Avera Direct) at 35-44. Investor concerns have intensified with the rapid advancement of technological changes, such as VoIP, that exacerbate the impact of increasing competition and threaten the future outlook for UNEs. SBC Ill. Ex. 12.2 (Avera Surrebuttal) at 29-32)

The major problem with the CLECs' proposed 9.27% cost of equity, besides being facially too low to attract equity investment in a competitive market, is that it fails to reflect an adequate risk premium over the cost of debt. The CLECs developed their proposed cost of equity by using both a three-stage DCF model and performing a CAPM analysis; the results of both are inaccurate. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 40, 45. First, the three-stage DCF model is a mechanistic approach that does not reflect what investors expect when they purchase stock. *Id.* at 41-42. Moreover, the near-term growth projections that the CLECs used in their DCF analysis understate long-term expectations for the telecommunications industry, which is in the midst of a downward correction. *Id.* at 43. The Wireline Bureau in the *Virginia Arbitration Order* rejected the very same three-stage DCF approach on which the CLECs here rely, holding that the CLECs "offer no explanation or evidence supporting the magnitude or the pattern of the growth rate assumptions beyond the fifth year. . . . There is no basis on which to find that [the CLECs'] three-stage DCF model produces a reasonable cost of equity capital estimate given the lack of support for their dividend growth rate assumptions. *Virginia Arbitration Order*, ¶ 75.

The CLECs' CAPM analysis is equally flawed. Making the same mistake they made with regard to the DCF model, the CLECs failed to use data that reflect the expectations of actual investors in the market. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 48. If they had done so, they would have seen that capital markets have become increasingly attuned to the risks associated

with investment in the telecommunications industry. *Id.* at 49. However, rather than attempting to use forward-looking data, the CLECs relied almost exclusively on selected studies for limited historical time periods, which produces results that assume that realized rates of return will converge to investors' expected returns when measured over extended periods of time. *Id.* at 45. The CLECs refer to these historic risk premiums for more limited time periods than the approach was intended to apply to, which produces a smaller risk premium and lower cost of capital than are accurate. *Id.* at 46-47. Both SBC Illinois' and the Staff's forward-looking applications of the CAPM analysis demonstrate the inadequacy of the CLECs' CAPM estimate. While the CLECs' estimate was 9.09%, SBC Illinois' was 14.42% and the Staff's was 14.29%. The CLECs' result falls far short of investors' current required rate of return. *Id.* at 48-49.

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For all of these reasons, the Commission should adopt SBC Illinois' proposed 12.19% cost of capital. That would represent an increase over the 1998 level, but an increase is required by changes in the law regarding cost of capital, by the actual significant increase in the risk raced by ILECs, and by the need to bring loop prices in line with the proper pricing signals. As Dr. Avera demonstrated throughout his testimony, not only is his methodology sound, but the relevant benchmarks overwhelmingly support SBC Illinois' proposed capital structure, cost of debt, and cost of equity. The proposals of Staff and the CLECs, by contrast, have no such support and, by seeking a decrease in the cost of capital, fail on their face to comply with the new mandates of the *Triennial Review Order* to base the cost of capital on a fully competitive market and to increase previously adopted cost of capital findings to account for the increased risk in such a market.

C. Other Loop Recurring Cost Modeling And Input Issues

1. Cable and DLC Installation Costs/Factors

a. Introduction

SBC Illinois uses a factor-based methodology to develop the installation investment for the majority of equipment used in the LoopCAT model. This factor approach is used for copper and fiber cabling, feeder-distribution interfaces ("FDIs"), and digital loop carrier ("DLC") systems. The installation factors were developed using actual audited accounting data from SBC Illinois' general ledger for a recent three year period to develop a quantitative relationship between material costs and installation costs. For cabling, installation costs are developed separately for fiber and copper cable, and the factors are also specific to the cable type (*i.e.*, aerial, buried, and underground). For circuit equipment, specifically, the DLC system for fiber-fed loops, two factors are developed: a hard-wired factor for the DLC chassis equipment and a plug-in factor for the plug-ins that are installed in the chassis. SBC Ill. Ex. 4.0 (Smallwood Direct) at 29; SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 49. The factors derived in this manner were then applied to the current cost of the cable, FDI and DLC equipment included in the LoopCAT model to develop a forward-looking total installed cost of such equipment. The method by which SBC Illinois developed and applied installation factors in this case is the same as that used to establish the currently effective UNE loop rates in Docket 96-0486/96-0569 (Consolidated). SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 59.

There is only one contested issue between Staff and SBC Illinois as it relates to the use of installation factors. Specifically, although Staff adopts the installation factor approach, it proposes to reduce each copper and fiber cable installation factor based on a selective use of cost data from the years 1999, 2000, and 2001, rather than using data for all three years. For the reasons discussed below, Staff's proposal in this regard is without foundation and should be

rejected. Staff and SBC Illinois are, however, in agreement as to the appropriate hard-wired and plug-in factors to apply in developing the total installed cost of DLC equipment. Staff Ex. 23.0 (Lazare Rebuttal) at 3. The Attorney General has also accepted those factors. AG Ex. 1.3 (Dunkel Surrebuttal) at 8.

The only party which recommended a complete rejection of installation factors was AT&T, which proposed the use of a so-called "bottoms-up" approach to developing installation costs. As will be discussed, AT&T's approach does not come close to developing a realistic estimate of the forward-looking costs of installing cable and DLC equipment. In fact, the necessary data do not exist (or are not realistically obtainable) to adopt *any* kind of reasonable "bottoms-up" approach, and the use of installation factors continues to be the most reasonable method of computing average installation costs across the entire network for TELRIC pricing purposes.

b. Staff's Proposed Adjustments To SBC Illinois' Cable Installation Factors

In developing its proposed cable installation factors, SBC Illinois used general ledger data for the period 1999 through 2001, the most recent three years for which data was available when SBC Illinois performed its cost study. SBC Illinois used this approach because there may be fluctuations in the precise ratio of installation and engineering costs and material costs on a year-to-year basis reflecting factors such as the particular mix of facilities installed each year. Using data for three recent years provides a sufficient sample of all sizes of projects and ensures that the resulting installation factors accurately represent the normal, forward-looking relationship between equipment costs and installation costs. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 62.

Staff, on the other hand, proposed that each cable installation factor be calculated based on data for whichever one of three years (1999, 2002 or 2001) produces the lowest result. Staff Ex. 3.0 (Lazare Direct) at 28-29. In support of this proposal, Staff witness Lazare argued that the Company's factors were developed on the basis of historical data. As Mr. Smallwood testified, however, there is no reason to expect (and Mr. Lazare presented no evidence) that the relationship between the costs of cable material and the costs for installing cable for a recent three year period is likely to change. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 61. If anything, the approach taken by the Company produces a conservative result since use of data for only the most recent year available at the time that the study was performed (2001) would have produced installation factors that are generally higher than the installation factors developed by the Company on the basis of data for 1999 through 2001. The conservative nature of the Company's proposal is confirmed by the fact that general ledger data for the years 2000 through 2002 produce cable installation factors that are slightly higher than those used by the Company in its study. Thus, there is generally a trend toward increases in the ratio of cable installation cost to material costs, which is not surprising in light of increases in labor costs. *Id.* at 61-62.

Furthermore, given Mr. Lazare's concern with the historical nature of the data used to develop the installation factors, it would have made more sense for him to recalculate the factor based on data for 2001, the most recent of the three years for which data was available. As shown in his Schedule 4, pages 2-7, however, only one of the factors developed by Mr. Lazare was based on data for 2001. The rest were based on data for 1999 and 2000. There is no basis for Staff's approach of selectively using data for the particular year that happens to produce the lowest number. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 62.

In an attempt to justify Staff's approach, Mr. Lazare argued that SBC Illinois' proposed installation factors are "overstated" because they "reflect not just the costs of network construction, but also the costs of expanding and reinforcing the existing network." Staff Ex. 3.0 (Lazare Direct) at 28. AT&T witnesses Pitkin and Turner made a similar argument. These witnesses, however, are wrong in assuming that there will never be a need to reinforce, or augment, network plant facilities in a forward-looking environment. To the contrary, as Mr. White explained, in the real world, the Company cannot forecast with absolute certainty the level of future demand in every area of the network. Accordingly, even in an efficient network, such as SBC Illinois', which includes a reasonable amount of spare capacity, there will always be a need to augment and reinforce facilities on a forward looking basis. Without significantly oversizing every lateral cable in the distribution, there is no way to avoid some amount of augmentations in the distribution network. SBC Ill. Ex. 8.1 (White Rebuttal) at 14-15; SBC Ill. Ex. 8.2 (White Surrebuttal) at 13-14.

As Mr. White also testified, there is no reason to conclude that the amount of costs associated with "reinforcement" or "augmentation" projects included in the three years of data used by SBC Illinois to develop the proposed cable installation factors is inconsistent with an efficient forward-looking level of such costs. In accordance with its engineering guidelines, SBC Illinois makes every attempt to minimize the number of re-enforcement jobs, thereby reducing costs. Those guidelines provide for an efficient balance between capital investment, including spare capacity, and operating costs, which has led to the design of an efficient network. What Pitkin/Turner and Mr. Lazare appear to advocate is a network that never needs augmenting. That goal, however, could be achieved only by adopting guidelines that require the installation of far more spare capacity in all areas of the loop plant than is required by the

Company's guidelines and reflected in the current actual fill rates. SBC Ill. Ex. 8.1 (White Rebuttal) at 16.

c. Response To AT&T's Criticism Of Installation Factors

AT&T argues that installation factors improperly assume that there is a linear relationship between the cost of material, such as copper cable and the cost of installing that material. AT&T asserts that there is no such linear relationship and, therefore, that an installation factor will not produce an accurate estimate of the cost of installing any one particular project. To solve this alleged problem, AT&T witnesses Pitkin and Turner argue that installation costs should be developed using a "bottoms-up" approach under which installation costs are developed by multiplying the estimated time to install particular facilities by an assumed hourly labor cost.

AT&T's position is wrong because it fails to recognize that the installation factor is not used to develop the cost of any one single job. Rather, it is a reliable and practical method for accounting for the wide variety of work activities and circumstances that occur on thousands of installation jobs performed throughout the network. Thus, while installation factors may not reflect an exact relationship between the material and installation costs for any one particular project, on the whole and on the average, they provide the best tool for computing costs under TELRIC. By comparison, even a properly performed "bottoms-up" approach (and AT&T's "bottoms-up" method was not properly performed) cannot be relied on to produce an accurate estimate of the average cost of installing the types of facilities to which the factors are applied.

An example in point is the cost of installing buried cable. In developing their proposed "bottoms-up" estimate, Pitkin/Turner assumed that there were only two functions (placing and splicing cable) associated with installing buried cable and that the time spent, and costs incurred, will be exactly the same on every buried cable installation project. In reality, as Mr. White

explained, there are numerous additional tasks ignored by Pitkin/Turner that may be required in varying degrees, depending on the specific circumstances.

To illustrate, Mr. White described a scenario involving the installation of 1,000 feet of buried copper cable in a straight line on a block with three driveways. SBC Ill. Ex. 8.1 (White Rebuttal) at 27-28, Sch. RSW-R2. In that scenario, the minimum number of tasks that would be required, in addition to the placing and splicing activities assumed by Pitkin/Turner, include, *inter alia*, (i) directional boring under three driveways, (ii) trenching in rock; (iii) hand digging a hole for proper placement of a pedestal, and (iv) performing work to restore the area (including reseeding) after the project is completed. SBC Ill. Ex. 8.1 (White Rebuttal) at 27; Tr. 544-47. As Mr. White explained, however, this is only one example. Every buried cable job is different and many are likely to require additional work. For example, in the typical suburban area where lots are smaller than those assumed in Mr. White's example, there would be a need to bore under many more than three driveways. Tr. 545 (White). Similarly, more trenching time may be required on a project where soil conditions are rockier than those assumed in the example. Tr. 547-48 (White).

Moreover, as Mr. White further explained, there are numerous "unforeseen" conditions that can, and do, increase the cost of a buried cable installation and which are not accounted for in the example presented by Mr. White. These include equipment breakdowns, inclement weather, abnormal traffic conditions, and unforeseen trenching/boring obstructions, such as frost, underground abandoned structures and unknown utilities. SBC Ill. Ex. 8.1 (White Rebuttal) at 28-29; SBC Ill. Ex. 8.2 (White Surrebuttal) at 22-24.

The installation factor developed for buried cable (as in the case of the factors developed for other cable facilities) takes into account all of the costs incurred to install buried cable over a

recent three year period and, therefore, is the most reliable way to account for the wide variety of installation costs for all buried cable projects over the entire network. By comparison, to accurately calculate costs using a "bottoms-up" analysis, one would need to determine the probability of occurrence of all of the different variables that affect the costs of installing buried cable. It would be extremely difficult, if not impossible, to perform such an analysis and, in any event, AT&T made no attempt to do so.

AT&T's other criticisms of the installation factor approach are similarly without merit. Pitkin/Turner, for example, argued that the installation factors improperly introduce "embedded data" into a TELRIC cost study. As Mr. Smallwood explained, however, SBC Illinois has *not* proposed to include actual embedded installation costs in its loop cost study. Rather, for each category of equipment, recent historical data was used to develop a factor which represents a reasonable, going-forward *relationship* between material and installation costs. That factor is then multiplied by the current contract prices for the equipment included in the study to obtain a forward-looking, installed cost. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 51. As previously discussed, the use of "embedded" data as part of an analysis to determine forward-looking costs is not prohibited by TELRIC.

AT&T's assertion that installation factors do not properly reflect economies of scale is also without merit. Pitkin/Turner argued that LoopCAT should assume that SBC Illinois would place all drop wires on a street at one time as part of a single project. As Mr. White explained, however, AT&T's suggestion is illogical, because in the real world multiple drop wires would rarely, if ever, be set for installation at neighboring residences on a single dispatch. SBC Ill. Ex. 8.1 (White Rebuttal) at 13-14. SBC Illinois' customers do not wait for their neighbors to request service before placing an installation order. Accordingly, it may take months, or even years, for

all drop wires on a particular street to be placed. As Mr. White also explained, this example demonstrates why a linear loading factor is the most appropriate method for determining cost, since each drop wire installation requires its own full loading to reflect normal practice, which would not change in a forward-looking network. *Id.* at 15.

Furthermore, as Mr. Smallwood explained, even where there are large construction jobs that need to be completed, in the real world those jobs are typically structured as a series of smaller jobs, which allows the projects to be managed more efficiently. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 54. In this regard, TELRIC does not, contrary to AT&T's suggestions, require an assumption that a TELRIC network would be constructed instantly or only in large chunks. Rather, TELRIC requires the more realistic assumption that the incumbent will "deploy current technology over a period of time." *Virginia Arbitration Order*, ¶ 32. In its recent *TELRIC NPRM*, the FCC recognized that

> [i]n the real world, however, even in extremely competitive markets, firms do not instantaneously replace all of their facilities with every improvement in technology. Thus, even the most efficient carrier's network will reflect a mix of new and older technology at any given time . . .[T]he UNE pricing methodology, while forward-looking, must be representative of the real world and should not be based on the totally hypothetical cost of a most-efficient provider building a network from scratch. *TELRIC NPRM*, ¶¶ 50, 53.

See also SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 55. SBC Illinois' installation factors reflect costs based on a real-world mix of actual recent construction projects, including very small and very large projects, and thus are reasonably representative of forward-looking construction activities. *Id.*[27]

[27] Pitkin/Turner also argued that the calculation of installation factors based on statewide data may create distortions in the costs calculated for each of the three UNE Access Areas. As support for this argument, they speculate that, because larger pieces of equipment may be installed in higher density (*i.e.*, urban) areas, installation factors may overstate costs in those areas. As Mr. Smallwood explained, however, the construction costs may also be higher in higher density areas because of more concrete to cut, more traffic that might restrict work hours, and more

(cont'd)

In its recent order establishing increased UNE loop rates for SBC Indiana, the Indiana Commission expressly approved the installation factor methodology used by SBC Illinois in this case and, in doing so, rejected many of the same criticisms that have been directed at that methodology by AT&T in this case. The Indiana Commission also rejected the "bottoms-up" approach proposed in that case by AT&T which is virtually identical to the approach that AT&T has proposed in this case. In arriving at these conclusions, the Indiana Commission stated as follows:

> In analyzing this dispute we are guided by the recognition that TELRIC does not preclude the use of total, long-run averages. That is, installation costs have to be computed as average costs across a variety of situations in order to be usable in setting generally applicable rates.
>
> The Commission reaffirms that SBC Indiana's use of linear loading factors is reasonable. We disagree with Messrs. Pitkin and Turner that linear loading factors are inconsistent with TELRIC principles because such factors purportedly rely upon embedded data. We reject the CLECs' view that SBC Indiana's use of its current costs and current engineering practices in and of itself somehow violates TELRIC principles. Even a forward-looking network must have some basis in reality, and it is reasonable for SBC Indiana to use its most current, audited costs to determine the relationship between major material investments and the cost of installation. Similarly, we reject AT&T's claims that linear loading factors violate TELRIC principles by overlooking economies of scale. TELRIC assumes that a forward-looking network will be constructed over time, not instantly, and networks placed over time will include construction projects of all shapes and sizes.[28] SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 58.

d. AT&T's "Bottoms-Up" Method

To implement AT&T's "bottoms-up" approach, Pitkin/Turner purported to use various inputs from SBC Illinois' Job Administration Management ("JAM") system. Pitkin/Turner's use

(… cont'd)

regulations that might raise the cost of doing business. Moreover, there are "high density" urban areas throughout the Company's service territory including Access Area C, which includes most the Chicago suburbs and cities such as Springfield, Peoria and Fairview Heights. These areas are high density and will also have large cables placed and large pieces of equipment deployed. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 41-42.

[28] *Indiana UNE Order* at 44.

of JAM, however, did not cure the fundamental shortcomings of the "bottoms-up" approach which have previously been discussed.

First and foremost, it is not appropriate to use JAM as a tool to gather costs for developing inputs for a TELRIC cost study. Mr. White, who was personally involved in the development of JAM and has extensive experience using it, explained that JAM is used by SBC's engineering and construction personnel as a job management tool, the primary purpose of which is to track job progress, construction productivity, material ordering and disbursements, and inventory tracking. SBC Ill. Ex. 8.1 (White Rebuttal) at 17-18. SBC Ill. Ex. 8.2 (White Surrebuttal) at 15-17. While JAM can be used to provide cost *estimates* for certain *portions* of a project, however, it is not used to develop an estimate of the total cost of a project. *Id.*

In particular, the functional time increments ("FTIs") used by JAM to estimate the time it takes to complete certain tasks assumes average technician performance using standard tools under normal working conditions. Those FTIs are *not* calculated based on the average time actually spent to complete tasks on actual projects. Thus, the FTIs do *not* reflect additional hours and costs that can, and almost always do, result from "unforeseen" field conditions, including, for example:

- traffic conditions, including congestion causing delays getting to and from the work location and cars parked in the work area
- inclement weather, including heavy snow requiring removal before starting to work and rain/lightening while working around joint trench and pedestals with power
- municipal rules, such as restricted hours of operation, limited hours of working during rush hour commuting, and noise ordinances
- equipment breakdown, such as damaged directional boring heads, snapped boring rods, trenching chain breaks and other mechanical breakdowns
- material defect, such as factory defects with cable
- accessibility issues, including fences, garages, customers blocking access to the work area

- trenching/boring obstructions such as rock, frost, unknown utilities, underground abandoned structures
- EPA issues, such as contaminated soil.

SBC Ill. Ex. 8.1 (White Rebuttal) at 26-32; SBC Ill. Ex. 8.2 (White Surrebuttal) at 20-24.

Moreover, even if JAM were used as a tool to develop an estimate of the total cost for particular jobs (and it is not), it could not be used to develop an estimate of all relevant costs of installing cable and other equipment for an entire network. This is because JAM estimates necessarily vary widely from job-to-job based upon the known field conditions, cable sizes and the design of the job. SBC Ill. Ex. 8.1 (White Rebuttal) at 18. Thus, although JAM can estimate a portion of the costs on a job-by-job basis, the estimates it produces will vary greatly depending on the details of the particular job being examined. *Id.* For these reasons, installation factors based on accounting data are far more useful and reliable than incomplete cost estimates culled from JAM.

The Indiana Commission expressly recognized these inherent drawbacks to using JAM to develop TELRIC costs when it rejected AT&T's bottoms-up approach in the recent SBC Indiana case:

> The Commission finds that AT&T's proposed bottom-up approach to developing loop costs is unworkable because, among other things, it does not account for all of the different variables that can occur at each job, and thus it would understate SBC Indiana's actual costs.
>
> Moreover, AT&T's bottom-up approach depends on using data from the JAMS database to develop proposed costs. The evidence shows that JAMS is not appropriate for use in developing SBC Indiana's total costs, because it is not designed to, and does not reflect the actual total costs of a project."[29] SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 69.

Furthermore, Pitkin/Turner misused or misinterpreted JAM data in three significant respects, each of which had the effect of underestimating costs. Thus, even if JAM were an

[29] *Indiana UNE Order* at 44.

appropriate tool for developing installation costs for use in a TELRIC study (and it is not), the Commission would be compelled to reject the installation cost estimates proposed by AT&T.

First, Pitkin/Turner inappropriately manipulated data from the JAM Estimator Reports and relied on assumptions that are unsound from an engineering perspective. In particular, Pitkin/Turner's proposed costs for block terminals, distribution terminals and copper cable assumed that SBC Illinois could perform installation work at different locations without any travel and setup time involved. SBC Ill. Ex. 8.1 (White Rebuttal) at 21-24. In addition, they assumed that setup time can be reduced by placing, splicing, and testing in a single location. *Id.* Mr. White testified that these assumptions are unrealistic and would not be relied on by any working network engineer. For example, even if one accepts Pitkin/Turner's unlikely assumption that four block terminals were located within a few hundred feet of each other, setup time would still be required to move tools, materials, and safety barriers to each new location. *Id.* at 22. Pitkin/Turner, however, made no allowance for such set-up time. Incredibly, Pitkin/Turner also made the same assumption with respect to 300, 600, and 900 pair block terminals, but the evidence shows that not even two – let alone four – 900 pair block terminals could be placed in a single day, and would never be placed so close together as to require no travel time between sites. *Id.*

Similarly, Pitkin/Turner assumed that four distribution terminals can be placed, spliced, and tested in one location, thereby reducing setup time. That too is not consistent with reality, because multiple distribution terminals are not installed at the same location at the same time. SBC Ill. Ex. 8.1 (White Rebuttal) at 22. Even if four distribution terminals could be placed in one day, setup time would still be required to move from location to location. But Pitkin/Turner's proposal does not account for that time. Indeed, Pitkin/Turner assume that an

aerial terminal could be placed in **[**********]**, when in fact JAM estimates **[***** *******]**. *Id.* This means that, under Pitkin/Turner's proposal, an SBC Illinois technician would have to drive to a location, set up the warning signs and cones, gather all the necessary equipment, inspect the work location, climb a pole, set up the splicing apparatus, place and splice a terminal, and inspect the job completely – in approximately **[**********]**. That is simply not realistic. *Id.*

As another example, Pitkin/Turner misused JAM data in developing the time required to place and splice an aerial terminal. Their workpapers show that **[*********]** are required to place and splice a 25 pair aerial terminal. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 67; BFP/SET-4 at 4. However, the JAM Estimator Report, on which they claim to have relied, indicates that it takes **[**********]** to place and splice an aerial terminal and **[****** ******]** to test the terminal. *Id.*; BFP/SET-4 at 1. Therefore, it appears that Pitkin/Turner either did not rely upon JAM at all or modified JAM outputs to such an extent that their proposals are meaningless.

Second, Pitkin/Turner inexplicably failed to account for many of the steps needed to install aerial, buried and underground cable.[30] SBC Ill. Ex. 8.1 (White Rebuttal) at 24-34. For each of these facilities, Pitkin/Turner developed installation cost estimates using functional time increments for only two tasks: placing and splicing. As Mr. White explained, however, the installation of such facilities requires, at *a minimum*, numerous other tasks for which there are FTIs in JAM, but which Pitkin/Turner overlooked. In the case of buried cable, for example, these missing tasks included:

[30] This failure may be attributable to the fact that Mr. Pitkin and Mr. Turner have had little or no experience with respect to the installation of outside distribution plant facilities. Tr. 1604-09. By comparison, Mr. White has had 17 years of experience in engineering and construction of outside plant facilities. SBC Ill. Ex. 8.0 (White Direct) at 1-2.

- directional bore under driveways, which allows for placement without altering a customers driveway
- inspection of the contract work
- trenching in rock
- clear and cap cable end, which is required to secure cable and eliminate future trouble
- hand dig, which is required for proper pedestal access
- pedestal placement, which is required for securing cable and future access
- restoration of grass areas
- conformance testing, which is required to validate pair appearance for service requirements and data base accuracy.

SBC Ill. Ex. 8.1 (White Rebuttal) at 27. Similarly, for aerial cable, Pitkin/Turner overlooked such necessary tasks as tree trimming, strand placement (which is necessary to physically attach the cable), and conformance testing. *Id.* at 25. And for underground cable, Pitkin/Turner ignored such necessary steps as additional splicing and set-up due to cable length restrictions, testing manhole water to comply with Federal mandate and conformance testing. *Id.* at 30.

As Mr. White's detailed analysis of Pitkin/Turner's workpapers indicates, their failure to include work steps needed to install cable in every situation had the effect of grossly underestimating the time and associated costs that would be estimated through a proper application of JAM, even for relatively uncomplicated jobs. SBC Ill. Ex. 8.1 (White Rebuttal at 24-34). Moreover, Pitkin/Turner's analysis did not account for either the additional time that would be estimated using JAM on more complicated projects, or the additional time and associated costs that may be encountered in the field due to unforeseen conditions and which cannot be estimated using JAM. SBC Ill. Ex. 8.1 (White Rebuttal) at 21.

Third, in developing their proposed adjustments to installation costs, Pitkin/Turner did not use the hourly labor rate derived from JAM. Instead, they applied to their inadequate

estimate of the hours needed to fully perform cable installation jobs the hourly labor rates proposed by AT&T witness Flappan. As discussed in Section IV.G. of this Brief, Mr. Flappan's hourly rates are significantly lower than SBC Illinois' actual labor rates.

For all the reasons discussed, AT&T's proposed adjustments to SBC Illinois' installation costs are unsupported and should be rejected out of hand.[31]

e. DLC Installation Costs

In the cost study presented with its direct testimony, SBC Illinois calculated the hard-wire and plug-in installation factors used to develop the total installed cost of DLC remote terminal ("RT") and central office terminal ("COT") equipment using data derived from the PICS/DCPR database for the period 1997 through 2000. In response to criticisms made by AT&T and Staff regarding the source and time period from which the data was derived, SBC Illinois revised its cost study on rebuttal to use DLC factors developed on the basis of data from SBC Illinois' general ledger (rather than PICS/DCPR) for the years 2000 through 2002, the three most recent years for which data was available. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 70. As previously discussed, the general ledger was also the source of the data used to calculate SBC Illinois' cable installation factors. *Id.*

Staff accepted the revised DLC installation factors used by SBC Illinois in its rebuttal testimony. Staff Ex. 23.0 (Lazare Rebuttal) at 3. As Mr. Lazare correctly observed (and Mr. Pitkin acknowledged), the Company's revised plug-in and hard-wire factors are **[**********]** and **[********]**, respectively, consistent with the range proposed by Mr. Lazare in his direct

[31] AT&T also alleged that the cost to install DS-3 equipment is overstated in SBC Illinois' DS-3 loop study. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 59. This allegation is unfounded. All the DS-3 level services are delivered over fiber based SONET OC-3 or higher facilities. The equipment requirements, such as power, interfaces, and space, for these OC-3 facilities are all different. Pitkin/Turner asserts that it would only take 1.5 hours to install OC-3 equipment. Generally, however, the OC-3 facilities are transported over higher level equipment such as an OC-12 or OC-48. Installing this equipment takes far longer than 1.5 hours. SBC Ill. Ex. 8.1 (White Rebuttal) at 37.

testimony. *Id.*; Tr. 1633-34, 38 (Pitkin). Application of these factors produces total installation costs for a 2016 line DLC remote terminal of approximately **[**********]**, which is actually less than the average installation cost estimate of **[**********]** developed by Mr. Lazare in his direct testimony on the basis of SBC Illinois' response to a Staff request for information on the specific costs of the ten most recent installations of the 2016 cabinets in Illinois. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 71-72; Staff Ex. 3.0 (Lazare Direct) at 23-24. Attorney General witness Dunkel also accepted the Company's revised DLC installation factors. AG Ex. 1.3 (Dunkel Surrebuttal) at 8.

In their rebuttal testimony, on the other hand, AT&T witnesses Pitkin and Turner refused to accept SBC Illinois' revised DLC factors, stubbornly choosing instead to present a lengthy diatribe about the PICS/DCPR database (AT&T Ex. 2.1 at 32-43), despite the facts that (i) SBC Illinois is no longer proposing to use that source and (ii) the general ledger data which the Company *is* using resolved Pitkin/Turner's concern over the potential for double-counting and had the effect of reducing UNE loop costs under the Company's study. SBC Ill. Ex. 4.1 (Smallwood Surrebuttal) at 45.

While Pitkin/Turner claimed to have identified three "issues" with the general ledger data (AT&T Ex. 2.1 at 45-46), their criticisms do not hold water. First, they took issue with certain adjustments made by SBC Illinois to the general ledger data. These adjustments, which were made to eliminate one time credits that are not forward-looking, are appropriate and do not represent a problem with the general ledger data. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 43-44. Second, Pitkin/Turner complained about a minor error which SBC Illinois discovered and fully disclosed to AT&T in a data request response. The impact of that error was *de minimus*. *Id.* at 44; SBC Ill. Cross Ex. 47. Third, Pitkin/Turner pointed to the fact that there was

a very small increase in the plug-in installation factor, from **[*****************]**. Tr. 747-48 (Smallwood); Tr. 1634 (Pitkin). Pitkin/Turner argue that, if anything, that factor should have gone down because of the alleged double-count in the application of PICS/DCPR-based factors. The alleged double count, however, dealt only with hardwire, not plug-in, equipment. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 44. Moreover, the small increase in the plug-in factor is insignificant compared to the substantial reduction in the hardwire factor resulting from the change to general ledger data. *Id.*; Tr. 748 (Smallwood).

Pitkin/Turner also charged that AT&T had not been provided access to the general ledger data used by SBC Illinois to calculate the revised factors. AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 44. That charge, however, is simply not true, as evidenced by the voluminous information provided to AT&T in response to numerous data requests. These included, for example, (i) the response to AT&T Data Request BFP-530, in which SBC Illinois provided AT&T with all of the general ledger activity for the period 1998 to 2002 for all the Field Reporting Codes (FRCs), Main Accounts and Transaction Category Codes (TCCs) that were used in the development of cable and DLC installation factors, along with a narrative description of the process that was used to develop the installation factors and very specific references to the relevant supporting workpapers and (ii) the response to AT&T Data Request BFP-529, in which SBC provided AT&T with five large Access Database files containing the raw general ledger data for the DLC equipment booked from 1998 to 2002 at low levels of detail, *i.e.* Account, Subaccount, FRC, TCC and Project. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 20, Sch. TD-S1. SBC Illinois did not receive complaints from AT&T (or any other party) indicating that the Company had not fully and adequately responded to these and many other requests for

information regarding the general ledger data and the calculation of revised DLC installation factors. *Id.*

In sum, AT&T's complaints about the use of the general ledger data to calculate DLC installation factors are entirely unsubstantiated and should be disregarded.[32]

AT&T also argued that SBC Illinois' DLC installation factors overstate installation costs for DLC equipment because, in AT&T's view, the "vast majority" of SBC Illinois' installation costs for DLC equipment are already included in its equipment purchase contracts with Alcatel. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 63; AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 62. The Joint CLECs made a similar argument. Joint CLEC Ex. 2.0 (Starkey/Balke Direct) at 58. SBC Illinois conclusively refuted that claim, which rests on a fundamental misinterpretation of certain provisions of the Alcatel contracts and a misrepresentation of how Alcatel and SBC Illinois actually apply and administer the terms of the contracts on a day-to-day basis.

SBC Illinois witness Mr. Donald Palmer, a procurement expert who is thoroughly familiar with the Alcatel agreements, explained the errors in the CLECs' position. Specifically, the CLECs relied on Section 10.14 of Master Agreement, Section 7.1(A) of the Litespan Purchasing Agreement, and Section 9.4 of the Alcatel Purchasing Agreement. Section 10.14 of the Master Agreement states:

> **[********** ********** **********]**

[32] Pitkin/Turner also criticized certain adjustments made by SBC Illinois in its revised cost study with respect to "cluster vendor" material costs, sales tax and DSX-1 jack costs. All of these changes were necessitated by the change from PICS/DCPR to the general ledger as the source of data for the development of the DLC installation factors. SBC Ill. Ex. 4.2 (Smallwood Rebuttal) at 28-30. For example, Cluster Vendor Furnished Materials, which represent the additional materials furnished by the installation vendor used to install the DLC equipment (*i.e.*, Bays 1-3), was added as a specific line item in the revised cost study because the installation factors developed using the underlying general ledger data do not capture these costs. By comparison, these vendor furnished material costs were accounted for in the original cost study through the application of the installation factors developed using PICS/DCPR data. SBC Ill. Ex. 4.2 (Smallwood Rebuttal) at 28-29.

****
***] (Emphasis added.)

As Mr. Palmer explained, this clause *does not even apply* to the Alcatel equipment at issues in this proceeding. First, as Mr. Palmer stated, there are no prices set forth in the Master Agreement for Litespan equipment, and, thus, under Section 10.14 of the Master Agreement, if SBC Illinois *had* actually negotiated for installation services (which it did not), as opposed to just products, such services would be governed by the prices established by SBC Illinois and Alcatel and set forth in the Master Agreement.[33] But SBC Illinois has never contracted with Alcatel for such services, as evidenced by the fact that there are no prices for such services contained in the Master Agreement. SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 13-14. Moreover, Mr. Palmer noted that Section 10.15 of the Master Agreement, ignored by the CLECs, gives SBC Illinois the right to select an alternate vendor to install Alcatel equipment. *Id.* at 15. As Mr. Palmer explained, there would be no purpose for the reservation of rights language if costs to install DLC equipment had already been included in the product price, as AT&T contends. And Mr. White explained that, in fact, SBC Illinois, not Alcatel, uses a combination of its own technicians and engineers and various outside plant contractors to do the actual installation and placement work associated with Alcatel central office and remote terminal equipment. SBC Ill. Ex. 8.1 (White Rebuttal) at 37-43.

The CLECs suggested that the Wisconsin Commission had, in a 2001 decision, relied on Section 10.14 of the Master Agreement to reduce SBC Wisconsin's DLC installation factor. The CLECs are incorrect. The Wisconsin Commission did not rely on this clause at all, but merely

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[33] The Master Agreement applies *generally* to a broad range of Alcatel products, such as modems, routers and other high-speed transport and switching equipment and not just to the Litespan DLC equipment at issue here. Each product is purchased pursuant to the terms of specific subordinate purchase agreements that contain actual price terms. SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 13.

noted the CLECs' argument regarding Section 10.14 in its discussion of this issue. Moreover, the Wisconsin Commission's decision was based, in part, on incorrect evidence and should not be followed here. As Mr. Palmer carefully explained, the Wisconsin Commission's decision was partially the result of the unfortunate misinterpretation of the contract's provisions by Ameritech, which at the time was not completely familiar with the actual administration and terms of the new SBC/Alcatel contracts that became applicable to Ameritech in November 2000, during the course of the Wisconsin proceedings. SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 16-20; SBC Ill. Ex. 15.1 (D. Palmer Surrebuttal) at 9-12. Mr. Palmer, who is intimately familiar with the terms of the Alcatel contracts and what costs they do and do not cover, has correctly explained the workings of the Master Agreement in this proceeding. Consequently, the Wisconsin Commission's decision has no bearing here.

AT&T further asserted that Section 7.1(A) of the Litespan Purchasing Agreement demonstrates that SBC Illinois somehow already receives installation services from Alcatel. Specifically, Section 7.1(A) states:

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> **********]** (Emphasis added.)

Pitkin/Turner took the language of the last sentence out of context to erroneously conclude that the contract prices include all on-site installation required to make the equipment operational. In fact, as Mr. Palmer explained, this language merely provides that Alcatel will guarantee the "functionality" of the equipment that is manufactured or assembled by Alcatel.

SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 21. In addition, Mr. Palmer testified that the provision in Section 7.1 (A) that Alcatel will include [**************************************
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**] simply means that all of the Litespan component parts, cabinets, and Litespan custom configurations that are listed in Exhibit B will meet the specified "functionality" requirement at no additional cost to SBC Illinois. *Id.* Contrary to AT&T's claims, this clause does *not* mean that the prices in Exhibit B also include the costs of any optional "Installation Services" that are necessary to physically install the equipment in SBC Illinois' central offices and remote terminal sites after it receives the equipment from Alcatel. *Id.*[34]

In sum, the Alcatel contract prices modeled in LoopCAT do not include the cost to actually physically place and "install" the equipment in the field. SBC Illinois' interpretation of the contract provisions in this regard has been expressly confirmed by Alcatel itself, as well as by the Indiana Commission in the recent SBC Indiana case, where it rejected CLEC arguments regarding the Alcatel contracts identical to those made by the CLECs in this case. SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 11-12; Tr. 1380-81 (D. Palmer).[35]

Beyond the Alcatel contracts, AT&T asserts that other evidence demonstrates that SBC Illinois has overstated its installation costs for DLC equipment. In particular, Messrs. Pitkin and Turner cite a five year old Project Pronto business case in support of their position that the total amount of installation costs for DLC equipment at both the remote terminal and central office is

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[34] Pitkin/Turner's reliance on Section 9.4 of the Litespan Purchasing Agreement (AT&T Ex. 2.0 at 66) is also misplaced. Mr. Palmer explained that while Section 9.4 does govern Alcatel's provision of technical consultants to SBC Illinois in certain circumstances at no charge, that section has nothing to do with on-site installation costs. To the contrary, the technical consultants provided by Alcatel under the terms of Section 9.4 assist SBC Illinois' *own* technicians, engineers, and installation contractors who actually install the equipment purchased from Alcatel. SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 22-23.

[35] *Indiana UNE Order* at 44.

only **[*********]**. Pitkin/Turner assumed that the cost of installing a remote terminal is only one-half that amount, or **[**********]**. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 67. The Project Pronto business case, however, was prepared in 1999, before any of the Pronto DLCs had been ordered or deployed, and, therefore, is not a valid source to use for estimating the forward-looking cost of installing such equipment. SBC Ill. Ex. 8.1 (White Rebuttal) at 38. In fact, the evidence shows that the cost estimate contained in the business case does not even come close to covering all of the activities and related costs necessary to install DLC facilities. These activities include, but are not limited to, engineering, planning and design work, power engineering, construction work necessary to prepare the remote terminal site (including the material and installation costs of the concrete pad on which to place the remote terminal), installation of the power pedestal, placing and splicing construction activities, testing and turn-up. SBC Ill. Ex. 8.1 (White Rebuttal) at 38-43; SBC Ill. Ex. 8.2 (White Surrebuttal), Sch. RSW-SR2; SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 72-74.[36]

Pitkin/Turner made a failed attempt to demonstrate inconsistencies in SBC Illinois' evidence concerning DLC installation costs by citing testimony of SBC witnesses in other proceedings. For example, Pitkin/Turner cited a statement made by John Trott in a Texas deposition that the total installed cost of a 2016 cabinet is in the range of $120,000 to $150,000. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 72-76. **[**********
**********]**

[36] Pitkin/Turner suggested that costs associated with certain of these activities, such as installation of the pad and power pedestal, are accounted for in LoopCAT through separate factors for land, building and power. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 69; AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 63. As Mr. Smallwood testified, however, that is simply not the case. The costs at issue (including site preparation, pad material and installation and power pedestal installation) are costs assigned to functional reporting code ("FRC") 257c (circuit electronic equipment) and, therefore, are reflected in the development of the hard-wire factors used to calculate DLC installation costs. The land, building and power factors have nothing to do with the cost of installing DLC facilities. Tr. 808-810 (Smallwood).

**] Tr. 1644 (Pitkin/Turner). Pitkin/Turner purported to adjust Mr. Trott's estimate downward by backing out the cost of line cards. Pitkin/Turner, however, improperly backed out line card costs that were not included in Mr. Trott's estimate to begin with. SBC Ill. Ex. 8.1 (White Rebuttal) at 44-45.

Pitkin/Turner also misconstrued a statement made in a California deposition by Cheryl Bash as supporting the proposition that it would not take "multiple weeks" of technician's time to install a 672 line DLC-RT cabinet. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 76-78. Ms. Bash's answer, however, assumed a full crew of three to four technicians. SBC Ill. Ex. 8.1 (White Rebuttal) at 45-46. Moreover, Pitkin/Turner disregarded evidence presented in the California proceeding by Ms. Bash, subsequent to her deposition, which demonstrates that the installed cost of a DLC-RT greatly exceeds the cost estimates used by Pitkin/Turner and, in fact, exceeds the total installed cost of a DLC-RT included in SBC Illinois' revised cost study. SBC Ill. Ex. 8.1 (White Rebuttal) at 46; SBC Ill. Ex. 8.2 (White Surrebuttal) at 24-25, Sch. RSW-SR1 (Confidential).[37]

Pitkin/Turner also cited an *ex parte* document filed by SBC in the FCC's Triennial Review proceeding. As Mr. White explained, however, the *ex parte* filing did *not* address the same DLC equipment modeled in Illinois. In fact, the equipment modeled at the FCC was from a different vendor using completely different technology and was modeled in a completely different configuration. Moreover, the purpose of the *ex parte* discussion was to demonstrate to the FCC the feasibility of a *CLEC* being able to efficiently obtain access to unbundled loops with CLEC-owned GR-303 DLC equipment collocated in the *central office*, not a remote terminal. Accordingly, the cost estimate in the *ex parte* bears no relation whatsoever to the Alcatel DLC

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[37] Specifically, Ms. Bash's evidence showed total installed DLC-RT costs in a range of **[************ **********]**. SBC Ill. Ex. 8.2 (White Surrebuttal), Sch. RSW-SR1, p. 7.

equipment modeled in Illinois, nor does it include any of the incremental costs associated with DLC equipment installation in an outside environment. SBC Ill. Ex. 8.1 (White Rebuttal) at 46-47.

Finally, Pitkin/Turner asserted that their proposed DLC installation cost estimate was supported by a JAM Estimate Report. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 70-71. As previously discussed, however, JAM is not the appropriate system to determine the total installed costs for network equipment. As Mr. White explained, this is particularly true for the installation of DLC equipment, as there are many steps required to plan, engineer and install an RT which are not picked up by JAM. SBC Ill. Ex. 8.1 (White Rebuttal) at 44; SBC Ill. Ex. 8.2 (White Surrebuttal) at 25.

2. Copper/Fiber Crossover Point

The copper/fiber crossover point (or crossover length) refers to the overall loop length beyond which the feeder portion of the loop is provisioned over fiber cable rather than copper cable. SBC Ill. Ex. 1.0 (Smallwood Direct), Sch. JRS-3 at 15. As Mr. White testified, in designing and building a forward-looking network capable of handling multiple service needs, including voice and advanced data services, the engineer must balance the service needs projected for the area being designed with the transmission parameters needed to make those services work. SBC Ill. Ex. 8.0 (White Direct) at 28; SBC Ill. Ex. 8.1 (White Rebuttal) at 60. Based on these considerations, SBC Illinois' network engineers have determined that 12kft is the appropriate crossover point. *Id.* For example, to avoid the need to install repeaters on a T1 line, DS1 services are best provisioned on less than 12kft of copper cable. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 19; SBC Ill. Ex. 8.1 (White Rebuttal) at 60. In addition, certain types of xDSL services, such as HDSL (which is equivalent to DS1), only achieve their maximum performance at 12kft or less. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 19. Moreover, to support

higher speed advanced DSL services, the crossover point cannot be over 12kft. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 19; SBC Ill. Ex. 8.2 (White Surrebuttal) at 32.

Accordingly, it is appropriate to use a crossover point of no longer than 12kft in developing forward-looking, TELRIC-based loop costs. SBC Illinois' use of a 12kft crossover point in this case is consistent with the cost study used to establish the currently effective UNE loop rates in Docket Nos. 98-0486/0569, which used a crossover point of between 9kft and 12kft. Tr. 1860-61 (Balke). It is also supported by the FCC Staff's recent approval of the use of a 12kft crossover point in TELRIC studies, based on its finding that the Carrier Serving Area ("CSA") guidelines, which expressly call for a 12kft crossover point, are "the most recent guidelines for building outside plant and, therefore, represent the most appropriate design guidelines to be used in a TELRIC model." *Virginia Arbitration Order*, ¶ 241; SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 22-23.

Staff was the only party to propose a specific crossover point other than 12kft. Staff witness Koch proposed that the loop cost model should be revised to assume a crossover point of 18kft, despite his admission that the 18kft option "is not capable of supporting all advanced services." Staff Ex. 24.0 (Koch Rebuttal) at 10. In support of his proposal, Mr. Koch suggested that the only types of advanced services that SBC either currently offers, or plans to offer, are those that can be supported by an 18kft crossover point and, therefore, that a network designed on the basis of a 12kft crossover point is "gold plated." Staff Ex. 4.0 (Koch Direct) at 13; Staff Ex. 24.0 (Koch Rebuttal) at 9-10, 13.

Mr. Koch's argument is not supported by the evidence. For standard xDSL service, with speeds of 200kbps to 384kbps, the technical breakpoint is actually approximately 17.5kft, because at 18kft and beyond load coils must be added to maintain adequate transmission

requirements. SBC Ill. Ex. 8.2 (White Surrebuttal) at 32. Moreover, SBC Illinois' network is engineered to handle speeds much greater than 384kbps. *Id.* Contrary to Mr. Koch's assertions, SBC not only plans to offer such higher speed advanced services, *it already does*. In fact, the design objective originally developed under Project Pronto was to provide speeds of 1.5Mbps. *Id.* To support speeds of 1.5Mbps or greater, the crossover point cannot be greater than 12kft. Today, SBC is selling advanced services with speeds of up to 6Mbps. *Id.*

As further support for Staff's proposal, Mr. Koch cited SBC Illinois' response to subsection c of Staff Data Request RK 1.14 for the proposition that SBCI does not "currently install loop plant so that copper fiber crossover length is restricted to 12kft." *Id.* What that data request response actually states is that, under SBC Illinois' deployment plans for the next five years, "in general, the lengths of copper network for new plant will be limited to approximately 12kft, except in those particular relief plan or new deployment where a financial analysis might yield a different solution." SBC Ill. Cross Ex. 59. Of course, the "different solution" in a particular case may be a crossover point of less than 12kft. Moreover, Mr. Koch's testimony ignores SBC Illinois' response to subsection b of the same data request, in which the Company explained (as it did in its testimony) why the 12kft crossover point used in LoopCAT is the most efficient *forward-looking* network design:

> Because loop lengths in excess of 12,000 feet are not consistently capable of supporting many of the services currently demanded, the forward-looking design calls for 12,000 feet of copper or less in the loop plant. This design is consistent with carrier serving area guidelines that have been in place since the early 1980s. SBC Ill. Cross Ex. 60.

Mr. Koch also relied on a Universal Service Order in which the FCC used in 18kft crossover point. Staff Ex. 4.0 (Koch Direct) at 13. That Order did not, however, involve the application of TELRIC principles to establish UNE rates. In a more recent case that *did* involve UNE rates, the FCC Staff specifically adopted a 12kft crossover point, stating as follows:

> CSA guidelines expressly call for a copper/fiber break point at 12,000 feet, not 18,000 feet. The CSA guidelines, although flexible enough to permit some exceptions, are nonetheless the most recent guidelines for building outside plant and, therefore, represent the most appropriate design guidelines to be used in a TELRIC model.[38]

The FCC Staff also discussed the fact that the FCC had used an 18kft break point for Universal Service purposes, and drew a distinction between that and a UNE proceeding, stating:

> the universe of UNE loops included in the loop cost model is broader than the loops in the network modeled only for universal service purposes. When including this broader universe of loops, we conclude that the loop cost model should design outside plant that adheres to CSA guidelines.[39] SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 22.

In an attempt to distinguish the *Virginia Arbitration Order*, Mr. Koch stated that the "characteristics" of Verizon Virginia's network design are "undoubtedly not identical to those of SBCI." Staff Ex. 24.0 (Koch Surrebuttal) at 12. The FCC Staff's conclusion regarding the 12kft crossover point was not, however, based on the specific "characteristics" of Verizon Virginia's "network design," as evidenced by Mr. Koch's correct observation that there are no "specific references to the planned capabilities of the actual Verizon Virginia network in the entire discussion of the fiber-copper cross-over point." Staff Ex. 24.0 (Koch Rebuttal) at 12. Rather, as indicated above, the FCC Staff's finding was based on the CSA guidelines. In any event, the evidence presented by Mr. White (who, unlike Mr. Koch, is an experienced network engineer) fully supports the conclusion that, based on the "planned capabilities of the actual" SBC Illinois network, the appropriate forward-looking network design requires a fiber/copper crossover point of no less than 12kft.[40]

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[38] *Virginia Arbitration Order*, ¶ 241.
[39] *Id.*, ¶ 242.
[40] The only other witness to question SBC Illinois' use of a 12kft crossover point was CUB witness Baldwin, who argued that, instead of using a pre-specified copper/fiber crossover point, a loop cost model should determine whether to deploy fiber or copper depending on the least-cost feasible technology using a dynamic optimization

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3. Other DLC Investment Cost Issues

a. Remote Terminal Cabinet Sizes

(i) Response To AT&T

The loop cost study presented with SBC Illinois' direct testimony included two sizes of DLC remote terminal cabinets: a 672 line DLC and a 2016 line DLC. In response to the testimony of Staff Witness Koch, SBC Illinois revised its loop cost study on rebuttal to include a smaller, 448 line DLC-RT. SBC Ill. Ex. 4.1 (Smallwood Rebuttal at 7).[41] AT&T witnesses Pitkin and Turner had two criticisms related to SBC Illinois' revision to include the 448 line DLC cabinet, neither of which are valid.

First, Pitkin/Turner asserted that SBC Illinois inappropriately shifted the "mix" of its DLC-RTs in a way that "moved what were large RTs into small RTs – thereby increasing costs." AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 54. As Mr. Smallwood explained, however, to incorporate the smaller 448 cabinet and CEV configuration pursuant to the Staff and AT&T recommendations, SBC Illinois was required to revise its DLC-RT mix. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 21. When revising this data, it was necessary to reevaluate how each remote terminal site in Illinois would be configured on a forward-looking basis and weight the DLC mix accordingly. An explanation of the reason for this shift in mix and the workpapers supporting this mix were produced in discovery. *Id.*

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analysis. CUB Ex. 1.0 (Baldwin Direct) at 25-28. This is not appropriate. As SBC Illinois and Staff agreed, the crossover point is not simply a function of the lowest cost. The crossover point also concerns the ability to provision advanced services. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 19; Staff Ex. 4.0 (Koch Direct) at 13.

[41] In response to the testimony of AT&T witnesses Pitkin and Turner, SBC Illinois also revised its loop cost study to include controlled environmental vaults ("CEVs"), underground structures that serve as equipment "rooms" for DLC systems. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 7. No witness took issue with SBC Illinois' revision to include CEVs.

Pitkin/Turner complained specifically about the reduction in the percentage of 672 line systems in Zone 1 (which is the same as Access Area A). However, Zone 1, which is the Chicago loop area, includes only 1.45% percent of the feeder plant on DLC systems, and therefore, the impact of changing the mix of large and small RTs in that access area had an insignificant impact on the loop costs in that zone. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 22. As the chart on page 57 of Messrs. Pitkin's and Turner's rebuttal testimony shows, for Zones 2 and 3, the percentage of 672 RTs actually changed very little in the revised cost study (from 6% to 7% in Zone 2 (Access Area B) and from 5% to 9% in Zone 3 (Access Area C)). *Id.* The change in the mix of RT sizes in those two zones was primarily attributable to replacing a number of 2016 systems with CEVs and 448 pair DLC systems. As discussed, those two DLC-RT configurations were incorporated into the study upon the recommendation of the Staff and AT&T witnesses. *Id.*

Second, Pitkin/Turner complained that SBC Illinois applied the same fill factor to the 448 cabinet that it did to the larger 672 cabinet. Pitkin/Turner argued that SBC Illinois should have increased the fill factor for the 448 size DLC cabinet to reflect the idea that a smaller size cabinet will be used to better fill demand in an area. AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 51. As Mr. Smallwood explained, however, SBC Illinois does not track fill data by equipment size and, therefore, cannot uniquely track the fill for a 448 cabinet. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 20. Rather, DLC fills are based on actual data and are not calculated as a function of the DLC system sizes modeled in the forward-looking network. Given that many of the DLC systems in SBC Illinois' *actual* network are older, smaller DLC systems such as a subscriber line carrier ("SLC") 96, which has only 96 lines (and, therefore, are even smaller than the 448 line system), SBC Illinois' fill rates are more reflective of smaller systems than the forward-looking

network modeled in the LoopCAT study would suggest. Since smaller systems have fewer lines, it is more likely that those systems will be capable of achieving higher utilizations. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 78.[42]

Thus, the average fill rate applied by SBC Illinois to the 672 and 2016 DLC-RT cabinet sizes in the loop cost study is higher than the fill rates that one would actually expect to achieve for a forward-looking network with only 672 and 2016 size cabinets. Accordingly, there is no basis for Pitkin/Turner's suggestion that SBC Illinois should have applied to the 448 size RT cabinets a fill rate higher than the average fill rate applied to the larger size 672 and 2016 systems, since that fill rate already reflects the utilization rates associated with smaller systems, including systems smaller than the 448 size cabinet. If, based on Pitkin/Turner's analysis, a higher fill rate were applied to the 448 size cabinet, then logic would dictate that the fill rate for the larger systems should be *reduced* from the average, thereby raising the costs associated with those systems. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 20.

(ii) Response To Staff

In contrast to Pitkin/Turner, who complained about the inclusion of the 448 line DLC-RT cabinet, Staff witness Koch expressed concern that SBC Illinois had not included in its model yet additional, even smaller, sized systems. Staff Ex. 24.0 (Koch Rebuttal) at 3-4. Mr. Koch indicated that his concern was engendered by Staff's awareness "of at least ten sizes of RT cabinets that are available from SBCI's vendor, Lucent Technologies." Staff Ex. 4.0 (Koch Direct) at 14; Staff Ex. 24.0 (Koch Rebuttal) at 3. Lucent Technologies is not, however, SBC

[42] Because the larger systems modeled in the Company's forward-looking cost study have a lower per unit investment cost than many of the smaller systems (such as the SLC 96) actually deployed in the system, SBC Illinois' proposed TELRIC costs are lower than they would have been had SBC Illinois included the smaller systems. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 78.

Illinois' vendor for DLC systems. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 17.[43] Alcatel has been, and is expected to continue to be, SBC Illinois' vendor for DLC systems. *Id.*

In selecting a vendor and deciding which systems to install, SBC goes through a technology selection process. That process is used to ensure that forward-looking equipment purchases are efficient. Through this process, SBC has determined that Alcatel is the appropriate vendor for DLC systems and has determined the configurations of DLC systems that SBCI will purchase from that vendor. *Id.* Therefore, the use of one CEV and three RT sizes in LoopCAT is not a "restriction" that causes inefficiency as argued by Mr. Koch. Rather, the DLC-RT sizes and configurations in LoopCAT are reflective of detailed engineering evaluations that were performed by SBC to ensure an efficient allocation of capital resources, and are representative of the sizes that would be deployed in an efficient forward-looking network. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 76; SBC Ill. Ex 4.2 (Smallwood Surrebuttal) at 17.

Furthermore, as discussed by Mr. Smallwood and Mr. White, it would not be efficient to maintain RT cabinets different than those modeled in LoopCAT in inventory. SBC Ill. EX. 4.1 (Smallwood Rebuttal) at 76; SBC Ill. EX. 8.1 (White Rebuttal) at 47-48. For example, each cabinet has unique templates for laying out the concrete pad on which to set the cabinet. By increasing the number of different sized cabinets in inventory, SBC Illinois would be required to develop additional templates, further increasing costs. In addition, with multiple configurations for each cabinet, engineering rules would need to be changed, and more options and requirements would need to be developed for each type of cabinet. For these and other reasons, standardizing on fewer cabinets allows SBC to operate more efficiently. By doing so, SBC Illinois can arrange purchase agreements with vendors to match requirements and more

[43] Mr. Koch testified that Staff became aware of the Lucent offerings in Docket 00-0812. Staff Ex. 4.0 (Koch Direct) at 14, n. 14. That Docket, however, is a case involving Verizon, not SBC Illinois. Tr. 1924 (Koch).

effectively forecast requirements for future purchases. Standardizing on fewer cabinets also allows SBC to be very aggressive in negotiating prices with vendors. *Id.* at 48.

As Mr. Smallwood also explained, incorporating into the cost study cabinet sizes smaller than those already included will increase loop costs because the per unit investment for smaller DLC systems is higher than the investment for larger systems. For example, even though an SLC 96 line system costs roughly 75% less than a 672 line system, the 96 line system has approximately 86% less capacity than a 672 line system. Because SBC Illinois' UNE costs are developed on a per-unit of capacity basis, a 672 pair system is less expensive than a 96 pair system. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 76; SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 18.

In addition, as previously discussed, the fill rate applied to DLC systems in SBC Illinois' cost study is an average fill rate that reflects the average utilization of all of the DLC systems actually deployed today in SBC Illinois' network, many of which are the smaller size SLC 96 systems. As a result, the cost study produces a conservative estimate of the cost per loop because it applies to the more efficient, larger size DLC systems modeled in the study, an average fill rate which is higher than the fill rate specific to those systems. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 78. Thus, including smaller DLC systems in the cost study would not, contrary to Mr. Koch's apparent assumption, increase the average utilization, or fill, rate applied to the DLC system investment reflected in the study. Rather, it would simply increase the per unit of capacity costs against which that average fill rate is applied, thereby increasing the cost per loop.[44]

[44] Mr. Koch asserted that the incorporation of the 448 line DLC system in SBC Illinois' revised loop cost study had the effect of reducing per loop costs. Staff Ex. 24.0 (Koch Rebuttal) at 7. As Mr. Smallwood explained (and

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For all the reasons discussed, there is no need to require that a "sensitivity analysis" be performed on each of the ten RT cabinet types allegedly offered by Lucent, as Staff recommends. In any event, there would be no practical way to perform such analyses because SBC Illinois does not have actual contract prices for the ten different RT sizes to incorporate into the study. Vendors offer substantial discounts to companies that will standardize on a fixed amount of products, as SBC Illinois has done in the case of its contract with Alcatel. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 19. The list prices for Lucent's equipment would not reflect such discounts. Tr. 791-92 (Smallwood).

b. Alcatel Discounts

The DLC equipment prices modeled in LoopCAT include a contract discount of **[********]**, which reflects SBC's realization of the deepest volume discount level possible under the currently effective August 2003 price list for the Alcatel Litespan Purchasing Agreement. SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 25; SBC Ill. Ex. 15.1 (D. Palmer Surrebuttal) at 5-6. These prices, which are in effect today, and will remain in effect through at least 2006, are the forward-looking DLC equipment prices and, therefore, are properly modeled in LoopCAT. *Id.* at 6.

AT&T proposed that the currently effective DLC equipment prices modeled in LoopCAT be further reduced by an additional discount of **[*********]** which is referenced in Amendment 3 of the Litespan Purchasing Agreement, executed in October 2001, and which, under the terms of that Amendment, was to have become effective on September 1, 2003. As Mr. Donald Palmer explained, however, this discount is not currently, and will not in the future be, applied to the

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Pitkin/Turner recognized), however, the reduction in costs observed by Mr. Koch resulted from the reduction in DLC installation cost factors. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 20.

Litespan DLC equipment costs reflected in the loop cost study. This is due to the fact that after Amendment No. 3 was executed, but before the discount was to have gone into effect, SBC entered into negotiations with Alcatel to address a variety of issues that covered not only the DLC equipment at issue here, but also several other contracts and products that SBC purchases from Alcatel. Those negotiations effectively resulted in the mutual cancellation of the discount. While the current contract has not yet been modified to reflect this fact, a formal amendment will eventually be executed when these negotiations are completed. SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 24.

Pitkin/Turner argued that because "SBC would not simply give this [discount] away," there is "no question that SBC has either already received this discount, or in the alternative, has negotiated with Alcatel and received benefits at least commensurate with" the subject discount. AT&T Ex. 2.1 (Pitkin/Turner) at 60-61. As Mr. Palmer explained, however, SBC's negotiations with Alcatel resulted in the mutual cancellation of the subject discount in exchange for *other* concessions from Alcatel that do *not* affect the current contract price of the equipment modeled in LoopCAT. SBC Ill. Ex. 15.1 (D. Palmer Surrebuttal) at 5. Those concessions will enable SBC Illinois to actually avoid substantial additional future costs that would otherwise have *increased* the current cost of Alcatel's DLC equipment. The primary benefit of these negotiations will be

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**********]** Tr. 1365-66 (D. Palmer).

Accordingly, there is absolutely no basis for adopting Pitkin/Turner's proposed adjustment to reduce the currently effective Litespan DLC equipment prices reflected in the loop cost study.[45]

c. Mix Of Universal Digital Loop Carrier ("UDLC") And Integrated Digital Loop Carrier ("IDLC") Facilities

Universal Digital Loop Carrier ("UDLC") refers to a DLC system that is configured in a way that individual circuits that are multiplexed onto a fiber facility for transport over the DLC system are demultiplexed back down to the individual circuits in the central office. From there, those circuits can be routed to the necessary equipment within the central office. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 79. Integrated Digital Loop Carrier ("IDLC") refers to a DLC configuration in which the DLC system does not demultiplex the circuits back down to an individual level. Instead, the system leaves groups of circuits together at the DS1 level and those DS1 circuits are routed directly to the central office switch. *Id.* SBC Illinois' loop cost study assumes a mix of approximately 88% UDLC and 12% IDLC. This weighting was developed by multiplying the percentage of IDLC systems in the network by the percentage of UNE-P loops to account for the number of possible UNE loops that can be served on an IDLC platform. *Id.* at 80.

AT&T asserted that the loop cost study should assume that 100% of DLC systems are IDLC, based on the incorrect assumption that it is always more efficient and less expensive to use IDLC facilities rather than UDLC facilities. This assumption was based on a misinterpretation of the engineering guidelines set forth in SBC's Loop Deployment Policies and

[45] In their direct testimony, Pitkin/Turner also suggested that there may be other "discounts," in addition to the one referenced in Amendment No. 3, that SBC Illinois failed to reflect in its cost study, although they did not propose any specific adjustments related to those alleged discounts and benefits. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 133-136. For the reasons fully explained by Mr. Donald Palmer, however, none of the contract provisions referenced by Pitkin/Turner in support of their suggestion involve discounts that would properly be included in a forward-looking cost study. SBC Ill. Ex. 15.0 (D. Palmer Rebuttal) at 25-26. Pitkin/Turner did not challenge or otherwise respond to Mr. Palmer's explanation in their rebuttal testimony.

Guidelines ("LDPG"), which, Pitkin/Turner claimed, reflects a preference for IDLC in all cases. In fact, as Mr. White explained, when viewed in context, the language of the LDPG clearly indicates that IDLC should be deployed *only* where it is appropriate from an economic perspective. SBC Ill. Ex. 8.1 (White Rebuttal) at 51-53.

The evidence demonstrates that, in fact, it is not economic to deploy IDLC in all cases, as AT&T assumes. For example, as Mr. White explained, IDLC cannot support non-switched special services or stand-alone unbundled loops. SBC Ill. Ex. 8.1 (White Rebuttal) at 54. Because SBC Illinois must provide such services and UNEs, doing so will necessarily cost more where IDLC has been deployed. Mr. White testified that the overall cost of deploying IDLC could be greater than the cost of deploying UDLC, particularly in the circumstance where *all* the DLCs are IDLC (as AT&T proposes) and SBC Illinois was forced to find some other alternative to provide a non-switched special service. *Id.*

As Mr. White further explained, SBC Illinois has economically-driven utilization thresholds that must be met before IDLC is considered appropriate. SBC Ill. Ex. (White Rebuttal) at 54. These growth-driven economic thresholds are based on the quantity of new POTS line additions within a two-year period. Thus, in a low growth area served by a remote terminal, the high, upfront costs for the central office equipment needed to support IDLC remote terminals may not economically justify the deployment of IDLC remote terminals. To assume that 100% of all remote terminals should be integrated assumes that all areas are high growth areas. This assumption is not realistic. *Id.*

Mr. White also refuted AT&T's claim that, with UDLC technology, loops that are converted back to analog technology will need to be reconverted to a digital signal to enter a digital switch. In making this claim, Pitkin/Turner assumed that every service provisioned on a

pair gain system is required to go into either the SBC Illinois digital central office or some other CLEC digital equipment. Once again, Pitkin/Turner's assumption is incorrect. Some of the services supported by UDLC will include both analog and digital special services that will interface with other equipment, and not necessarily the digital switch of the ILEC or the CLEC. Moreover, the cost savings for the IDLC are minimal since each Litespan DLC system *must* have a central office terminal (COT) regardless of whether it is IDLC or UDLC. SBC Ill. Ex. 8.1 (White Rebuttal) at 55.

In addition, IDLC systems cannot, contrary to AT&T's claim, be efficiently unbundled. Specifically, in the forward-looking network, the interface for IDLC would be GR-303, which uses virtual interface groups ("VIGs") to connect the remote terminal to the central office. In this situation, the DS1s coming from a remote terminal to a central office are directly terminated into the Integrated Digital Terminal (IDT), which is part of the switching equipment in the SBC Illinois Central Office. There is no physical way to access individual channels (DS0s) within these DS1s in order to unbundle those channels for use as stand-alone UNE loops. SBC Ill. Ex. 8.1 (White Rebuttal) at 69. The primary vendor of SBC Illinois' IDLC equipment, Alcatel, has confirmed that such equipment cannot be used to provide unbundled loops or certain special services. SBC Ill. Ex. 8.1 (White Rebuttal) at 56, Sch. RSW-R4.

The only possible way to unbundled stand-alone loops served by an ILDC would be to allow a CLEC to take a DS1 interface out of VIG for their loops from pair gain systems, thereby eliminating the need to deploy UDLC systems for their service needs. However, this would result in a vast underutilization of the DS1 Virtual Interface Groups until the CLEC had close to 24 customers served in a particular IDLC Remote Terminal. If this scenario were multiplied by the hundreds of Remote Terminals and the numerous CLECs which are in business in SBC Illinois'

service territory, it would increase the cost of pair gain equipment, the sizes of the Remote Terminals, the size (and cost) of right of way to place the Remote Terminal, and the number of integrated digital terminals to support these Remote Terminals. Thus, it does not make economic sense to adopt a purely IDLC platform. SBC Ill. Ex. 8.1 (White Rebuttal) at 56-57.

In addition, for technical reasons explained in detail by Mr. White, only 2-5% of the CLECs would have access to the DS1 links. The remaining 95-98% of the CLECs would be required to continue to interface to SBC Illinois at a DS0 level and, therefore, would not be able to access unbundled loops in an ILDC environment. (SBC Ill. Ex. 8.2 (White Surrebuttal) at 28-30. Moreover, even if one assumes that a DS1 interface VIG could be dedicated to each CLEC, every CLEC would be required to have one DS1, at a minimum, into every Remote Terminal, allowing no interface at the DS0 level. Such an arrangement would be cost effective only for those CLECs having a "critical mass" of subscribers served by the RT. Unless such a "critical mass" of customers were achieved by every CLEC in every remote terminal, equal access could not be assured. *Id.* at 57.

Pitkin/Turner made no serious attempt to refute the points made by Mr. White, as summarized above. Nonetheless, they stubbornly insisted that there are no "technical problems" with using IDLC as it relates to unbundling of stand-alone UNE loop. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 142; AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 65. Not only is Pitkin/Turner's position contrary to the evidence presented by SBC Illinois, it is also directly contrary to the position that has been taken by AT&T on this issue before the FCC. In an *ex parte* to the FCC dated December 4, 2002, AT&T identified many of the same problems with the GR-303 DLCs (the type of IDLC at issue here) that were discussed by Mr. White. SBC Ill. Ex. 8.2 (White Surrebuttal) at 27, Sch. RSW-SR3. For example, AT&T, like Mr. White, noted that

GR-303 DLCs (i) limit the number of accessing LECs "by requiring the establishment of separate and distinct Interface Groups (IGs) for each LEC seeking access to a given DLC;" and (ii) require that a CLEC gain a "critical mass" of end users before it "can utilize its DS1 uplink effectively and cost-efficiently." *Id.* AT&T concluded that these and other "operational concerns must be addressed before the deployment of any solution whose architecture and technology is premised on GR-303 DLCs." *Id.*

Pitkin/Turner attempted to gloss over the problems with unbundling loops from IDLC systems by noting that many unbundled loops in Illinois are provided as part of a UNE "platform" rather than on a physical stand-alone basis**.** Pitkin/Turner's assertion ignores at least three factors. First, the long-term availability of the UNE platform is uncertain as a result of recent local developments, including the D.C. Circuit's USTA II decision. Second, thousands of customers are being served by stand-alone UNE loops today, proving that there is an ongoing need for UDLC equipment. Finally, Pitkin/Turner overlook the many other customers of non-switched special services, which also will continue to require the use of UDLC systems. SBC Ill. Ex. 8.1 (White Rebuttal) at 56.

In light of the numerous economic and practical constraints on the deployment of IDLC discussed above, the relative weighting of UDLC and IDLC reflected in SBC Illinois' loop cost study reflects the most efficient deployment of the available technology. SBC Ill. Ex. 8.2 (White Surrebuttal) at 26-27. Accordingly, Pitkin/Turner's proposal to change the weighting to 100% IDLC should be rejected. Staff witness Koch also opposed Pitkin/Turner's proposal. Staff Ex. 16.0 (Koch Rebuttal to Intervenors) at 3.

d. Number Of Remote Terminals Per COT

SBC Illinois' cost study assumes that, on average, two DLC remote terminals ("RTs") are served by each central office terminal ("COT"). SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 80.

This assumption is reasonable because there are only two optical ports on the COT, generally called the East optics and the West optics, so there can be at most two RTs that directly connect to the COT, and the others must "daisy-chain" off of those two. *Id.* That sets up the requirement that the subordinate carrier serving areas be served across a common fiber cable route, so that the second RT's traffic can flow through the first. In order for that to be practical, there needs to exist sufficient demand to warrant two RTs located at some distance from the central office along the same route. In some towns, there may only enough demand to justify one RT.

AT&T argued that, because it may be technically feasible for a COT to serve four RTs in a "ring configuration," the cost study should be revised to assume that every COT serves four RTs. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 148-49; AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 21. For reasons discussed by Mr. White and Mr. Smallwood, however, it is neither practical nor efficient to design and administer a network so that every COT serves four RTs. In general, CSAs ("Carrier Serving Areas"), which are served by a single RT, have between two to six distribution areas ("DAs") with each DA designed to have between 200 to 600 living units. Accordingly, there is a potential for an RT to serve as many as 3600 living units. In addition, these RTs need to support a variety of services such as sub-rate, DS1, ISDN, COIN or non-switched service, to name a few. SBC Ill. Ex. 8.2 (White Surrebuttal) at 31. Increasing the number of RTs per COT creates a compounding effect on bandwidth requirements and will ultimately cause an increase in bandwidth above capacity. This situation would result in the need for significant rework and rerouting of the existing fiber network, causing increasing costs, customer down time and a potential increase in customer outages. SBC Ill. Ex. 8.2 (White Surrebuttal) at 31.

Furthermore, Pitkin/Turner's assumption that it would be possible for every COT to serve four RTs appears to be based, at least in part, on the assumption that 100% of the DLC systems are IDLC and that IDLC-served loops can be unbundled. AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 66-67. For the reasons discussed in Section III.C.3.c, above, Pitkin/Turner's assumption in this regard is unsupported by the evidence.

e. Calculation And Application Of Building Cost Factor

SBC Illinois' loop cost study applies a building cost factor to all electronic equipment investments to account for investment in the buildings that house such equipment. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 82. In his direct testimony, Attorney General witness Dunkel proposed an adjustment to exclude investment in DLC remote terminals from the electronic equipment to which the building factor is applied on the grounds that remote terminals are generally not housed in buildings. AG Ex. 1.0 (Dunkel Direct) at 27. Mr. Dunkel's proposal should be rejected. As explained by Mr. Smallwood, the reason the building factor is applied to remote terminals is related to the method by which the building factors are calculated. Under that method, the calculation of the building factor takes into account the ratio of all building investments to all electronic equipment investments (*i.e.*, FRCs 257C and 357C), not just electronic equipment that is located in buildings. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 82. Therefore, it is proper to apply this factor to *any* telephone plant electronics investments, even those that are not in buildings. Since the remote terminal falls into the category of electronic equipment, the factor is appropriately applied to the remote terminal investments. Moreover, if the building factor were applied only to electronic equipment that actually is located in buildings as Mr. Dunkel suggests, it would be higher, because investment in remote terminals would need to be removed from the total base of investment included in the denominator. *Id.* at 82-83.

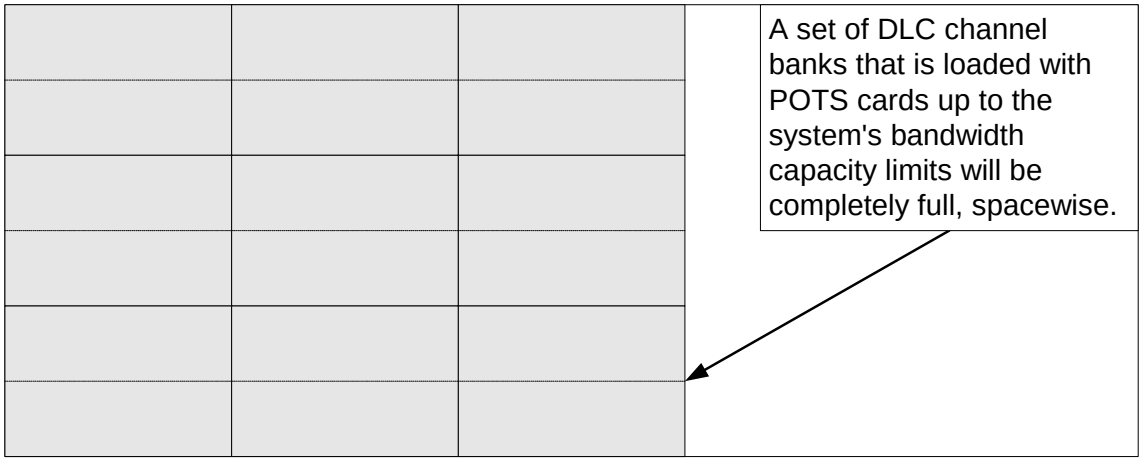
In his surrebuttal testimony, Mr. Dunkel purported to recalculate the building factor by removing the investment in remote terminals from the denominator. Mr. Dunkel then proposed that this revised building factor be applied to electronic equipment exclusive of the remote terminals. AG Ex. 1.3 (Dunkel Surrebuttal) at 6. Mr. Dunkel's recalculation of the building factor, however, was not accurate, and, therefore, does not resolve the issue. Mr. Dunkel appeared to have calculated his revised building factor by removing from the denominator an amount of 257c investment determined by applying a percentage of remote terminal costs specific to the forward-looking study for a 2-wire analog loop. Tr. 813 (Smallwood). As Mr. Smallwood explained, however, the building factor includes in the denominator all 257c and 357c electronic equipment, including equipment related to other loop types, such as higher capacity DS1 and DS3 loops, as well as other electronic equipment specific to the central office that may not be reflected in the cost study. Tr. 813-14 (Smallwood).

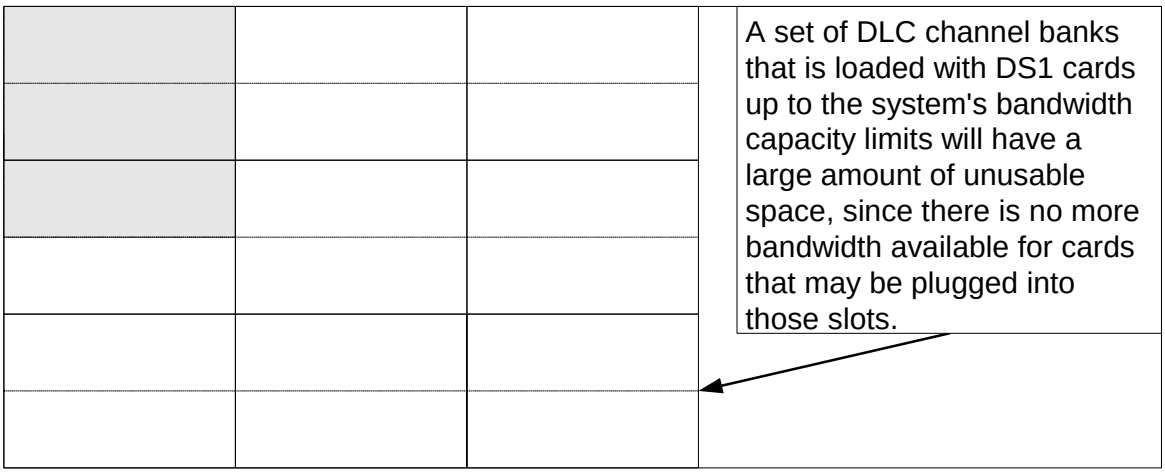
As Mr. Smallwood also explained, there is no mechanism in the accounting system that would allow for an accurate disaggregation of all of the electronic equipment investment included in the denominator between equipment which is housed in buildings and equipment which is not, because the accounting system is not designed to track data based on the building/no building distinction. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 53; Tr. 813-14 (Smallwood). Given the lack of data that would be needed to accurately adjust the building factor, the Commission should approve SBC Illinois' method of calculating building costs by applying the unadjusted building factor to all electronic equipment, including remote terminals. This is a reasonable method and consistent with the method used to develop the currently effective UNE loop rates in Docket Nos. 96-0486/0569. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 53.

f. Allocation Of Shared DLC Components

In SBC Illinois' loop cost study, the investment is shared DLC components is allocated evenly across all possible DS0 terminations. Thus, a DS1 termination, which can carry 24 DS0s, is allocated 24 units of the cost per DS0 for shared DLC components. SBC Ill. Ex. 8.1 (White Rebuttal) at 57. AT&T, on the other hand, proposes that the DS1 terminations be allocated only four units of the cost per DS0, based on the theory that DS1 requires four times the line card space of a DS0. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 146-48. AT&T's analysis assumes that physical line card space, rather than bandwidth capacity, is the factor which limits the capacity of the DLC remote terminal and, therefore, that physical line card space is the "cost-causative" factor. As Mr. White and Mr. Smallwood explained, however, this assumption is incorrect. The ultimate capacity that a DLC can provide is largely determined by the bandwidth of the facility that is feeding the system, not by the amount of physical line card space. SBC Ill. Ex. 8.1 (White Rebuttal) at 58.

Specifically, a DS1 line card requires six times the amount of bandwidth of a POTS line card. Each POTS line card uses four time slots (or four DS0 lines per card). SBC Ill. Ex. 8.1 (White Rebuttal) at 58. Accordingly, when a DS1 card is inserted into the system, it consumes an amount of bandwidth equal to the amount that could have been used by six POTS cards which support 24 POTS lines. *Id.*; SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 81. Therefore, a DS1 line card *effectively* consumes 24 POTS lines worth of DLC space and associated investment in common equipment, since, by using the DS-1 card, SBC is precluded from supporting 24 POTS customers. *Id.* This concept is illustrated in the figures below:





Id. at 81-82.

As illustrated by the above figures, due to bandwidth consumption, SBC Illinois foregoes the ability to use a substantial amount of DLC space when a DS-1 card is installed. This indicates that bandwidth, not actual physical space, is the limiting cost causative factor. Accordingly, SBC Illinois' method of allocating investment in shared DLC components to DS1 service is reasonable and should be approved.[46]

[46] In their rebuttal testimony, Pitkin/Turner asserted that the limiting characteristics of the remote terminal would be physical line card space if SBC Illinois were to utilize only IDLC systems. AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 69. As previously discussed, however, due to numerous economic and practical constraints in the deployment of IDLC systems, including the inability to efficiently unbundled stand-alone UNE loops served over an IDLC, the (cont'd)

g. Remote Terminal Investment Cost Allocation

AT&T and Staff asserted that SBC Illinois' allocation of all of the DLC-RT investment to voice services in inappropriate because it does not reflect the purported capability of the DLC to provide both voice and DSL services. To correct this purported flaw, these parties recommended that 75% of the capacity of the DLC-RT be allocated to voice services and 25% of the capacity be allocated to DSL services, thereby reducing by 25% the RT investment reflected in the cost study. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 137; Staff Ex. 4.0 (Koch Direct) at 19. This recommendation should be rejected because it mistakenly assumes that the DLC-RTs used in the cost study are DSL-capable. In fact, they are not. As Mr. White and Mr. Smallwood explained, the RT investment developed for LoopCAT is based *solely* on the provision of voice service, and includes *only* the cost of the equipment necessary to provision voice circuits, a fact that Mr. Koch expressly acknowledged. Staff Ex. 4.0 (Koch Direct) at 11; Tr. 1922-23 (Koch).

SBC Illinois is required to incur significant costs including additional electronics that are necessary to make a DLC remote terminal capable of supporting DSL services. This equipment includes:

- Appropriate structure and space to provide power and heat
- Space for a DSL-supportable CBA
- Power Distribution Fan Assembly(ies)
- ADSL Bank Control Units
- Appropriate software load (v10.2 or higher)
- Appropriate fibers to feed the DSL shelf and possibly additional copper to feed the Distribution Areas (DA) served by the DLC
- Aggregation/Optical Concentration-device (OCD) (in Central Offices)

(… cont'd)

approximate 12% weighting of IDLC systems in SBC Illinois' cost study reflects the most efficient forward-looking deployment of such systems.

- Broadband connectivity to the collocation space of a CLEC from the OCD device
- Other miscellaneous equipment and connections to monitor, provision and maintain the equipment.

SBC Ill. Cross Ex. 58. SBC Illinois' cost to upgrade a channel bank common from voice grade to DSL capable is **[**********]** times the cost of a regular POTS channel bank, and the cost to upgrade a line card from voice grade to DSL-capable would be about **[*******]** times the cost of the regular voice only line card. SBC Ill. Ex. 8.2 (White Surrebuttal) at 26; SBC Ill. Ex. 8.1 (White Rebuttal) at 49. Because the cost of the equipment necessary to make the RTs DSL capable, including the higher prices for the DSL-capable line cards, were not included in LoopCAT, it would be unreasonable to discount the DLC-RT investment included in the cost study by 25%.

Moreover, as Mr. Smallwood explained, allocating 25% of the RT costs to DSL services would only be appropriate if one were to assume that every RT in the forward-looking network is configured to provide DSL service. That is not the case. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 23. Rather, the number of DLCs equipped for DSL will be some subset of the total number of DLCs deployed.[47] In addition, the proposed 25% allocation assumes that the subscription rates for voice and DSL would be proportionate to the technical capacities of the equipment. There is no basis to assume that this is the case given the fact that voice services enjoy almost universal penetration while DSL does not. In fact, the subscription rate for DSL services does not come close to approaching that percentage.[48] As a result, even if one were to assume that every DLC-RT is fully equipped to support DSL, the utilization rate for that

[47] Currently, only **[*********]** of SBC Illinois' RTs are DSL capable. SBC Ill. Ex. 8.1 (White Rebuttal) at 49.
[48] Nationwide, SBC has about 3 million DSL customers, compared to 55-60 million access lines. SBC Ill. EX. 4.1 (Smallwood Rebuttal) at 84, n. 58.

broadband investment would be lower, thereby raising the per-unit fill adjusted investment. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 84.

AT&T erroneously argued that the cost of the equipment that can be used to provide both voice and data service should be partially allocated to data service on the basis of "cost causation" principles. AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 73. In fact, principles of "cost causation" support the rejection of the Staff and AT&T recommendation, because the need to invest in the common equipment is caused by the need to provide voice service. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 22-23. Mr. White explained that the main driver for placing an RT is to provide voice services and capacity relief. For example, to provide service to a new neighborhood where an RT is the appropriate economical technology, the decision is based on the voice needs of the neighborhood. SBC Ill. Ex. 8.1 (White Rebuttal) at 48. As discussed above, DSL functionality can only be added to an RT by adding additional equipment, the incremental cost of which is not included in the cost study to begin with.

Mr. Koch argued that Staff's proposed allocation of DLC-RT costs to data services is consistent with a cost study presented by SBC Illinois in Docket 00-0393 related to interim pricing for an end-to-end broadband "UNE." As Mr. Smallwood testified, however, that study did not, in fact, properly identify the incremental cost of DSL functionality in the DLC system. Moreover, the cost study submitted by SBC Illinois in Docket 00-0393 was never adopted by the Commission. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 24. In fact, Mr. Koch himself opposed SBC Illinois' cost study and proposed interim rates for the broadband "UNE" that were lower than those developed by SBC Illinois on the basis of its cost study. *Id.; Order on Second Rehearing*, Docket 00-0393 at 25 (March 28, 2002). The Commission adopted Mr. Koch's proposed rates. *Id.*

Furthermore, in Docket 00-0393, the Commission rejected Ameritech Illinois' argument that some portion of the cost of a loop which is capable of providing data service should be allocated to the high frequency portion of the loop ("HFPL"). *Order*, Docket 00-0393 at 85, 86-87 (March 14, 2001). In rejecting this argument, the Commission found that "the ILEC bears no additional incremental cost for provisioning [the HFPL], and thus the economic principles adopted by the Commission dictate that it should be priced at zero." *Id.* at 85. Similarly, the so-called "common costs" of the DLC-RTs included in SBC Illinois' study in this case are costs which must be incurred to provide voice service, and the study includes none of the "incremental costs" necessary to provision DSL service. Consistent with the cost causation principles relied on by the Commission to assess a zero cost to the HFPL in Docket 00-0393, therefore, the Commission should assign no amount of the DLC-RT investment included in the cost study in this case to data services.

4. Premises Termination Costs

a. NID And Drop Wire Installation Costs

(i) Response to Staff

In SBC Illinois' loop cost study, the costs of installing premises termination equipment, including NIDs and drop wires, is developed on the basis of subject matter expert estimates of installation times multiplied by a unit labor cost factor. A material factor is then applied to the installation cost to develop the total premises termination costs. Staff witness Lazare asserted that the **[*********]** minutes of travel time assumed by SBC Illinois' study for each service installation at an individual premise consisted of travel to and from the Company's facilities. Staff Ex. 3.0 (Lazare Direct) at 31. Because Mr. Lazare considered it unreasonable to assume that an installer must travel back to the Company's facilities after completing each installation,

rather than traveling on to connect another service in the same area, he proposed an adjustment to reduce the amount of travel time per installation. *Id.* at 31-33.

Mr. Lazare's proposed adjustments should be rejected. First, the travel time included in SBC Illinois' study do *not*, contrary to Mr. Lazare's assumption, contemplate having the technician return to the garage in between every job. Rather, it reflects an estimate of the average amount of time for all jobs in a day, including travel from the garage to the first job and travel back to the garage from the last work site of the day. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 86; SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 45. Thus, the fundamental premise of Staff's proposed adjustment to travel times is incorrect.

Furthermore, the average amount of travel time of **[********]** minutes included in the Company's study includes more than actual driving time; it also includes setting up work area protection (*i.e.*, placing cones around the van or truck), contacting the customer,[49] and retrieving all necessary tools and supplies from the work truck. *Id.*; SBC Ill. Ex. 8.1 (White Rebuttal) at 17. The average travel time also considers the driving time required in urban areas (sometimes with significant traffic congestion) and rural areas (sometimes with significant distances between sites). Mr. Lazare's proposed average travel time of 10 minutes is insufficient to cover all of these activities.

In support of his proposed average travel time, Mr. Lazare asserted that TELRIC requires an assumption that the "network is being constructed today on a going-forward basis" and, therefore, "technicians could simply walk from one service drop to the next." Staff Ex. 3.0 (Lazare Direct) at 32; Staff Ex. 23.0 (Lazare Rebuttal) at 16. Even under the TELRIC standard, however, there is no basis for assume, as Mr. Lazare apparently does, that all customers would

[49] SBC Illinois policy requires that technicians make contact with the customer to inform the customer that work will be completed at their premises.

all order service on the same day. SBC Ill. Ex. 4.1 (Smallwood Surrebuttal) at 45. Indeed, it would be literally impossible to install 90% of new services within five days, as required by the Commission's rules, if all customers were to request service on the same day. As Mr. White explained, in the real world, customer rarely, if ever, coordinate their requests for a service in a way that would enable a technician to walk from one house to the next in the manner envisioned by Mr. Lazare. SBC Ill. Ex. 8.1 (White Rebuttal) at 17.

Moreover, Mr. Lazare's interpretation of the TELRIC standard apparently assumes that a monopoly environment would still exist because he assumes that SBC Illinois would have every customer on the block. TELRIC, however, contemplates an efficient, competitive market outcome. In a forward-looking competitive market, SBCI might only have service to one customer in a neighborhood. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 45.

(ii) Response To AT&T

AT&T proposed three arbitrary adjustments to the NID and drop wire installation times included in the Company's study. Each of these adjustments ignore reality and must be rejected.

First, Pitkin/Turner reduced the cost of trenching by one-half based on the assumption that trenching machines can be used to simultaneously bury multiple drop wires. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 55-57. As discussed above, however, it is completely unrealistic to assume, as Pitkin/Turner did, that an ideal group of customers would all seek to have drop wires installed on their street at the same time. In fact, even in new subdivisions, developers build in phases and, therefore, service requests come at all different times. SBC Ill. Ex. 8.1 (White Rebuttal) at 35.

Furthermore, as Mr. White pointed out, Pitkin/Turner erroneously assumed that it would be more efficient to use trenching machines in all circumstances, including on very short distances or in congested areas where it may be more practical to hand dig. Under

Pitkin/Turner's scenario, SBC Illinois would be required to incur significant additional costs to purchase and maintain additional trenching machines and to operate those machines in many situations in which it is not practical to do so. These costs would include the additional work time associated with using a trenching machine, such as loading and unloading the machine from a trailer. Pitkin/Turner, however, included no allowance for such additional costs. SBC Ill. Ex. 8.1 (White Rebuttal) at 35.

Second, Pitkin/Turner proposed that the time needed to make an aerial mid-span attachment on a drop wire be reduced by one-half, based on their assumption that such mid-span adjustment are not needed on every drop. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 57. Once again, Pitkin/Turner's assumption ignores reality. As Mr. White explained, a mid-span attachment is a drop attachment placed between two poles and attached to the cable strand. For safety and pole access reasons, the Company's policy is to use mid-span attachments for new drops rather than attaching the drop directly to the pole. This policy was adopted because, typically, third party attachments and facilities, such as cable TV and power lines, are located on the pole above the telecommunications facilities. Providing a midspan attachment allows for clear climbing space for employees of other utilities to access their facilities. SBC Ill. Ex. 8.1 (White Rebuttal) at 36. Accordingly, SBC Illinois' assumption of a mid-span attachment for each drop wire is an appropriate assumption to make on a going-forward basis and is TELRIC-compliant.

Third, Pitkin/Turner assumed that SBC Illinois' installation time for drop wire can be reduced by placing two sets of four drops in one day. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 35. As Mr. White explained, however, Pitkin/Turner's assumption caused them to eliminate travel and set-up times that are a necessary part of the business even on a forward-looking basis.

SBC Ill. Ex. 8.1 (White Rebuttal) at 36. As previously discussed, real customers do not ask for service in clusters. Rarely in the real world does a customer place an order requiring drop placement at the same time and in the same neighborhood as another customer, and even more rarely, if ever, are they side-by-side. SBC Illinois cannot assume that drop installations are ever side-by-side, because new houses and businesses are not constructed in that way and customers do not coordinate their service requests that way. *Id.*

b. Adjustment To Remove Double-Counting

In his Direct Testimony, Attorney General witness Dunkel pointed out that SBC Illinois had included the aerial and buried NID and drop-wire material costs as exempt material in its cable installation factors in LoopCAT and also in its premises termination investment. To eliminate this "double recovery," Mr. Dunkel initially proposed an adjustment to remove the separate line item costs for the NID and drop wire costs. AG Ex. 1.0 (Dunkel Direct) at 25. Subsequently, in rebuttal testimony dated January 20, 2004, responding to Staff's direct testimony, Mr. Dunkel proposed that the double-counting be removed through an adjustment to the installation factor, rather than through an adjustment to remove the separate line item costs for the NID and drop wire costs. AG Ex. 1.2 (Dunkel Rebuttal). In his rebuttal testimony, also dated January 20, 2004, Mr. Smallwood agreed that there had been an inadvertent double-counting of the NID and drop wire costs and proposed, as did Mr. Dunkel in his January 20, 2004 rebuttal testimony, to remove the double-counting by removing such costs from the calculation of the installation factors. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 85-86. Mr. Smallwood made this adjustment in the revised loop cost study sponsored by him in his rebuttal testimony. *Id.* at 86. Accordingly, there is no longer any dispute between SBC Illinois and the Attorney General with respect to this issue.

AT&T did not propose any adjustment with respect to this double-counting issue in their direct testimony. In their rebuttal testimony, however, Pitkin/Turner criticized SBC Illinois for proposing to eliminate the double-counting by removing the investment in NIDs and drop wires from the calculation of the cable installation factors, rather than adopting Mr. Dunkel's original proposal to remove the separate investment line items for NIDs and drop wire costs. AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 46. Pitkin/Turner's criticism is without merit and should be disregarded.

In his surrebuttal testimony dated February 20, 2004, Mr. Dunkel expressly stated that SBC Illinois' method "is an acceptable way to correct the double counting, and is the method I used in my Rebuttal Testimony." AG Ex. 1.3 (Dunkel Surrebuttal) at 3-4. Furthermore, as Mr. Smallwood explained, in light of the FCC's mandate that ILECs offer subloop rate components, including "Term to NID", it is necessary to directly identify the costs of subloop components, including NID, drop wire and premises termination costs, as separate line items in loop cost studies, rather than indirectly through the use of an installation factor. SBCI used this direct method in the LoopCAT model. Accordingly, it is not appropriate to "zero out" the line items for NIDs, drop wire and premises termination costs, as suggested by Pitkin/Turner. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 85-86.

Finally, if the NID and drop costs are included in the development of the cable installation factors, those costs are effectively assigned the fill rates applicable to distribution and feeder cable. Tr. 1663 (Pitkin). By comparison, including the NID and drop wire costs as a separate line item allows for the application of the specific fill factor applicable to premises termination equipment, which is different than the fill factors for distribution and feeder cable.

Tr. 1664 (Pitkin). Accordingly, the approach adopted by SBC Illinois and the Attorney General produces a more accurate cost estimate.

c. Mix Of Aerial And Buried Premises Termination

In its loop cost study, SBC Illinois used an mix of **[******]** percent buried premises termination and **[********]** percent aerial terminations. This is appropriate for a forward-looking network design. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 87. AT&T proposed that this weighting of aerial and buried premises terminations be changed to match the relative mix of aerial and buried distribution cable. AT&T Ex. 2.0 (Pitkin/Turner at 120. This would have the effect of increasing the percentage of aerial premises termination equipment and reducing the percentage of buried premises termination equipment. *Id.*

AT&T's proposal should be rejected because it fails to recognize that the distribution cable weightings are based on pair-feet in service, not pairs in service. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 87. For example, a distribution pair that is 10,000 feet long may contain both aerial and buried plant, with the aerial plant running 8,000 feet from the FDI, along a right-of-way up to the subdivision, and 2,000 feet of buried plant running into the subdivision. In this case, the weighting would be 80% aerial and 20% buried. However, all of the customers would be served using buried drop wires because the distribution plant that runs into the subdivision is buried. The forward-looking mix for drops included in SBC Illinois' study was based on a network subject matter expert's estimate and reflects the fact that the majority of home owners in a forward-looking network would want and would receive buried drop plant. This is an appropriate forward-looking assumption and should be adopted. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 48.

d. Multiple Dwelling Units

In response to a recommendation made by Staff witness Zolnierek in his direct testimony, SBC Illinois revised its loop cost study on rebuttal to incorporate the impact on premises termination costs of situations in which residential customers reside in multiple dwelling units ("MDUs"). SBC Illinois developed the adjustment using U.S. Census data. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 88. Dr. Zolnierek testified that the Company's adjustment satisfies his concern. Staff Ex. 27.0 (Zolnierek Rebuttal) at 47-48. Accordingly, there is no longer an issue between Staff and the Company with respect to MDUs.

AT&T, however, criticized SBC Illinois for not adopting Pitkin/Turner's proposal to use U.S. Census data to incorporate MDUs on a geographically deaveraged basis. AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 52. Pitkin/Turner claimed that, by using the 2000 census, they were able to extract the total housing structures for each "urban" area. Pitkin/Turner, however, incorrectly assumed that all "urban" areas, as defined by the Census Bureau, are the same as UNE Access Area A, which is limited to the Chicago loop area. In fact, almost all of the areas that Pitkin/Turner categorizes as an urban area under the Census Bureau guidelines are located in Access Area C, not A. *Id.* at 47-48. Therefore, it is completely inaccurate, as Pitkin/Turner did, to use the US Census data for the Chicago, IL MSA, which includes both out of state areas (Gary, IN) and locations included in Access Areas B and C. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 48.

5. FDI Costs

SBC Illinois' cost study appropriately includes three FDIs pair terminations per working loop. This in consistent with standard engineering practice. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 90. AT&T proposed that this standard practice be disregarded and that the cost

study be adjusted to assume that there are only 2.0588 FDI terminations per working loop. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 130. AT&T's proposal must be rejected.

Pursuant to standard industry practice, FDIs are designed by manufacturers to terminate two distribution pairs for one feeder pair. The literature from Marconi, a manufacturer of FDIs, included in Pitkin/Turner's workpapers, points to this fact. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 49. The concept behind the three-panel FDI is that it allows a single pair within the feeder cable to supply service to any one of many distribution pairs in the distribution cables. This gives the feeder cable the most flexibility because it allows for more efficient and less complex cross connect work at the FDI, as opposed to more complex and costly, splicing augmentation in the cable. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 90; SBC Ill. EX. 8.1 (White Rebuttal) at 67-68. For example, because there are two distribution terminations for each feeder termination in the FDI, all that is required to move service from one customer to another is a cross-connect change, which is easily accomplished given that the cabinet is designed for this task. By comparison, the number of terminations per FDI assumed by Pitkin/Turner provides little more flexibility than straight-through cabling, which would have two terminations (one distribution pair and one feeder pair) per working loop. *Id.*

Accordingly, the use of three FDI terminations per working loop in the LoopCAT model represents a cost-efficient sizing methodology. Pitkin/Turner, by contrast, provide no evidence that their sizing methodology is efficient or would provide adequate service levels. They reference no studies performed by Telcordia (or other reputable telecommunication research companies) in support of their methods and identified no telecommunications company that has successfully utilized their methods. SBC Ill. Ex. 8.1 (White Rebuttal) at 68. For these reasons alone (which Pitkin/Turner never rebutted), Pitkin/Turner's adjustment should be rejected.

AT&T's approach is also flawed because it provides insufficient consideration of the need for spare capacity. Since each working loop requires one feeder pair and one distribution pair, and each of these would require a termination in the FDI, that would be a total of two terminations. With a mere .0588 unused terminations at the FDI in Pitkin/Turner's design, there would hardly be a need for an FDI at all, as there would be virtually no spare terminations with which to perform cross connects. SBC Ill. Ex. 8.1 (White Rebuttal) at 68-69.

Based on SBC Illinois' use of the ultimate sizing distribution methodology, and using Pitkin/Turner's 2.0588 terminations per FDI recommendation, the Company would have to upsize the FDI. SBC Illinois, however, uses the industry standard two distribution pairs to one feeder pair at the FDI, which allows for fewer feeder terminations. SBC Ill. Ex. 8.1 (White Rebuttal) at 68-69. For example, using the industry standard methodology, if the distribution area required 1200 distribution pairs, the Company would have 600 feeder pairs for a total FDI interface of 1800 terminations. Using Pitkin/Turner's methodology, the 1200 distribution pairs would require 1133 (1200/1.0588=1133) feeder pairs for a total of 2333 (1200+1133=2333) FDI terminations. *Id.* On the other hand, if SBC Illinois did not use the ultimate sizing distribution methodology and used the same 2.0588 terminations per FDI, then the Company would routinely be required to make costly placing and splicing augmentations to the network. *Id.*

Pitkin/Turner argued that there is "no engineering reason" to terminate feeder pairs only on the center panel of an FDI and suggested that 2.0588 terminations per working loop can be achieved if feeder pairs are terminated on the same panels on which distribution pairs are terminated. As Mr. White explained, however, there are very good "engineering reasons" why Pitkin/Turner's suggestion is inappropriate. If SBC Illinois were to adopt Pitkin/Turner's recommendation, it would create chaos and confusion in the outside loop plant, increase

operating costs and quickly eliminate the flexibility in the plant. SBC Ill. Ex. 8.1 (White Rebuttal) at 70. Feeder pairs and distribution pairs are terminated on separate panels to allow the technician to reduce cable congestion in the FDI and to quickly ensure that the technician has cross connected both a feeder and distribution pair together. Terminating feeder and distribution pairs on the same panel, as Pitkin/Turner suggest, would ensure that the internal wiring of the FDI would quickly become an unorganized jumble of wires. In addition, when the technicians attempted to find alternative spare pairs when attempting to repair defective pairs, they would have no way to determine where a spare feeder, versus a distribution pair, might be available in the FDI. *Id.*

In addition to their proposal to reduce the assumed number of FDI terminations per working loop (which should be rejected for all the reasons discussed above), AT&T also claimed that LoopCAT inappropriately assumes that every customer will have a connection to an FDI. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 90. As Mr. Smallwood explained, however, the assumption is appropriate because forward-looking network designs call for the use of interfaced plant (*i.e.*, plant with an interface between feeder and distribution cabling). SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 89. While it is true that there may be exceptions where large office buildings are fed directly by feeder cable, SBC Illinois does not have a way to quantify these exceptions to the forward-looking deployment guidelines. *Id.* In any case, Messrs. Pitkin and Turner's estimation of 25% direct-fed loops on a statewide basis is based on data for the existing network and represents an inflated estimate of the percentage of loops that would not be interfaced in the forward-looking network. *Id.*; SBC Ill. Ex. 4.2 (Smallwood Rebuttal) at 49.

Finally, AT&T proposed an arbitrary adjustment to resize FDIs. This proposal, which is related to AT&T's criticism of the distribution area sizes assumed in LoopCAT, is discussed in the following section.

6. Distribution Area Modeling

AT&T argued that LoopCAT is flawed because, in their view, it fails to reflect the efficient sizing and placement of distribution areas ("DAs"). AT&T's claim in this respect essentially boil down to the issue of whether SBC Illinois should be allowed to refer to its existing network design, which is consistent with sound engineering and network planning principles (and, thus, is unlikely to change in a forward-looking network) or whether the Commission should adopt AT&T's recommendations, which are arbitrary and not supported by the evidence or sound engineering practice.

For example, Pitkin/Turner asserted that LoopCAT uses too many distribution areas and that those areas are too small, and recommend that DAs be sized in excess of 200-600 living units. As Mr. White testified, however, Pitkin/Turner's proposed network design bears little resemblance to an actual telephone network capable of providing service day-to-day and year-to-year. In particular, Pitkin and Turner ignore the fact that the smaller the geographic size of the DA, the *lower* the cost of the distribution network, because the average distance between the customer and the interface will be shorter. SBC Ill. Ex. 8.1 (White Rebuttal) at 60-61. This is an important design concept because the DA cable must be sized to meet ultimate demand and to avoid costly cable additions after a neighborhood is developed. *Id.* The use of DAs which serve 200-600 lines, which is standard throughout the industry, is most efficient in the long run because it deliberately causes costs to be shifted to the feeder network, which can be sized for a shorter term demand than the distribution network and is more easily augmented to serve exhausted DAs, if necessary. *Id.* at 61. In this regard, Mr. White presented an analysis of a real

world example which demonstrates that the cost of adopting the "larger DA model" suggested by Pitkin/Turner results in increased costs due to increased cable and structure costs for distribution cable. *Id.* at 63-64.

Moreover, the evidence refutes Pitkin/Turner's assertion that SBC's engineering guidelines support their recommendation that DAs should be sized *in excess of* 200-600 living units. To the contrary, as Mr. White explained, SBC's guidelines contemplate that DAs will have *an average of* 200-600 living units, except in anomalous circumstances where expansion is possible. SBC Ill. Ex. 8.1 (White Rebuttal) at 62. Moreover, there may be practical impediments to expanding the size of the DA, such as finding easement space and municipal concurrence to place larger hardware, which leads to higher costs. *Id.*

Pitkin/Turner also did not take into consideration real-life restrictions on DA size, including, for example, natural boundaries such as rivers, highways, or large farm fields, that prevent the easy rerouting of distribution cable. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 91. Instead, they summarily resized even those DAs in their modeling. *Id.* Network design engineers with extensive knowledge of the cities, the neighborhoods, and the customer base have analyzed alternatives where they exist. The engineers have already taken into account where natural boundaries exist and where it is feasible to expand distribution areas (per the engineering guidelines as quoted by Pitkin/Turner), and have chosen the efficient size of distribution area and the equipment that provides service to the area. *Id.*

In sum, Pitkin/Turner presented no credible evidence that their recommendation to expand the size of DAs is either desirable or feasible, or even that it would represent an efficient forward-looking network design. Pitkin/Turner did not uncover massive flaws in the design of SBC Illinois' network, nor did they perform a true review of the network's design. They have

not provided any evidence that they have visited several distribution areas, reviewed maps, and can now present better DA designs. Their concept of a wholesale redesign of all of the distribution areas in SBC Illinois' territory is, therefore, unsupported and should be rejected outright. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 91.

Based on their unsupported view that the DA sizes in SBC Illinois' LoopCAT model are too "small," Pitkin/Turner proposed an adjustment to use the next larger feeder/distribution interface (FDI") size than is currently used in the network. Pitkin/Turner thus proposed that over 21,500 FDIs be upsized, even though they admit that there is absolutely no evidence to support their recommendation. SBC Ill. Ex. 8.1 (White Rebuttal) at 65. In essence, Pitkin/Turner expect the Commission to adopt their recommendation based solely on their unfounded speculation that the sound engineering principles upon which SBC Illinois' current sizing of FDIs is based are not consistent with a forward-looking network. That is nonsense. Mr. White explained that SBC's practices represent the most efficient, forward-looking network practices available and are based on fundamental engineering principles that have been used for over thirty years. *Id.* at 65-66. It is entirely proper to consider such established engineering principles when designing a forward-looking model, because those principles are not going to change any time in the foreseeable future. *Id.* It is entirely improper to scrap these principles and replace them wholesale with unsupported opinions advanced by individuals with little or no hands-on engineering experience. *Id.* at 66.

Finally, Pitkin/Turner's proposal to resize FDIs ignores the effects that such upsizing would have on fill factors for such equipment. This is illustrated by the table below, which deals with FDI quantities in SBC Illinois' outside plant as extracted from Figure 12 on Page 159 of Pitkin/Turner's direct testimony.

***** BEGIN CONFIDENTIAL *****

*****END CONFIDENTIAL *****

With their adjustments, Pitkin/Turner have taken, for instance, the **[***********]** 600 pair-sized FDIs in Zone 2 and converted them all to 900 pair sized FDIs. They have effectively added **[*************************]** FDI terminations into Zone 2, but in their study, they show no increase in demand. Therefore, the fill factors should be decreased accordingly. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 92. Instead, AT&T has argued for *higher* fill factors. *Id.* at 92-93. They made similar adjustments to the outside plant cable inventory as contained in the cost study. This inconsistency is irreconcilable, and indicative of the way Pitkin/Turner proposed broad changes to the underpinnings of SBC Illinois' cost studies with the only goal being to lower the results. *Id.* at 93.

7. Loop Length, Cable Size And Cable Gauge Modeling

a. Distribution Lengths Over 18,000 Feet

AT&T criticized the LoopCAT preprocessor methodology because a small number of the loops contained in the ARES data have distribution lengths that exceed 18,000 feet, which in their view is inconsistent with a forward-looking network. As Mr. Smallwood testified, however, this criticism of LoopCAT is a red herring, because the number of loops identified by Pitkin/Turner represent a very small percentage of the loops used in LoopCAT. SBC Ill. Ex. 4.1

(Smallwood Rebuttal) at 96. As Mr. Smallwood also explained, even in a forward-looking network, there will be a small number of loops with distribution lengths that represent exceptions to engineering guidelines because they are needed to provide service to certain customers in remote, outlying areas. *Id.* Because TELRIC requires the assumption that existing wire center and customer locations remain fixed, such loops should be included in the cost model. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 50. Staff witness Koch also testified that Pitkin/Turner's adjustment to remove loops with distribution lengths over 18kft is "difficult to justify" in light of the need to provision service to customers served by such loops. Staff Ex. 16.0 (Koch Rebuttal to Intervenors) at 4. For these reasons, AT&T's adjustment should be rejected.[50]

b. Data Used To Develop Loop Lengths

In criticizing SBC Illinois' use of the ARES database as a source of information to develop loop lengths for the LoopCAT model, Pitkin/Turner incorrectly asserted that LoopCAT does not use actual loop lengths, stating as follows: "LoopCAT computes loop length by using (1) actual *feeder* lengths in the embedded base, as indicated in SBC's ARES outside plant planning systems, and (2) the maximum distribution length for the distribution portion of the loop. However, the loop information extract from ARES cuts the maximum distribution length in half." AT&T Ex. 2.0 (Pitkin/Turner Direct) at 110. As Mr. Smallwood testified, while the process described by Pitkin/Turner *has* been used previously in other states, where another loop length data source (LEIS) has been used, the loop length information out of *ARES* represents both the actual feeder length and actual distribution length, and the distribution lengths have not been cut in half. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 97.

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[50] As Mr. Smallwood explained, SBC Illinois did not include in its loop cost study the cost of additional equipment, such as load coils, that are necessary to serve outlying customers served by distribution lengths over 18kft. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 47. If anything, forward-looking TELRIC principles would dictate that these additional costs be included, with the effect of increasing final UNE rates by about a penny. *Id.*

AT&T also argued that the LEIS database, rather than ARES, should be used to develop loop lengths since the "LEIS data reflects 100% of the loops." AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 84-85. The Joint CLECs made a similar argument. Joint CLEC Ex. 2.0 (Starkey/Balke) at 40. As discussed above, however, it was reasonable to use the ARES database because the data from that source represents actual feeder and distribution lengths. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 50. Furthermore, the information that SBC Illinois extracted from ARES was comprised of a data set of approximately five million loops out of a total population of approximately seven million loops. This constitutes approximately 70% of the population of available loops. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 100. This data was the best available at the time the study was conducted and represents a more than adequate base of data from which to model SBC Illinois' loop lengths. *Id.*[51]

c. Distribution Cable Resistance Limits

In modeling its loops, SBC Illinois placed a 900 ohm limit on the resistance of the distribution cable that is fed by a digital loop carrier ("DLC"). SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 98. AT&T arbitrarily proposed that the loop cost model should assume a resistance level of 1300 ohms for such loops. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 113-14. This proposal should be rejected.

As Mr. Smallwood explained, there are two reasons why it is inappropriate to use a 900 ohm resistance level. First, the POT line cards used in the DLC remote terminal for signal transmission from the DLC to the customer are designed for optimal performance at 900 ohms. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 98. This is consistent with the Company's CZ9

[51] Mr. Smallwood discussed the reasons why data for certain loops were excluded from the ARES data and explained that the excluded data were not biased. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 28-29. Accordingly, the sampling size of around 70% of the access line count is more than sufficient to be statistically valid. *Id.* By comparison, the AFAM model used to establish the existing UNE loop rates, and which Starkey/Balke espoused, used a sample size of only about 1,600 loops, significantly less than 1% of the sample size used in LoopCAT.

(Carrier Zone-900 ohm) resistance design standard, which calls for the copper cabling extending from the remote terminal to have maximum 900 ohms of impedance. *Id.*

Second, SBC Illinois' service obligations require that it be in a position to provide certain services that are not functional at resistance levels as high as 1300 ohms. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 98. The 900 ohm limit allows SBC Illinois to provide all services without the need to perform special construction at the time of the request. Because the 900 ohm limit represents the level at which all services can be delivered at the required level of quality, it is appropriate to use that limit in modeling loop costs on a forward-looking basis. *Id.* AT&T's proposal to increase the resistance limit to 1300 ohms would impede SBC Illinois' ability to provide quality telephone service. *Id.* at 99.

d. Allocation Of Copper Cable Inventory Between Feeder And Distribution Plant

AT&T and the Joint CLECs criticized SBC Illinois' approach to allocating copper cable between feeder and distribution plant. AT&T Ex. 2.0 (Pitkin/Turner Direct) at 122-24; Joint CLEC Ex. 2.0 (Starkey/Balke) at 42-44. This criticism is unjustified. SBC Illinois is able to separate its cable inventory by UNE zone, so the mix of cabling is zone specific. SBC Illinois does not, however, have the data required to separate the inventory between feeder and distribution plant. SBC Ill. Ex. 2.1 (Smallwood Rebuttal) at 99. Accordingly, to separate the cable into feeder and distribution, SBC's network subject matter experts provided allocation percentages based on cable size. *Id.* This approach assumes that the smallest cables (*i.e.*, > 200 pairs) are generally placed in the distribution section of the loop, larger cable (*i.e.*, > 1500 pairs) are generally placed in the feeder section, and cable sizes in between are representative of both feeder and distribution and should be divided between the two. This method of dividing cable is completely reasonable for modeling purposes.

While Pitkin/Turner criticized SBC Illinois' approach, their solution was to perform the same allocation, only with different percentages. *Id.* Pitkin/Turner provided no evidence to support their proposed percentages. Rather, they simply claimed that SBC Illinois' assumptions are wrong and, thus, by default, their own assumptions are correct. In essence, Pitkin/Turner are asking the Commission to substitute their judgment for that of the experienced SBC Illinois network engineers on which the Company's cost study was based. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 99; SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 51. There is no basis for the Commission to do so.

e. Copper Cable Mix

AT&T also proposed to modify SBC Illinois' mix of copper cable by structure (*i.e.*, aerial, buried or underground) and zone. In support of this proposal, Pitkin/Turner asserted that, in their opinion, the structure mix should be determined on the basis of route miles as opposed to sheath miles. As in the case of their position regarding the mix of cable inventory, discussed above, Pitkin/Turner's position amounts to an unsubstantiated claim that their estimate is better than SBC Illinois' estimate, with no real evidence to support that claim. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 100.

Moreover, Pitkin/Turner's position that SBC Illinois' proposed mix of copper cable by structure is incorrect is based primarily on their opinion that the percentage of underground facilities in Access Area C assumed in the LoopCAT model is "unrealistically high." AT&T Ex. 2.0 (Pitkin/Turner Direct) at 125-26. Pitkin/Turner's opinion, however, was based on the incorrect assumption that Access Area C should be considered "rural." In fact, Access Area C includes virtually all of SBC Illinois' service territory outside of the City of Chicago. Accordingly, Access C includes many densely populated areas, including most of the Chicago suburbs, as well as urban areas such as Peoria, Rockford, Springfield, and Champaign/Urbana,

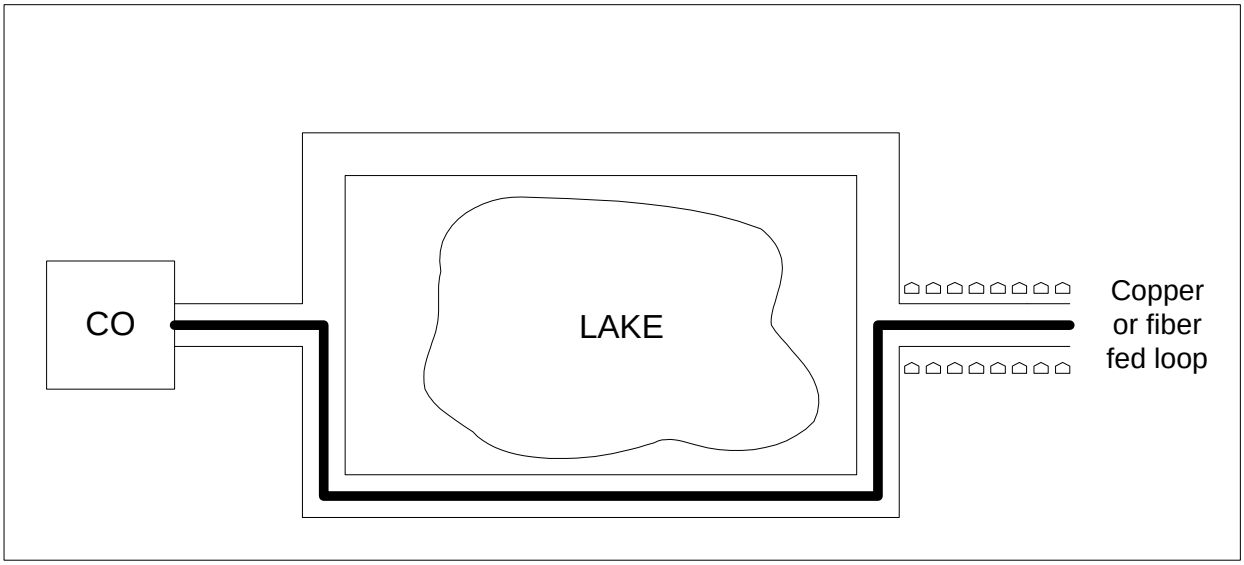
where it is not unusual to install underground distribution facilities. SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 41, 51. Because Pitkin/Turner's criticism of SBC Illinois' proposed mix of copper cable is based upon a fundamental misconception of the nature of the service territory in Access Area C, their arbitrary proposal to change that mix should be summarily rejected.

f. Cable Length and Sizing

(i) AT&T's Proposal To Arbitrarily Reduce Feeder And Distribution Cable Lengths

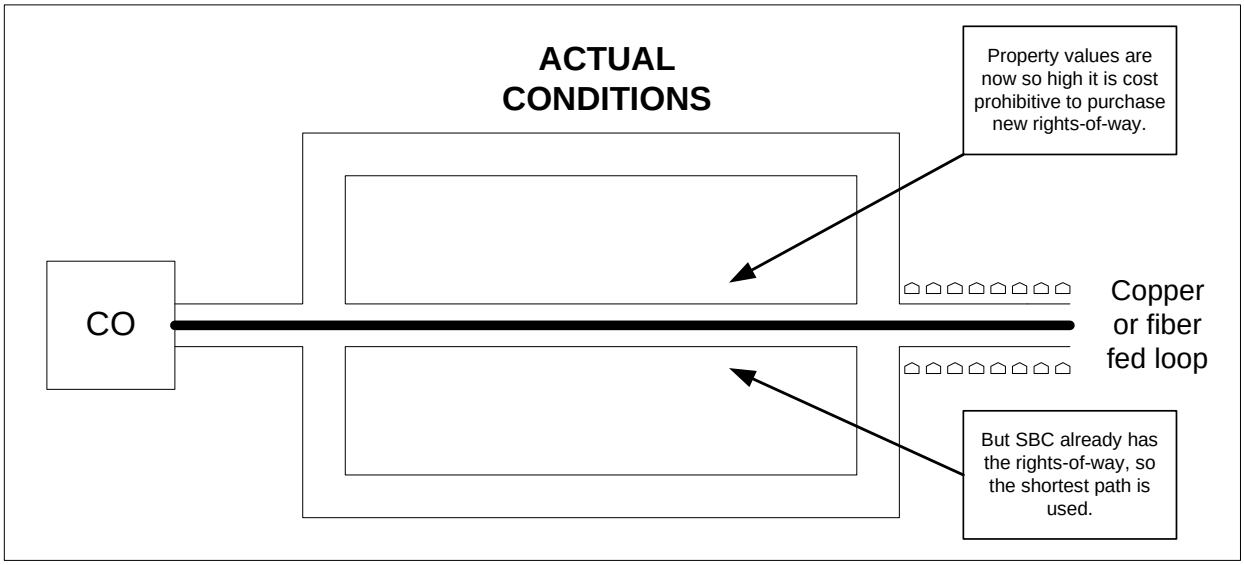
AT&T proposed that the lengths of distribution and feeder cable included in LoopCAT be arbitrarily adjusted downward by 5% and 10%, respectively, to reflect what Pitkin/Turner claimed to be an "estimate" of the "effect of LoopCAT's overstatement of cable lengths in the development of UNE costs." AT&T Ex. 2.0 (Pitkin/Turner Direct) at 154-55. There is, however, no evidence to support the conclusion that LoopCAT "overstates" cable lengths, much less any evidence that would support the arbitrary across-the-board reductions in cable lengths proposed by AT&T. LoopCAT's use of existing loop lengths is consistent with the TELRIC standard in that, under TELRIC, existing wire centers and customer locations are fixed. It is reasonable to use existing cable lengths to estimate this fixed relationship between SBC Illinois' wire centers and its customers. Moreover, TELRIC does not assume that, in a forward-looking network, all existing buildings, streets, rivers and other obstacles have disappeared. Accordingly, it is reasonable to assume that the existing rights-of way (which determine cable length) will continue to exist in the forward-looking network SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 15-16. The existing cable lengths reflect SBC Illinois' approach to designing the network, which sizes cable and equipment based upon projected demand over a multi-year period, is balanced and consistent with a forward-looking network. SBC Ill. Ex. 8.1 (White Rebuttal) at 42.

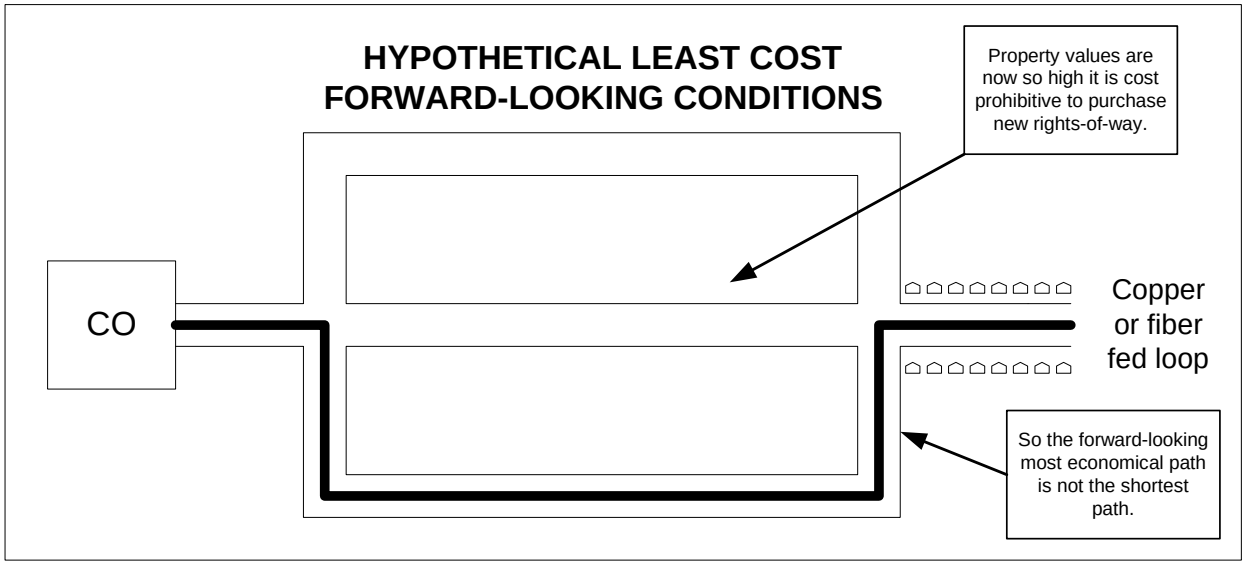
In support of AT&T's position, Pitkin/Turner presented what they claimed to be an illustration of the "before and after" effects of a farm that is subdivided. Supposedly, the subdivided farms would now allow telephone service to pass right through, allowing for shorter feeder *and* distribution lengths (it is not clear how distribution lengths are affected in their scenario). As Mr. Smallwood explained, however, for every purely hypothetical situation that allows for shorter lengths, there are realistic situations that would allow for *no* changes in loop length over time, such as in the situation where a lake (or a highway, or a housing development, or even a farm) is in the way:



SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 94.

Moreover, there could also be situations where conditions have changed, and the existing telephone company rights-of-way are even *more* efficient than what would be currently available if the outside plant were to be totally reconstructed, as shown in the next two figures.





SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 93.

Accordingly, SBC's loop length information should not be adjusted based on Pitkin/Turner's hypothetical conjecture regarding what changes *might* have occurred in the past few years. AT&T offered no evidence that conditions that lead to shorter loops have occurred, and such changes certainly have not occurred in any widespread nature throughout the SBC Illinois' service territory in a manner that warrants a significant reduction in the existing route

length information. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 15. For these reasons, AT&T's proposal to arbitrarily reduce loop feeder and distribution lengths should be rejected.

(ii) Joint CLECs' Criticism Of Cable Sizing Assumptions

The Joint CLECs claimed that LoopCAT does not calculate efficiently-sized cable. Joint CLEC Ex. 20 (Starkey/Balke Direct) at 46-47. As Mr. Smallwood explained, forward-looking cost modeling should be based, as an initial matter, on network characteristics and that is what LoopCAT does. The claim that SBC Illinois's cable sizing is not correct, and that LoopCAT is not correct as a result, rests on the notion that the forward-looking network under TELRIC can be built to a perfect size and never needs to be augmented as demand changes. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 101. As previously discussed, however, this is an unrealistic assumption. In fact, all telecommunications networks are built over time incrementally as demand for services materializes and/or grows. To assume otherwise would be to artificially underestimate UNE costs. *Id.* at 101-102.

Furthermore, distribution plant is placed to meet ultimate demand. The way in which the feeder and distribution plant "spiders" out into a geographic area around the central office requires that the cable segments become progressively smaller as the loop plant approaches a customer location. The smallest cables in the network are typically the distribution cables that serve a particular street or block on a street. Telcordia's Notes on the Networks (Section 12.1.2, page 12-2) describes distribution plant as follows:

> The distribution plant consists of small cables/systems that cross-connect the feeder plant to the customer. This plant is designed to meet the greatest expected customer demand in an area for the life of the plant. In the distribution facilities, copper cables of 26, 24, 22 (and rarely 19) gauge predominate. Distribution network design requires more distribution pairs than feeder pairs; distribution networks contain more distribution cables than feeder cables. Most distribution plants include either direct-buried or aerial cable, with the ultimate needs installed initially. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 102.

SBC Illinois' UNE cost studies mirror the efficient design of distribution plant, as described above, which has not changed over time and would not change in a forward-looking network. Starkey/Balke provide no evidence to the contrary. *Id.*

Starkey/Balke also criticized the technical assumptions in LoopCAT related to fiber cable sizing. Joint CLEC Ex. 2.0 (Starkey/Balke Direct) at 64-65. For the reasons discussed by Mr. Smallwood, these criticisms are unjustified. The cost of fiber cable for a DS0 circuit in LoopCAT in Access Area A in the revised LoopCAT is under a penny per month, about ten cents per month in the Access Area B, and under a quarter per month in Access Area C. Fiber costs are a relatively small portion of the overall loop cost. Contrary to the Joint CLECs' criticism, it is perfectly reasonable to make simplifying assumptions of an average fiber cable size by zone. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 101.

8. Planning Period

CUB witness Baldwin criticized SBC Illinois' use of a four year planning period for its UNE loop studies. Mr. Baldwin's criticism was based upon the misconception that the planning period is linked to the various asset lives of the loop components. In fact, that is not the case. The planning period for SBC Illinois' cost studies is linked with the approximate time span between UNE cost proceedings. The use of the planning period is intended to allow consideration of the variation in costs for the many components within the cost studies over the planning period. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 103.

9. Previous Methodologies

In support of their position that the TELRIC costs approved by the Commission in Docket Nos. 96-0486/96-0569 should remain unchanged, the Joint CLECs argued that the mainframe computer-based Ameritech Facility Analysis Model ("AFAM") used to develop costs in the docket is superior to LoopCAT. In fact, the evidence shows that AFAM is an inferior

model, which was abandoned in favor of LoopCAT following the SBC/Ameritech Merger. In particular, AFAM contained a significant amount of programming that made it difficult for CLECs and Commission Staff to access the model. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 25; SBC Ill. Ex. 4.2 (Smallwood Surrebuttal) at 12-13; SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 34-35. In contrast, and as discussed in Section III.A.2 above, LoopCAT is a spreadsheet based model, which makes it more easy to audit, update and operate, a conclusion echoed by Staff witness Dr. Qin Liu:

> Unlike previous loop cost models (such as AFAM), which are mainframe-based, LoopCAT is a spreadsheet-based cost model. This makes the LoopCAT cost model relatively easy to understand, modify and use. Staff Ex. 5.0 (Liu Direct) at 4.

There were a number of problems with the AFAM model as it was used in Docket No. 96-0486/96-0569, which are corrected in LoopCAT. For example, that model did not account for investment in a number of network components such as building entrance facilities and remote terminal cabinets, which are properly included in the LoopCAT model, a fact that Joint CLEC witness Balke acknowledged in a presentation made to the Commission Staff in 1999. Tr. 1869; SBC Ill. Cross Ex. 52P; SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 33.

In addition, in applying "target" fill factors, AFAM incorrectly assumed that cable could be purchased in the exact size requested for a particular route when, in fact, equipment vendors only provide cable in limited, standardized numbers of sizes. SBC Ill. Ex. 4.0 (Smallwood Direct) at 27. In this regard, the Joint CLECs' witnesses described how AFAM works as follows:

> AFAM's algorithms determined the quantity of circuits working in any given cable section, and then applied the appropriate utilization factor to determine the total quantity of pairs necessary to serve demand (both active and spare pairs). AFAM then chose the next available cable size larger than the quantity computed. For example, if there were 200 working pairs in a given route, with a 75%

utilization, 267 pairs would be computed, and a 300 pair cable was chosen. Joint CLEC Ex. 2.0 (Starkey/Balke Direct) at 29.

As Mr. William Palmer explained, however, rather than simply stop there and assume the full investment in the 300 pair cable used in the example, AFAM adjusted the investment *downward* by the ratio of the required pairs computed (267 in the example) to cable size chosen (300 in the example). That is, in the above example, if the 300 pair cable cost $10,000, AFAM would assume an investment of $8900, or $10,000 (x) 267/300. In effect, the AFAM algorithm used in Docket Nos. 96-0486/0569 inappropriately created cable sizes and prices – 267 pairs at $8900 in the example – that did not exist in the actual network, could not be purchased from cable vendors and would not exist in a forward-looking network. This was a significant flaw that had the effect of understating the Company's costs. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 32; SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 29-30.

AFAM is also inferior to LoopCAT with respect to the age and quantity of the loop sample used to develop distribution costs. AFAM relied on data for a sample size of 1,600 loops, most of which were pulled in the mid-to-late 1980s. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 29; SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 31. Intervenors in Docket Nos. 96-0486/96-0569 challenged the accuracy of this data. *Id.*; SBC Ill. Ex. 14.1 (W. Palmer Rebuttal) at 32-33. By comparison, as discussed in Section III.C.7.b, above, the LoopCAT model presented in this case employed current, actual loop length data for approximately five million loops obtained from ARES. SBC Ill. Ex. 4.0 (Smallwood Direct) at 25; SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 28.

The Joint CLECs' insistence that the Commission rely on the results of the AFAM model used in Docket Nos. 96-0486/96-0569 is undermined by a 1999 Ameritech presentation, co-authored and presented by Mr. Balke, which identifies numerous flaws in that model. Tr. 1865-

69 (Balke); SBC Ill. Cross Ex. 52P; SBC Ill. Cross Ex. 54P. The presentation, which was made to the Commission Staff, demonstrated that revisions to correct these flaws, such as "includ[ing] costs that were missing before," would have resulted in significant increases in the resulting loop investment and TELRIC costs per loop even without the adoption of actual fill factors. *Id.*; Tr. 1868-74 (Balke).

The Joint CLECs directed a number of criticisms at LoopCAT, none of which are valid, and none of which justify relying on the AFAM results from Docket Nos. 96-0486/96-0569. For example, the Joint CLECs argued that LoopCAT's use of actual network data ignores economies of scale, providing as an example the theoretical placement of two cables in the past that could now be replaced by one larger cable. Joint CLEC Ex. 2.0 (Starkey/Balke Direct) at 46-48. This criticism is without merit because incremental placement of cables is a forward-looking reality in engineering a telecommunications network for SBC Illinois and any other telecommunications carrier. TELRIC was designed to estimate the network costs that an efficient carrier could achieve. It was not designed to calculate costs that no real-world carrier could achieve. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 31.

The Joint CLECs also incorrectly asserted that LoopCAT lacks "information about loop architecture building blocks." Joint CLEC Ex. 2.0 (Starkey/Balke Direct) at 35-39. In fact, the inputs used in the LoopCAT model are based on actual data and information obtained from network subject matter experts who make engineering network architecture decisions. Much of the actual data, such as remote terminal quantities, was updated for these studies so the data would be forward-looking yet compatible with the actual SBC Illinois network. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 28.

The Joint CLECs also complained that the LoopCAT preprocessor is faulty because the same feeder length is repeated in two columns ("Feeder" and "Fiber Feeder"). Joint CLEC 2.0 (Starkey/Balke Direct) at 51-53. The reason that both columns are populated with the same data is to allow the PreProcessor program to extract data from either the corresponding "(Copper) Feeder" or "Fiber Feeder" columns, based on the copper-fiber crossover point for each loop. Therefore, what the Joint CLECs assessed as an error was actually an appropriate method to facilitate correct preprocessing of the data. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 31. The Joint CLECs also pointed out that a very small percentage (approximately 3% or less) of the loops in LoopCAT will have greater than 12,000 feet of copper. Joint CLEC Ex. 2.0 (Starkey/Balke Direct) at 50. This is not a fault of LoopCAT. Even in the forward-looking environment, some loops will not meet the transmission parameters set out by carrier service area guidelines. *Id.*

Finally, the Joint CLECs erroneously asserted that LoopCAT is not capable of developing costs at a wire center level. Joint CLEC Ex. 4.1 (Starkey/Balke Direct) at 41-42. In fact, LoopCAT can develop loop costs at the wire center level. However, this Commission has previously determined the three geographic areas that are appropriate for rate development purposes, and SBC Illinois followed that convention in this case. Furthermore, AFAM, like LoopCAT, also made technical assumptions about the appropriate network deployment depending on the UNE rate area being studied. SBC Ill. Ex 4.1 (Smallwood Rebuttal) at 27-28.[52]

For the reasons discussed, there is no basis for the Joint CLECs' position that the AFAM model used in Docket Nos. 96-0486/96-0569 is superior to LoopCAT. In any event, the

[52] Other criticisms of LoopCAT made by the Joint CLECs and other parties (including allegations that LoopCAT improperly relies on "embedded data" and reflects an improper allocation of cable inventory between feeder and distribution plant) are addressed in other sections of this Brief.

difference between the costs produced by SBC Illinois' cost model in this case and the costs approved in Docket Nos. 96-0486/96-0569 is driven primarily by differences in model *inputs*, such as fill, depreciation and cost of capital, rather than by differences in the models themselves. SBC Ill. Ex. 4.0 (Smallwood Direct) at 33; SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 35. Accordingly, there is no basis for the Joint CLECs' claims that LoopCAT is an unreasonable method for calculating loop costs.

10. Agreed upon issues

In their direct testimony, Staff and AT&T proposed that adjustments be made to incorporate CEVs and change the mix of residential and business customers assumed for certain loop types. In addition, Staff proposed an adjustment to sales tax as between Chicago and other parts of the state, and the Attorney General proposed an adjustment to remove the double counting of distribution terminal equipment. SBC Illinois made adjustments in accordance with these recommendations and they were flowed through the revised loop cost studies presented in this proceeding. SBC Ill. Ex. 4.1 (Smallwood Rebuttal) at 4-7. These adjustments have been accepted by the other parties. On the other hand, the Attorney General and AT&T initially proposed adjustments with respect to feeder stubs and building entrance facilities, respectively, which they have since withdrawn. AG Ex. 1.3 (Dunkel Surrebuttal) at 4; AT&T Ex. 2.1 (Pitkin/Turner Rebuttal) at 75-76. Accordingly, these issues have all been resolved.

IV. Non-Recurring Cost Studies And Rate Designs

A. General Issues

1. TELRIC Standards/Principles

Nonrecurring charges ("NRCs") are intended to cover the nonrecurring, one-time costs that SBC Illinois incurs to fill a CLEC's order for a UNE. *See TELRIC NRPM*, ¶ 14 ("[N]on-recurring costs are one-time costs that a firm incurs in supplying a facility or service to a

customer or other carrier.") SBC Illinois generally incurs two types of nonrecurring costs when supplying a UNE to a CLEC: (1) service order costs, such as the costs associated with receiving a CLEC's UNE order, preparing the order for service, and issuing the order to the work group that provisions the requested UNE; and (2) provisioning costs, which include the work activities necessary to assign and connect a UNE, test and turn over the UNE to the CLEC, and to disconnect or change service. The amount of costs SBC Illinois incurs (and thus the amount of the applicable NRCs) varies, depending on, among other things, the type of UNE ordered, whether the CLEC submitted its order electronically or manually, and the nature and type of work required to provision the CLEC's order.

The FCC's pricing rules for UNEs require, "as a general rule, that incumbent LECs' rates for interconnection and unbundled elements must recover costs in a manner that reflects the way they are incurred." *First Report and Order*, ¶ 743. Thus, the nonrecurring "'installation' or 'set-up' costs an incumbent LEC incurs processing and provisioning a competitive LEC order for a UNE" (*TELRIC NPRM*, ¶ 114) are generally recovered through NRCs, the one-time charges imposed when SBC Illinois processes and provisions a CLEC's order.

The FCC's rules appear to require that NRCs be established using the same network assumptions that are used to establish the recurring TELRIC costs of unbundled network elements.[53] That is, NRCs must be "based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent LEC's wire center." FCC Rule 505(b)(1). In accordance with this

[53] In the *TELRIC NPRM* (¶ 116), the FCC acknowledged that this is far from clear. The FCC stated that its pricing rules "suggest" that nonrecurring charges be calculated using the same network assumptions used to calculate the recurring costs of UNEs, but acknowledged a significant dispute concerning whether NRCs "should use a different network assumption that more closely reflects the costs associated with providing services on the incumbent LEC's existing network." *Id.*

standard, as explained in its testimony and below, SBC Illinois developed nonrecurring cost studies that measure SBC Illinois' forward-looking nonrecurring costs of processing and provisioning UNE orders from CLECs.

2. Cost Causation And Characterization Of Costs

The FCC's TELRIC pricing rules incorporate cost-causation principles. The FCC was clear: "Costs must be attributed on a cost-causative basis." *First Report and Order*, ¶ 691. Thus, for instance, costs that are "common" costs (*i.e.*, that cannot be directly attributed to any particular service or subset of services) must be attributed to all services as common costs. The FCC's TELRIC rules incorporate a similar principle with respect to rate structure, requiring, "as a general rule, that incumbent LECs' rates for interconnection and unbundled elements must recover costs in a manner that reflects the way they are incurred." *First Report and Order*, ¶ 743.

The CLECs make a mess of these clear principles, accusing that SBC Illinois of "co-mingling . . . recurring and non-recurring costs." Joint CLEC Ex. 1.1 (Ankum-Morrison Surrebuttal) at 6. The thrust of the CLECs' argument is that whether a cost should be recovered via a recurring or nonrecurring charge cannot be determined by whether or not the *cost* is recurring or nonrecurring, because most every cost is "nonrecurring". Rather, the CLECs argue, the Commission should classify costs by asking "if other entities, such as other CLECs and the [ILEC] itself, benefit either immediately or over time," in which case "the costs of these activities should be recovered through recurring charges." *Id.* at 5. For instance, the CLECs argue that computer processing costs should be recovered through recurring charges because "they are costs associated with equipment that benefits all entities that place service orders." *Id.* at 20. The CLECs are wrong.

First, the FCC's rules do not allocate costs on the basis of who might benefit over time. If they did, then CLECs should bear a portion of many of the same nonrecurring costs at issue here when SBC Illinois incurs those costs to provide its own retail service, on the theory that, over time, the CLECs might benefit from these activities (*e.g.*, "[a]ny testing and repairs on facilities" *Id.* at 7). But that is not what the FCC's pricing rules require. Rather, those rules require that "[c]osts must be attributed on a cost-*causative* basis." *First Report and Order*, ¶ 691 (emphasis added).

Second, the CLECs ignore the FCC's own description of nonrecurring costs. The FCC stated that "non-recurring costs are one-time costs that a firm incurs in supplying a facility or service to a customer or other carrier." *TELRIC NRPM*, ¶ 14. Such costs include the "'installation' or 'set-up' costs an incumbent LEC incurs processing and provisioning a competitive LEC order for a UNE." *Id.*, ¶ 114. The "large, one time investment costs" that SBC Illinois incurs to deploy "switch facilities" or "power equipment" (Joint CLEC Ex. 1.1 (Ankum-Morrison Surrebuttal) at 4) may be nonrecurring in the sense that there are some one-time costs involved (*e.g.*, paying the equipment vendor), but that does not make them "nonrecurring costs" in the sense relevant to UNE pricing under the FCC's TELRIC rules. That is, these costs are not caused by the provision of any *single* service or network element and are not "one-time costs" that are "incur[red] [in] processing and provisioning a competitive LEC order for a UNE." *TELRIC NPRM*, ¶¶ 14, 114.

The costs SBC Illinois has identified in its nonrecurring cost studies, on the other hand, do fit squarely within the FCC's definition of nonrecurring costs. That is, the costs identified by SBC Illinois are all costs that SBC Illinois is forced to incur in order to process and provision a CLEC's UNE order, like installation and set-up costs.

3. Treatment Of Technology

The three most significant factors that drive SBC Illinois' nonrecurring costs are labor rates, the time it takes to perform an activity, and the flow-through (or fall-out) rate, which reflects how often a CLEC's order can be processed completely electronically. Labor rates are addressed in Section B.5 below. While activity times and fallout rates are discussed in detail below, in connection with the different types of nonrecurring cost studies SBC Illinois has submitted, a common theme – technology – runs throughout many of the issues surrounding SBC Illinois' nonrecurring costs and, in particular, activity times and fallout rates.

SBC Illinois' nonrecurring costs are based primarily on the telecommunications technologies that SBC Illinois is currently deploying. But, contrary to the suggestions of some CLECs, that is not at all inconsistent with the TELRIC methodology. The TELRIC methodology does not permit costs to be based on speculation about future technological advances. Rather, the FCC's rules *require* that costs be based on "currently available" technology (FCC Rule 505(b)(1)) "that is compatible with the existing infrastructure" (*First Report and Order*, ¶ 685). The Joint CLECs concur. Tr. 1699 (Ankum-Morrison). The continued use and deployment by SBC Illinois of a specific current technology demonstrates that that technology is efficient in light of current output volumes, and that its use in applying the TELRIC methodology is reasonable and appropriate. As the Seventh Circuit recently held, "TELRIC calls for a projection, but it does not demand that every ingredient be hypothetical. How could one know the long-run costs of the most efficient technology without understanding the costs of today's most efficient producers?" *AT&T Communications*, 349 F.3d at 411.

Many of the CLECs' recommendations, on the other hand, assume a hypothetical firm using untested, and in many cases unidentified, future technologies, or technologies that the CLECs do not even attempt to show would be more efficient than those currently used by SBC

Illinois. As a result, their proposed NRCs fall far below the economic costs (measured by the TELRIC methodology) that SBC Illinois can reasonably expect to incur over the period of the cost studies. And as a result, the CLECs' proposed NRCs violate the FCC's pricing rules.

For instance, Ankum and Morrison baldly assert that SBC Illinois' cross-connect times should be reduced because "one-sided cosmic frames[] allow for shorter and more efficient cross-connect times." Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 120. That cosmic frames may reduce this one particular cost element (cross-connect times) does not make them the most efficient technology currently available, or mean that cross-connect times should be based upon their use. Technician travel times might be reduced (and thus NRCs that reflect technician travel might be lower) if every central office had a helicopter on the roof waiting to shuttle technicians to work sites. But that does not make helicopters, as opposed to trucks and vans, the most efficient method for SBC Illinois' technicians to travel, in light of the high costs of helicopters (and of building roof helipads). And that does not mean that travel times should be based on the use of helicopters. The "most efficient technology" cannot be measured based solely on a single cost element (like travel time or cross-connect time), but must be assessed on the basis of all the costs and consequences associated with using a particular technology. *See* Tr. 1533-34 (Turner). And in the case of cosmic frames, while they may reduce cross-connect times, they do not constitute the most efficient technology because of certain operational limitations (which the CLECs do not contest) and their exceptionally high cost (which again the CLECs do not contest). SBC Ill. Ex. 16.0 (Deere Rebuttal) at 7-8.

Similarly, Ankum and Morrison assert that SBC Illinois should utilize so-called Work Flow Engines ("WFE"). Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 33-35. Yet, on cross-examination, Mr. Morrison could not identify any specific WFEs – either available off-the-shelf

or custom-made – that he believed that SBC Illinois could, or should, implement. Tr. 1704. Nor did he or Dr. Ankum identify any such technologies in their prefiled testimony.

Furthermore, AT&T witness Turner insisted that SBC Illinois is inefficient insofar as it has not integrated its LASR and EXACT systems. Pressed to identify what software or hardware SBC Illinois ought to use to integrate those systems, Mr. Turner failed to identify any. Tr. 1541-1544 (Turner). And while he suggested that he had "friends in the industry" and that "Anderson [sic] Consulting does a considerable amount of work in this area," he conceded that none of those contacts had any experience at all with LASR and EXACT. *Id.*

These are merely a few of a legion of examples of the CLECs' attempt to distort the TELRIC methodology to produce fantasy costs that bear no relation to the costs SBC Illinois incurs to provide network elements to CLECs. The many other errors made by the CLECs are addressed more fully below.

4. Use Of Subject Matter Experts

The estimated time for SBC Illinois personnel to complete various tasks when processing and provisioning UNE orders is an important component of SBC Illinois' nonrecurring costs (and thus its nonrecurring charges). To estimate these "activity times," as well as the occurrence probabilities of the activities (*e.g.*, how often the activities must be performed), SBC Illinois relied on numerous subject matter experts ("SMEs"), chosen for their particular expertise in performing and/or supervising the relevant activities.

With respect to the order processing activities of the Local Service Center ("LSC"), experts with years of experience in processing CLEC orders, and who each have handled thousands of such orders, were asked, based on their experience and technical expertise in processing orders, to determine the time required to perform each task associated with each order

type. SBC Ill. Ex. 10.0 (Brown Direct[54]) at 8. These experts have hands-on experience performing the relevant tasks, day-in and day-out, and collectively have 179 years of telephony experience. *Id.*

For network provisioning activities, an experienced expert from each relevant work group was asked to identify the relevant activities and activity times and occurrence probabilities to provision different UNEs and UNE combinations, in consultation with other personnel with first-hand knowledge of the relevant work activities. SBC Ill. Ex. 9.0 (Gomez-McKeon Direct) at 6-7. Like the service order experts, these network provisioning experts were chosen for their hands-on expertise in performing the relevant provisioning activities, day-in and day-out, and have collectively worked thousands of orders. *Id.* at 7-9.

Further, line managers and SBC Illinois witnesses (Mr. Christensen and Ms. Gomez-McKeon) worked with the experts to verify their activity determinations. *See, e.g.*, Tr. 1410-11 (Gomez-McKeon). And Dr. Currie, the expert responsible for preparing SBC Illinois' service order NRC cost studies, visited several LSCs to observe work activities and verify the accuracy of the activity times. SBC Ill. Ex. 9.0 (Gomez-McKeon Direct) at 7; SBC Ill. Ex. 10.0 (Brown Direct) at 8; Tr. 1149-1150 (Currie).

The CLECs' consultants, each paid hundreds of dollars per hour,[55] suggest that the SMEs' estimates are "inherently flawed" and "most likely biased against the CLECs" because "SMEs have few if any incentives to provide accurate estimates." Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 38-39. That is nonsense. Overstating activity times or occurrence probabilities to increase competitors' costs would be a serious violation of SBC policy. SBC Ill. Ex. 10.1 (Christensen Rebuttal) at 15. SBC's employees are required to read, understand, and

[54] Fred Christensen adopted the Direct Testimony of Justin Brown.
[55] Tr. 1570 (Turner), 1683-84 (Ankum-Morrison).

sign SBC's Code of Business Conduct, which prohibits fraudulent conduct, including "any oral or written misrepresentation of facts." *Id.* at 16. Moreover, witnesses for both AT&T conceded that the work required of the LSC (which helps process UNE orders) would actually *increase* if there was more CLEC competition. Tr. 1594-1595 (Turner), 1695-96 (Ankum-Morrison).

The Joint CLECs also assert that the estimates of SBC Illinois' experts are not TELRIC-compliant because "it is unclear as to whether SMEs have made estimates assuming a forward-looking network, anticipating process efficiencies and mechanization," rather than providing estimates based solely on existing processes. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 44. However, the written instructions SBC Illinois provided to its SMEs clearly direct those experts to identify "forward-looking" activities, "defined as the most efficient method of performing the defined task during the study planning period." MCI Cross Ex. 43. In addition, the instructions required SMEs to "[i]nclude any plans for mechanization of the task over the next five years and incorporate these efficiencies into your estimate." *Id.* And, emphasizing the importance of providing accurate, forward-looking estimates, the experts were notified that "[y]our input may be subject to regulatory scrutiny, including potential inquiries, such as data requests, depositions, or other testimonies." *Id.*; *see also* Tr. 1258, 1286 (Christensen), 1402-03, 1500-02 (Gomez-McKeon).

Finally, the Joint CLECs' speculation about potential "SME bias" is nothing more than a red herring, designed to distract the Commission from the lack of foundation for the Joint CLECs' own proposed activity times and occurrence probabilities. While SBC Illinois presented estimates from numerous experts who perform the relevant tasks daily, and have performed the relevant tasks on thousands of occasions, the Joint CLECs present estimates from two highly paid consultants – a economist (Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 1-2) and a

consultant who once did provisioning work in the late 1960s and 1970s and perhaps related tasks in the early 1980s (*id.* at 3-4), but who apparently has never worked a service order or provisioned a *UNE* – "something brand new" created by the 1996 Act. *Verizon Comms. Inc. v. FCC*, 535 U.S. 467, 528 (2002). AT&T presents a witness who has never worked for an ILEC, Tr. 1605 (Turner), but who has previously developed nonrecurring costs studies that rely on SMEs. Tr. 1521 (Turner). Indeed, AT&T's witness on nonrecurring costs agrees that "fundamentally you have to use something like subject matter experts to come up with activity times." Tr. 1526 (Turner). He further testified that he knows of no other process superior to that of using SMEs. Tr. 1521-22 (Turner).

In the end, the questions before the Commission are (1) are the experts SBC Illinois relies on to perform the relevant tasks every day more likely to be "inherently biased" than the CLECs' paid experts? and (2) which set of competing estimates is most likely to have, in the Joint CLECs' words, a "basis in reality"? *See* Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 52.

In lieu of using subject matter experts, the Joint CLECs assert that SBC Illinois should have performed time and motion studies. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 51-53. As SBC Illinois witness Dr. Currie observed, time and motion studies are not a reliable means of determining forward-looking activity times. Tr. 1090-91 (Currie). The Joint CLECs and AT&T all concur in this assessment. Joint CLEC witness Dr. Ankum agreed that "it is highly likely that you are going to inject bias into the process" when you perform a time and motion study. Tr. 1691 (Ankum-Morrison). And AT&T's witness had a similarly skeptical view of time and motion studies, testifying that they are "fraught with problems." Tr. 1525-25 (Turner). Not surprisingly, at no time during the 15 months between the filing of SBC Illinois' direct case in December of 2002 and the hearing in March of 2004 did any of the CLECs

perform, or even attempt to perform, time and motion studies. Tr. 1686, 1719 (Ankum-Morrison). And although Joint CLEC witness Mr. Morrison has some experience with time and motion studies (mostly during the late 1970s and early 1980s), he did not rely in this proceeding on any time and motion studies that he has performed. Tr. 1687 (Ankum-Morrison). Likewise, Mr. Turner has not used time and motion studies as part of the nonrecurring cost models that he has developed. Tr. 1523 (Turner).

B. Service Order Nonrecurring Cost Studies

SBC Illinois' service order nonrecurring cost studies reflect SBC Illinois' nonrecurring costs of creating and processing a CLEC request for a UNE, in order to generate the work orders that are subsequently provisioned by SBC Illinois' network provisioning work groups (the costs of which are reflected in SBC Illinois' provisioning nonrecurring cost studies). SBC Ex. 5.0 (Currie Direct) at 8, 11. SBC Illinois' Local Service Center ("LSC") processes UNE requests from CLECs, whether submitted electronically or manually, and the service order cost studies thus focus almost exclusively on the LSC and the volume (*i.e.*, per-UNE order) sensitive costs, both automated and labor, of processing CLEC UNE orders. *Id.* at 8, 11.

SBC Illinois has developed six different TELRIC service order studies, measuring SBC Illinois' TELRIC costs of processing service orders related to (1) existing UNE-P, (2) new UNE-P combinations, (3) special access to UNE conversions, (4) unbundled loops, (5) unbundled local switching, and (6) EELs. *Id.* at 10. In each case, the same methodology is used to determine SBC Illinois' TELRIC costs.

The basic methodology SBC Illinois used to identify and quantify its nonrecurring costs is straightforward and not controversial: First, SBC Illinois identified the specific forward-looking work activities and personnel required to process or provision a UNE order. Then SBC Illinois calculated how often each work activity is required, to develop (and subsequently apply)

a probability of occurrence factor (*e.g.*, a particular task may be required only 50% of the time in order to process and provision a particular type of UNE order). Next, SBC Illinois identified the forward-looking time and resources required to complete each work activity, as well as the labor cost for the individuals that typically perform each activity. Finally, SBC Illinois multiplied the time required for each task by that task's associated labor cost and its occurrence factor, and summed the resulting costs to produce the total nonrecurring cost of processing or provisioning the UNE order. *See* SBC Ex. 5.0 (Currie Direct) at 7; SBC Ex. 6.0 (Cass Direct[56]) at 5. The CLECs do not seem to quarrel with this essential approach to performing a nonrecurring cost study. *See* Tr. 1519-20 (Turner).

The details regarding the tasks, activity times, and occurrence probabilities associated with processing the six types of UNE orders are described in detail in SBC Illinois' testimony and supporting cost studies, and SBC Illinois will not exhaustively summarize that testimony here, but respectfully refers the Commission to that testimony and the relevant cost studies. Rather than focus on the numerous details of those cost studies – most of which are undisputed – SBC Illinois addresses below some of the "highlights" of those cost studies, including significant changes from SBC Illinois' prior service order nonrecurring cost studies, as well as some of the CLECs' likely criticisms. In general, the CLECs do not contest SBC Illinois' methodology for determining service order-related nonrecurring costs, but they have raised numerous issues regarding the details of SBC Illinois' cost studies. Of these numerous criticisms, SBC Illinois cannot be sure which the CLECs will raise in earnest until the CLECs file their own opening briefs. Thus, SBC Illinois will respond to any CLEC assertions not addressed below in its reply brief.

[56] Dr. Kent Currie adopted the Direct Testimony of Chris Cass.

1. Identification Of Tasks

As explained above, the experts upon which SBC Illinois relies to identify the forward-looking tasks necessary to process the various types of UNE orders process such UNE orders day-to-day. *See* SBC Ill. Ex. 5.0 (Currie Direct) at 7-9. The major tasks associated with processing service orders for the six types of UNE orders are described in the direct testimony of Dr. Currie (SBC Ill. Ex. 5.0, at 13-16, 17-22, 30-35, 37-48).

One reason that SBC Illinois' proposed service order NRCs differ from those previously approved by the Commission in Docket No. 98-0396 is that SBC Illinois' current cost studies more accurately identify and measure the tasks necessary to process UNE orders. For instance, for CLEC orders for existing UNE-P, the Commission previously approved only costs relating to *electronic* orders, while the new cost studies also examine the work required to process orders for existing UNE-P that CLECs submit manually (*e.g.*, by fax). *See* SBC Ill. Ex. 5.0 (Currie Direct) at 30. SBC Illinois also separately identified several types of "support activities" that LSC personnel must sometimes (but not always) perform in order to process a UNE order, including resolving certain types of errors, handling CLEC requests to supplement previously submitted orders, and answering phone calls from CLEC representatives regarding certain service order issues. *See id.* at 15-16.

With respect to CLEC orders for existing UNE-P, the NRC approved in Docket No. 98-0396 was based on the assumption that processing an electronically submitted order for existing UNE-P involves nothing more than doing "record work only." *See id.* at 18-19. However, the record in this proceeding demonstrates that that assumption is wrong, for at least two reasons.

First, some existing UNE-P combinations may not have dial tone when ordered by the CLEC (*e.g.*, the network elements may all be in place and physically connected, but the dial tone is not yet turned up). In this case, extra tasks are involved; specifically, another work group (the

RCMAC) must sometimes perform switch translation work. *Id.* at 13-14. Second, all orders for existing UNE-P (even where dial tone already exists) involve more extensive tasks than record work only. Record work consists of changing a CLEC's billing information, such as the CLEC's name or billing address. *Id.* at 18. It does *not* involve any network provisioning system, and thus no network system information is changed. To process a UNE-P request, on the other hand, SBC Illinois' network systems must be updated, and thus the CLEC is required to provide significantly more information. This additional information and extra steps required to update the network systems entail additional work by the LSC, and thus the "record work only" NRC does not reflect the costs of processing an order for existing UNE-P. *Id.* at 18-19.

For the most part, the CLECs do not contest SBC Illinois' identification of the service order tasks necessary to process the various types of UNE orders. AT&T alleges that some "support activities" should have probability occurrences of zero, because, AT&T asserts, these activities are already accounted for by the overall fall-out rates. And the Joint CLECs allege that a handful of activities should be excluded (or their activity time set to zero) asserting that if "efficient" OSS were used they would not be necessary. But the CLECs' assertions rest on speculation about what might be possible with future OSS, not on any evidence regarding what is possible with currently available OSS. As explained below, the CLECs' suggestions are unsupported, inconsistent with the TELRIC methodology, and must be rejected.

<u>Support Activities</u>. SBC Illinois' service order cost studies identify six support activities that the LSC must sometimes, but not always, perform in order to process a CLEC's UNE order. *See* SBC Ill. Ex. 10.0 (Brown Direct) at 15-18; SBC Ill. Ex. 5.0 (Currie Direct) at 15-16. These six support activities, which account for *additional* time that LSC service representative sometimes spend processing CLEC UNE orders, are:

Reject Activity. When a CLEC provides invalid information on its UNE order, an LSC service representative must perform additional tasks to reject and return the order to the CLEC, along with a reason for the rejection. *See* SBC Ill. Ex. 10.0 (Brown Direct) at 15.

Automatic Call Distribution (ACD) calls. When a CLEC has a question regarding order activity, it can call an 800 number and speak to an appropriate LSC service representative. The ACD support activity accounts for the average time an LSC service representative spends on these support calls. *Id.*

Errored Service Order Image (ESOI). An ESOI is sometimes generated after an order processed by an LSC service representative passes the initial mechanized error edit process, but later encounters an error as it flows through the downstream systems. The ESOI support activity accounts for the time necessary for the LSC service representative to investigate and correct the error. *Id.* at 16.

Pending Past Due (PPD). An order is "pending past due" when it has not been completed by the due date originally provided to the CLEC via the firm order confirmation. In this case, the order is automatically returned to an LSC service representative. The PPD support activity accounts for the time the LSC service representative spends resolving the PPD. *Id.*

3E Errors. A 3E error is generated when a CLEC UNE order is processed and provisioned, but due to some systems miscommunication billing is not established. The 3E error support activity accounts for the time necessary for the LSC service representative to correct the error in order to establish billing. *Id.* at 17.

Supplemented Orders. Once an order has been processed and a firm order confirmation sent to the CLEC, the CLEC may wish to submit updates or changes to that order. The supplemented order support activity accounts for the time necessary for an LSC service representative to process the CLEC's request for an update or change. *Id.*

AT&T first asserts that the occurrence probabilities for these support activities should be reduced and "coordinated" with the overall fall-out rate. These assertions are addressed below in the occurrence probability and fall-out sections of this brief.

AT&T also asserts that two of the support activities (3E Error and ESOI Error activities) should be eliminated altogether because they are "variation[s] on the Reject Activity process" and should not be separately accounted for. AT&T Ex. 3.0 (Turner Direct) at 101-102. AT&T is mistaken, and its conclusory assertions are contrary to the record. The record establishes that

these three support activities occur in different circumstances and involve different tasks. "Rejected orders" account for "orders rejected by the service representative as a result of invalid information being provided by the CLEC"; "ESOI errors" occur *after* an order is generated and begins flowing through downstream systems; and "3E errors" occur *after* an order is processed *and provisioned*. SBC Ill. Ex. 10.0 (Brown Direct) at 15-17. AT&T's conclusory assertion that somehow all three are captured by the "reject activity" process, and that the "Reject Activity probability and labor time already captures the cost" for these functions (AT&T Ex. 3.0 (Turner Direct) at 102) simply fails to pass muster in light of the clear differences between these different types of errors and activities. It is nothing more than another attempt to randomly disregard SBC Illinois' costs.

Moreover, the record establishes that SBC Illinois calculated separate probability occurrences for each support activity. SBC Ill. Ex. 10.0 (Brown Direct) at 17-19; SBC Ill. Ex. 5.0 (Currie Direct) at 15-16, 23-24. Thus, even if these different support activities were consolidated into one generic "reject error" category, the probability of occurrence for the consolidated activity should be the *sum* of the probabilities for the three separate errors occurring.

Validation and Verification Activities. The Joint CLECs assert that all "validation and verification tasks" should be eliminated from SBC Illinois' nonrecurring cost studies (including both service order and provisioning studies) because they are "related to errors resulting from inconsistencies in SBC's own databases" and would be "redundant in an efficient OSS." Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 89. The Joint CLECs' theory is that "efficient" OSS would be virtually error-free, and thus SBC Illinois' personnel would never need to review CLEC orders or provisioning work orders to validate and verify their accuracy. *See id.* at 83.

The CLECs are wrong. Validation and verification activities are common-sense business practices to ensure that orders are processed as accurately as possible. *See* SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 6.

With respect to UNE orders that CLECs submit manually (*i.e.*, by fax), the record establishes that personnel in the LSC must review the faxed orders for completeness, verify that the "switch information, telephone number, and features requested are consistent and accurate," and, after inputting the CLEC's order in SBC Illinois' ordering system, verify "that the order was accepted by the appropriate mechanized ordering system." SBC Ill. Ex. 5.0 (Currie Direct) at 15. The Joint CLECs offer *no* explanation as to how these activities could be avoided using some currently available OSS technology, and are unable to explain any connection between the need to manually handle orders that CLECs choose to submit manually and any alleged flaws in SBC Illinois' electronic OSS.

The Joint CLECs' assertions are equally baseless when it comes to electronic orders. The majority of CLEC UNE orders flow through SBC Illinois' systems without any manual intervention. *See* SBC Ill. Ex. 10.0 (Brown Direct) at 4. In fact, there are more than 4800 front-end edits that are detected electronically and returned to the CLEC for correction – with no manual intervention by SBC Illinois at all. Tr**.** 1218 (Christensen). Thus, the LSC performs the service order work at issue only where handling an order that is not designed to flow through (often, a complex order), or where an order is routed to the LSC for manual handling because some error is detected. *Id.* In these circumstances, validation and verification activities are manifestly reasonable.

Complex orders are, by definition, more complex than the average "simple" UNE order, and it is perfectly reasonable for an LSC service representative to review the order for accuracy

and completeness, and subsequently verify that the CLEC's request was processed correctly. And when a UNE order falls-out for manual processing due to some error, it is perfectly reasonable for the LSC service representative to review the CLEC order "to understand what the CLEC is trying to do" and ensure accuracy and completeness, and, after entering the order into the electronic systems, verify that the order was entered properly and was accepted. *Id.* at 4, 9. The Joint CLECs fail to explain how these tasks could reasonably be omitted using any currently available OSS.[57]

2. Activity Times

As explained above, SBC Illinois developed its service order activity times using the same experts who have performed those tasks countless times, day-in and day-out. The CLECs propose several adjustments to those activity times, some common across all or several of the six service order studies, and some specific to particular studies. As explained below, the CLECs' proposed adjustments are without merit.

Reject Activity. As explained above, "reject activity" support work is required when a CLEC's UNE order is rejected because the CLEC failed to provide complete or accurate information and an LSC service representative must reject and return the order with an explanation of the reason for the order rejection. AT&T proposes that the activity time for an LSC service representative to select a reject reason and make notes on the service order be reduced from **[**********]** to one minute. AT&T Ex. 3.0 (Turner Direct) at 105-

[57] Indeed, the Joint CLECs' discussion of validation and verification activities (*see* Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 80-89) focuses on *provisioning* activities (discussed below), not *service order* activities. Similarly, while the Joint CLECs alleges that certain "order distributed" or "sent, distribute," "log in," and "administrative close-out" tasks should be set a zero because they should be done automatically or with a few key-strokes, their testimony focuses on the provisioning cost studies. *See id.* at 143-148. Those allegations are addressed below in the provisioning cost studies section of this brief.

106.[58] In support of this proposal, AT&T's witness weakly asserts that "[i]n my experience with performing similar functions, this time is overstated." *Id.* at 106. It is not clear what "similar functions" Mr. Turner has performed, but it is apparent that he has not performed the particular activities in question.

The record demonstrates that this activity is more than a simple one-step process; it consists of multiple tasks. The LSC service representative must first determine the most appropriate standardized reject reason. Then the representative issues the reject in the LASR system, typing notes regarding the reject reason. The representative must then enter a second system (EXACT) in order to cancel the access service request, again typing notes regarding the service request. Finally, the representative must enter the system that delivered the order to his or her desktop and note the reject activity there. SBC Ill. Ex. 10.1 (Christensen Rebuttal) at 7. The average time required to complete these multiple tasks is accurately represented by SBC Illinois' proposed activity time, and AT&T's proposed modification should be rejected.

Order Receipt and Checking Order. The CLECs propose that the activity times for several order receipt and related functions in the six service order cost studies be reduced to zero,[59] because the task should be performed automatically or is "effectively timeless." AT&T Ex. 3.0 (Turner Direct) at 128. The CLECs' proposals, however, are based on an overly simplistic and incorrect notion of what is required to perform these activities.

For instance, with respect to supplemental orders, while AT&T proposes to eliminate the **[**********]** minutes SBC Illinois allowed for an LSC representative to check the "EXACT

[58] AT&T also notes that SBC Illinois' proposed reject activity time in the EELs service order study is one minute higher than in its other service order studies, and suggests that (if SBC Illinois' proposed times are used), the EELs study activity time be reduced to make it consistent. SBC Illinois concurs with this proposal.

[59] Among others, AT&T addresses the time to check the EXACT SUPP page for a change request in the EELs service order study (AT&T Ex. 3.0 (Turner Direct) at 106) and the loop study (*id.* at 114); the receipt of service order task in the existing UNE-P study (*id.* at 110) and the new UNE-P study (*id.* at 117); and the "retrieve work list and select LSR" task in the ULS study (*id.* at 128).

Supp page" for a change request, the record demonstrates that this task is far from automatic. In particular, CLECs do not always identify in the "remarks" section of their supplemental orders what supplemental activities they want performed. Thus, the LSC service representative is required to compare the supplemental order with the CLEC's original order to determine what supplemental work the CLEC is requesting. SBC Ill. Ex. 10.1 (Christensen Rebuttal) at 7-8. Tr. 1226-27 (Christensen). The CLEC's own failure to indicate what is "supplemental" about its supplemental order causes SBC Illinois' employees to perform this activity, and thus this activity time should be accounted for in SBC Illinois' nonrecurring cost studies.

Similarly, AT&T's assertion that the "receipt of service order" activity "takes no time" and "should be set to zero minutes" for both the existing and new UNE-P service order studies (AT&T Ex. 3.0 (Turner Direct) at 110, 117) ignores the multi-step process covered by this activity time. First, the LSC service representative must log into the order delivery system and request a Purchase Order Number ("PON"). SBC Ill. Ex. 10.1 (Christensen Rebuttal) at 9-10. The PON number and Operating Company Number information is then delivered to the representative's screen, and the representative must enter the PON into another section of the screen. The system then pulls the actual PON from SBC Illinois' databases, and electronically delivers it to the representative's screen. *Id.* These steps cannot be completed instantaneously, and SBC Illinois' **[**********]** minute activity time is reasonable and appropriate.

<u>ACD Coverage Support Activities</u>. As explained above, ACD support activities account for the time spent by LSC personnel fielding telephone call inquiries from CLEC employees regarding order activity. AT&T asserts that SBC Illinois' task times for ACD activities are overstated. Specifically, AT&T asserts that (1) the **[*********]** minutes associated with answering the call should be set at zero because "[t]he time to receive a call is the time it takes to

pick up a handset or activate a headset" (AT&T Ex. 3.0 (Turner Direct) at 106); and (2) the **[**********]** minutes allowed for the LSC service representative to record the conversation in a Customer Contact Log should be set at zero because it "takes virtually no time" and can be done while the LSC representative is conversing with the CLEC employee to resolve the ordering issue (*id.* at 106-107). Both assertions are wrong.

With respect to logging the conversation, AT&T's recommendation is simply against all reason. An LSC service representative would be hard pressed to simultaneously converse with a CLEC employee to understand and then attempt to resolve the CLEC's issue, while at the same time devoting his or her attention to accurately describing and logging the conversation. To log the call, the LSC representative must log into an electronic system and type notes on the CLEC's order, accurately recording any additional information received from the CLEC. *See* SBC Ill. Ex. 10.1 (Christensen Rebuttal) at 8-9.

And while AT&T is correct that answering a ringing phone takes virtually no time, the task time for receiving the CLEC's call reflects more than just the time for one LSC representative to pick up the phone. Rather, the first LSC representative to answer may be required to determine and then transfer the CLEC to the service representative that originally processed the CLEC's order. *See id.* at 8. The LSC does this by means of a warm transfer – that is, the first LSC representative holds the call until the second service representative is available to handle the CLEC's inquiry.

<u>Special Access to UNE service order costs</u>. SBC Illinois' service order cost study for special access to UNE orders, which generally involve the conversion of a high-speed transport circuit and multiple sub-tending high-speed loop facilities, assumes that the average conversion

request will cover several dozen circuits.[60] AT&T does not contest this assumption, but asserts that certain of SBC Illinois' activity times fail "to reflect the fact that the work is being performed on multiple circuits in a single project." AT&T Ex. 3.0 (Turner Direct) at 122. Thus, AT&T recommends that the "review spreadsheet received from ASC; match up data of LSC order to ASC order" task time be reduced to one-tenth of SBC Illinois' estimate, and the "review in EXACT" task be reduced to one-fifth. *Id.* at 123-124. *See also* AT&T Ex. 3.1 (Turner Rebuttal) at 30-32. These random reductions, however, are entirely unsupported and should be rejected.

Mr. Turner offers absolutely no support for his opinion regarding what these task times should be. While SBC Illinois has relied on the experts that actually perform the work at issue on a daily basis, Mr. Turner does not even attempt to suggest that he has any experience performing these tasks, but instead appears to rely solely on his "experience" as a CLEC consultant recommending work time reductions left and right. Moreover, Mr. Turner's proposals simply do not square with the process that these two functions entail. *See* SBC Ill. Ex. 10.1 (Christensen Rebuttal) at 12-13, and SBC Ill. Ex. 10.2 (Christensen Surrebuttal) at 6-7 (describing the multiple activities that service representatives must perform to complete these tasks).

3. Occurrence Probabilities

Each task and activity has an associated occurrence probability, which measures how frequently the task or activity is expected to occur in processing a UNE order. Occurrence probabilities are often measured by a "Task Occurrence Factor " ("TOF"), which identifies the probability that a particular task must be performed, and by a "Work Group Occurrence Factor

[60] The precise number, which is confidential, can be found at AT&T Ex. 3.0 (Turner Direct) at 122.

("WGOF"), which measures the probability that a particular workgroup must undertake an activity in order to provide service. *See* SBC Ill. Ex. 5.0 (Currie Direct) at 7-8. For instance, personnel in the Local Service Center ("LSC") must manually process each and every UNE order that a CLEC manually faxes to SBC Illinois; thus, for manual orders, the LSC's WGOF for the standard tasks required to process orders (*e.g.*, review the request, enter it into the ordering system, verify that the order was accepted, and issue a firm order confirmation back to the CLEC) is 100%. *Id.* at 15, 22.

With respect to electronically submitted orders, some (but not all) WGOFs are identical to the "fall-out" rate. "Fall-out" (discussed in more detail below) measures the frequency that an order that is normally processed by an automated system "falls out" and requires manual handling. As AT&T's witness recognized, some complex UNE orders that are ordered by CLECs relatively infrequently are designed to fall-out for manual processing by the LSC, and thus have high fall-out or WGOFs. Tr. 1528-29,1532-34 (Turner). Other, "simple" UNE orders (like POTS UNE-P) are designed to flow-through SBC Illinois' systems without any manual work by the LSC the vast majority of the time, and thus have low fall-out or WGOFs. (These fall-out rates or WGOFs are discussed in more detail below.)

Finally, SBC Illinois measured distinct WGOFs for the six "support activities" (described above) that the LSC must sometimes perform. These support activities occur with different frequencies than the "primary" tasks of the LSC (those associated with manually entering orders in SBC Illinois' electronic systems). *See* SBC Ill. Ex. 5.0 (Currie Direct) at 23-24. To measure the WGOFs for these additional tasks, SBC Illinois used LSC tracking reports that it maintains in the ordinary course of business. SBC Ill. Ex. 10.0 (Brown Direct) at 17-18.

LSC Support Activities. AT&T proposes several adjustments to the WGOFs for the six LSC support activities. AT&T's suggestion to eliminate two of the support activities because they are allegedly duplicative of a third was refuted above in the "identification of tasks" discussion. With respect to the remaining four support activities, AT&T proposes substantial reductions, or even elimination, of the WGOFs. AT&T Ex. 3.0 (Turner Direct) at 99-103. AT&T's proposals are without merit.

Reject Activity. In its direct testimony, AT&T criticized SBC Illinois' Reject Activity WGOF of **[*************]**, asserting that that WGOF was "astronomical" because "[i]n efficient, forward-looking OSS, the probability of Reject Activity should be very low." AT&T Ex. 3.0 (Turner Direct) at 99. However, the Reject Activity WGOF for UNE-P is only **[************]**. *See* AT&T Ex. 3.1 (Turner Rebuttal) at 20. The higher number cited by AT&T is for EELs, which are complex orders not currently designed to flow-through electronically. AT&T's proposal to reduce this WGOF to a mere 1%, by "splitting" AT&T's proposed 2% fall-out, should be rejected. As explained below in the fall-out discussion, AT&T's proposed 2% fall-out is unsupported and contrary to the FCC's TELRIC pricing rules.

Moreover, "splitting" fall-out to allocate some portion to the overall fall-out rate and some portion to the Reject Activity WGOF in utterly arbitrary, because the two measure different things. The fall-out rate measures the frequency that UNE orders cannot electronically flow through the service order process to the back end systems, but fall-out for manual processing by the LSC. *See* SBC Ill. Ex. 10.2 (Christensen Surrebuttal) at 1-2. The Reject Activity WGOF, on the other hand, accounts for the occurrence of an additional subsequent activity that the LSC must sometimes perform, above and beyond processing an order that falls-out – the reject activity includes a total of **[************]** minutes to halt the request that

contains invalid data or lacks crucial data, and an additional **[************]** minutes to determine the reject reason, to reject the request, and to make notes regarding the reason. *See* SBC Ill Ex. 5.1 (Currie Rebuttal), Schedule KAC-R7 at 51; SBC Ill Ex. 10.1 (Christensen Rebuttal) at 6-7.

Supplemental Order Activity. AT&T's proposal to reduce the supplemental order activity WGOF for UNE-P of **[***********]** to the same level as AT&T's proposed reject activity WGOF is premised on a fundamental misunderstanding regarding the process at issue. AT&T suggests that supplemental order activity occurs "when a Reject Activity occurs" and there is "a need for additional information from the CLEC that placed the initial order" and thus should be set at the same WGOF as reject activities. AT&T Ex. 3.0 (Turner Direct) at 100. But that is simply not what a supplemental order is used for. When an order is rejected, the CLEC makes the necessary corrections and resubmits the order with a new version number; a supplemental order is not used. SBC Ill. Ex. 10.1 (Christensen Rebuttal) at 4. A supplemental order, rather, is used by CLECs to make *changes* to due dates, features, addresses, or listings *before* an order is completed. *Id.* at 4-5.

AT&T is correct that "this is *not* what is known as a Subsequent Order," which is "an order to modify (or supplement) some aspect of an *existing* working UNE that the CLEC has *already established*." AT&T Ex. 3.0 (Turner Direct) at 100 (emphases added). Rather, as Mr. Christensen explained, a supplemental order is submitted *before* the working UNE has been established, and simply has nothing to do with rejected orders. Indeed, Mr. Turner subsequently admitted that "Mr. Christensen's explanation is not inconsistent with my understanding of what occurs with this activity." AT&T Ex. 3.1 (Turner Rebuttal) at 22. In light of this admission, Mr. Turner's insistence that he "believe[s]" a two percent fallout is "appropriate" (*id.*) (even though

he reduced the WGOF to one percent) simply has no basis, and must be rejected. AT&T's proposal would inappropriately deny SBC Illinois the opportunity to recover its costs of processing the supplemental orders that CLECs submit, by pretending that CLECs submit far fewer supplemental orders than they actually do (and effectively requiring SBC Illinois to process the remainder for free).

PPD Activity. AT&T proposes that the tiny **[**********]** WGOF for PPD Activity for UNE-P be eliminated entirely, because, AT&T asserts, it is already covered by the general fallout percentage (which AT&T asserts should be 2%) and "is really an indication of a breakdown within SBC-Ameritech's provisioning processes since the order was due by a certain date but SBC-Ameritech is not meeting its commitment." AT&T Ex. 3.0 (Turner Direct) at 102. AT&T is wrong.

PPD Activity occurs in the small amount of cases where a due date is missed. But this is not "indicative of a breakdown" in the provisioning process. Rather, *CLECs* may cause many missed due dates. For instance, a CLEC customer may not be ready for SBC Illinois to perform the work required to complete the order by its due date, or the CLEC may have failed to make access to the end user location available to SBC Illinois. SBC Ill. Ex. 10.1 (Christensen Rebuttal) at 5. In other words, many PPDs are caused by circumstances beyond SBC Illinois' control. *Id.*

ACD Coverage. AT&T asserts that the ACD Coverage WGOF "should correspond to the forward-looking fallout percentage that is adopted," and thus suggests a 2% WGOF. AT&T Ex. 3.0 (Turner Direct) at 102-103. However, as AT&T notes (*id.* at n.113), the ACD Coverage WGOF for UNE-P is only **[**********]**. This WGOF is thus already *lower* than any reasonable general fall-out percentage, and thus should not be modified. (As explained below,

AT&T's proposed 2% fall-out rate is unsupported, unreasonable, and violates the FCC's TELRIC pricing rules.)

Special Access to UNE Project Administration cost study. The service ordering activities for CLEC requests to convert special access arrangements to UNEs include not just the activities of the LSC, but also certain tasks undertaken by SBC's Access Service Center ("ASC"). *See* SBC Ex. 5.0 (Currie Direct) at 36-37. AT&T claims that the occurrence probability for the ASC's activities related to the disconnection of the special access service should be set at zero. AT&T does not deny that the ASC must perform these activities, and does not contest SBC Illinois' estimate of the time required to perform these activities, but asserts that the cost of these activities are included in the disconnection nonrecurring costs related to special access circuits. AT&T Ex. 3.0 (Turner Direct) at 124. AT&T is largely (but not entirely) mistaken.

In response to AT&T's criticisms, SBC Illinois proposes to reduce the time for the ASC's "Create disconnect order from CABS records & edit" activity to 30 seconds, because there is *some* overlap between the ASC activities for disconnecting special access circuits and the ASC's activities when converting special access to UNEs. SBC Ill. Ex. 5.1 (Currie Rebuttal) at 45-46. However, this activity should not be reduced to zero (which AT&T proposes to do by applying a zero occurrence probability), because the activities of the ASC when special access is converted to UNEs take that additional 30 seconds, compared to the ASC's activities when disconnecting a special access circuit. In particular, in the special access to UNE conversion context, the ASC must enter additional information in the comment field of the order, which takes about 30 seconds. *Id.*

AT&T's speculation that other ASC activity times should be eliminated entirely because of overlap should be rejected. Dr. Currie, the SBC Illinois cost expert responsible for the service

order nonrecurring cost studies, personally "visited the ASC and ha[s] directly observed the tasks performed by the ASC in order to convert special access circuits to UNEs." SBC Ill. Ex. 5.2 (Currie Surrebuttal) at 23. Dr. Currie testified that the special access to UNE nonrecurring cost study "accurately reflects the ASC tasks that are caused by such conversion requests," and "almost all of the ASC work done in the conversion process goes beyond what the ASC ordinarily does with disconnecting a circuit. In other words, the ASC costs included in my rebuttal testimony include no cost that is part of the ordinary disconnection cost of a special access circuit." *Id.* at 23-24.

4. Service Order Computer Processing Costs

SBC Illinois' service order nonrecurring cost studies also contain certain, but not all, computer processing costs. In particular, SBC Illinois has included those computer processing costs that are directly caused by service orders, and that could be avoided in the long run if service orders were not created and issued. SBC Ill. Ex. 5.0 (Currie Direct) at 26. While in Docket No. 98-0396 the Commission required that computer processing costs be treated as recurring costs, and not included in service order nonrecurring costs, and while some parties assert that the Commission should again impose the same requirement,[61] the record in this proceeding demonstrates that SBC Illinois' treatment of these costs is reasonable and satisfies the FCC's TELRIC pricing rules.

As noted above, the FCC's TELRIC pricing rules require that costs be assigned according to cost causation principles. *See First Report and Order*, ¶ 691. While many computer

[61] The Joint CLECs' assertion that these costs should be recovered via recurring rate elements because these costs are "associated with equipment that benefits all entities that place service orders" (Joint CLEC Ex. 1.1 (Ankum-Morrison Surrebuttal) at 20) is refuted above in the "Cost Causation and Characterization of Costs" discussion. Under the Joint CLECs' theory of rate design (which is not the FCC's) it is hard to see how there could be any nonrecurring costs at all, because all costs are "associated" with things that benefits multiple users (*e.g.*, SBC's entire network and infrastructure, its network provisioning personnel, its LSC and other service personnel, etc.).

processing costs are shared or common costs (causally related to all or a subset of products and services), some computer processing costs are directly caused by service ordering tasks. That is, some of SBC Illinois' computer systems spend a significant or majority of their processing times handling service orders. SBC Ill. Ex. 5.0 (Currie Direct) at 28. Moreover, in the long run, these computer processing costs vary with the volume of service orders, and are thus volume-sensitive costs. *Id.* at 27-28. Thus, because these costs are caused by service orders, under the FCC's TELRIC pricing rules they should be assigned to SBC Illinois' nonrecurring service order costs. *Id.* at 28-29.

AT&T, while admitting that service orders cause computer processing costs, first asserts that these costs should be recovered through recurring rates, and then asserts that "a proper restatement of SBC Illinois' OSS costs should *assume*" that all computer costs are included in the "general-purpose computer accounts" and "are being recovered in SBC Illinois' recurring wholesale and retail rates." AT&T Ex. 3.1 (Turner Rebuttal) at 15-16 (emphasis added). But, as SBC Illinois demonstrated using a detailed special study, the *particular* computer-related costs at issue are caused by having certain nonrecurring activities (service orders), and thus should be assigned directly to service orders as direct, nonrecurring costs. SBC Ill. Ex. 5.1 (Currie Rebuttal) at 23.

Moreover, there is no basis to simply *assume* that these costs are already included in the general-purpose computer accounts and thus already being recovered via the shared and common cost factor. Rather, the record shows that SBC Illinois separately identified these different types of computer costs, assigning those computer costs that are directly attributable to service orders to its service order nonrecurring costs, and assigning all *other* computer-related costs not directly attributable to service orders, such as general purpose computer processing costs, to common

costs. SBC Ill. Ex. 5.2 (Currie Surrebuttal) at 19. In other words, these costs have not been double-counted. *Id.*[62]

5. Fall-out Rates

Fall-out is the percentage of electronic orders that must be manually processed in order to create or correct a service order and allow it to be processed electronically. Conversely, flow-through is the percentage of electronic orders that are processed without manual intervention. In its nonrecurring cost studies (both service order and provisioning), SBC Illinois used fall-out rates based on its actual, most recent experience in processing and provisioning CLEC UNE orders. While somewhat higher than the 2% fall-out rate adopted in Docket No. 98-0396, these fall-out rates represent a significant improvement in accurate TELRIC rate-setting.

When flow-through rates were developed for the nonrecurring cost studies submitted in Docket No. 98-0396, very few, if any, service orders permitted flow-through of requests submitted electronically by CLECs. *See* SBC Ill. Ex. 5.1 (Currie Direct) at 30. Thus, there was little actual data available to estimate reasonable fall-out rates, and SBC Illinois was forced to rely chiefly on SME estimates. The Commission, however, found that SBC Illinois' proposed fall-out rates were not well-supported, and instead adopted a 2% fall-out rate. *See id.* at 30.

Now, six years later, SBC Illinois has developed and implemented processes and systems that are designed to – and do – efficiently process CLEC orders electronically, with minimal fall-out. SBC Illinois also has a Performance Measure (PM 13.1) that expressly measures "[t]he number of orders that flow through [SBC's] ordering systems and are distributed in the Service

[62] Thus, if the Commission agrees with AT&T and the Joint CLECs that these costs should be "recovered through *recurring* rates" (AT&T Ex. 3.0 (Turner Direct) at 86 (emphasis in original); Joint CLEC Ex. 1.1 (Ankum-Morrison Surrebuttal) at 19-22), then the Commission should adopt the alternative method proposed by SBC Illinois whereby these computer processing costs could be recovered via a recurring cost element from the customers that cause these costs to be incurred. SBC Ill. Ex. 5.0 (Currie Direct) at 29 & Sch. KAC-9.

Order System without manual intervention." SBC Ill. Ex. 11.0 (Mitchell Direct[63]) at 7. This actual experience and actual data from using advanced, mature electronic OSS can and should be used to estimate far more accurate and reasonable fall-out rates than the guess-work that, by necessity, formed the basis of the fall-out rates adopted in the 1998 docket.

Several parties assert that the Commission should adopt the same 2% fall-out rate as in Docket No. 98-0396. But that proposal violates the FCC's TELRIC pricing rules. As noted above, the FCC's TELRIC pricing rules *require* that costs be based on "currently available" technology (FCC Rule 505(b)(1)) "that is compatible with the existing infrastructure" (*First Report and Order*, ¶ 685). The 2% fall-out proposal advanced by some parties, however, is not based on any currently available technology.

The CLECs point to two "technologies" in support of their 2% fall-out proposal: (1) a *retail* and resale system used by Southwestern Bell ("SWBT"), and (2) orbitz.com's electronic systems. *See* Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 55, 76-79; AT&T Ex. 3.0 (Turner Direct) at 92. But these parties do not contest the obvious: a CLEC cannot use SWBT's non-UNE systems or orbitz.com (or an ATM machine, *see* Joint CLEC Ex. 1.1 (Ankum-Morrison Surrebuttal) at 18) to order UNEs. Nor can SBC Illinois use any of those systems to provision UNE orders. In other words, none of these electronic systems are "currently available" technologies that SBC Illinois can use to process and provision UNE orders.

In contrast, the electronic OSS systems that SBC Illinois currently uses to process and provision UNE orders are the most efficient systems currently available to perform those tasks. As the Supreme Court recently held:

> [UNEs] are not otherwise marketed or available to the public. The sharing obligation imposed by the 1996 Act created "something brand new" – "the

[63] Lance McNiel adopted the Direct Testimony of John Mitchell.

> wholesale market for leasing network elements." The unbundled elements offered pursuant to § 251(c)(3) exist only deep within the bowels of [an ILEC]; they are brought out on compulsion of the 1996 Act and offered not to consumers but to rivals, and at considerable expense and effort. New systems must be designed and implemented simply to make that access possible . . . . *Verizon Comms. Inc. v. Law Offices of Curtis V. Trinko, LLP*, 124 S.Ct. 872, 880 (2004).

SBC Illinois has done just that, continually designing, implementing, and improving its OSS, at considerable expense and effort, to provide efficient access to elements of its network. And the CLECs have had considerable input into that process, participating in collaboratives and identifying and prioritizing desired enhancements. *See* SBC Ex. 11.1 (McNiel Rebuttal) at 2-3; SBC Ill. Ex. 11.0 (Mitchell Direct) at 6-7. The CLECs' own witnesses recognize this. Tr. 1532-33 (Turner), 1700 (Ankum-Morrison).

SWBT's "EASE" system provides no support for the CLECs' proposed 2% fall-out. That system is used by SWBT for retail and resale orders. That system simply was not designed for, and cannot be used for, UNE orders. *See* SBC Ill. Ex. 11.1 (McNiel Rebuttal) at 3. As the record demonstrates, the process necessary for ordering UNEs is fundamentally different, and more complex, than that used for ordering retail or resale services. *See id.* at 4-5.

The CLECs' assertion that EASE is "used to provision loop-port combinations that are used to serve SBC's own retail customers" (AT&T Ex. 3.1 (Turner Rebuttal) at 35) is simply nonsense. As noted above, the Supreme Court recently recognized that "[UNEs] are not otherwise marketed or available to the public," but "exist only deep within the bowels of [an ILEC]; they are brought out on compulsion of the 1996 Act and offered not to consumers but to rivals, and at considerable expense and effort." *Trinko*, 124 S.Ct. at 880. Thus, "[n]ew systems must be designed and implemented simply to make that access possible." *Id.* While SBC Illinois may *use* its own loops and ports when providing retail service (or selling that service for

re-sale), providing those elements themselves as unbundled network elements is fundamentally different.

The CLECs' reference to orbitz.com also cannot support their proposed 2% fall-out. As an initial matter, the CLECs do not even know what orbitz.com's "fall-out" rate is, but merely speculate that it is very low. In any event, as noted above, orbitz.com's electronic systems cannot be used to order, process, or provision UNE orders, and thus cannot constitute the currently available technology upon which SBC Illinois' nonrecurring charges are based.

Orbitz.com is an inapt analogy for other reasons as well. For instance, the systems used by orbitz.com are for "service ordering" only. That is, those systems are used only to book a flight. Orbitz.com does not perform air traffic control, or coordinate flight schedules, or fly the planes; orbitz.com has nothing like a physical telecommunications network, and provides no physical services. In terms of the functions SBC Illinois must perform in order to provide UNEs, orbitz.com would do little more than receive a CLEC order and provide a confirmation. SBC Illinois' systems, however, must perform and coordinate many more functions, to process orders, update billing information, update network inventory and switch translation information, and send orders downstream so that actual provisioning can occur. In short, the number of functions that SBC Illinois' electronic systems must perform and support is far greater, and far more complex, than those performed by orbitz.com. *See* SBC Ill. Ex. 5.1 (Currie Rebuttal) at 34-37.

Moreover, the CLECs make no effort that show that, even if SBC Illinois could somehow use orbitz.com's electronic systems to process UNE orders, doing so would be more *efficient* (as opposed to merely reducing fall-out). That is, the CLECs make no effort to estimate the *cost* of developing, implementing, and maintaining systems with lower fall-out, and make no effort to demonstrate that those additional costs are outweighed by the savings associated with reducing

fall-out. In comparison to the extremely low NRCs proposed by the CLECs, ranging from 8 cents to 50 cents for POTS UNE-P, orbitz.com charges a "nonrecurring" fee of $6 (SBC Ill. Ex. 5.1 (Currie Rebuttal) at 4) – and even that may significantly understate orbitz.com's costs, as it may subsidize the fees it charges customers with revenues from other sources (*e.g.*, pop-up advertisements, rebates from participating airlines.) Moreover, that $6 fee covers only the electronic processing of an order plus the automatic emailing of an electronic ticket (what the CLECs refer to as orbitz.com's "service provisioning" activity, *see* Joint CLEC Ex. 1.1 (Ankum-Morrison Surrebuttal) at 17). Again, in the UNE context, that is little different than receiving an electronic order and electronically returning an order confirmation. In the real world, SBC Illinois' OSS must do much, much more.

Staff, joined subsequently by AT&T, asserts that SBC Illinois' Performance Measure ("PM") 13 is more appropriate to use to measure fall-out than PM 13.1. *See* Staff Ex. 11.0 (McClerren Direct) at 18-22; Staff Ex. 30.0 (McClerren Rebuttal) at 4-5; AT&T Ex. 3.1 (Turner Rebuttal) at 36-37. They are mistaken. As the record shows, PM 13 measures fall-out only on the basis of UNE orders that are designed to flow through. PM 13.1, on the other hand, measures fall-out on the basis of all electronically submitted orders, whether designed to flow through or not. *See* SBC Ill. Ex. 11.1 (McNiel Rebuttal) at 6; SBC Ill. Ex. 11.0 (Mitchell Direct) at 7. *If* it were reasonable to assume that all UNE orders should be designed to flow-through without any manual handling, then perhaps Staff might be correct in asserting that PM 13 should be used. But that is not a reasonable assumption at all.

Assuming that *all* UNE orders are designed to electronically flow-through is simply not a "TELRIC" assumption. For instance, complex UNE orders and orders that are submitted by CLECs infrequently are not designed to flow-through electronically. *See id.* at 6. And that is

perfectly consistent with TELRIC. Designing, testing, and implementing systems and processes so that particular UNE order types can flow-through electronically entails costs, and the more complex the UNE orders at issue are, the higher those costs might be. Determining whether it is "efficient" to program OSS so that particular UNE order types can flow-through electronically must involve a careful balancing of the costs of achieving flow-through against the benefits of doing so. And where the UNE orders at issue are complex, or are ordered by CLECs infrequently, it may be impractical to achieve electronic flow-through and more cost effective to process and provision the orders via manual processes. Tr. 1533-34 (Turner).

For the same reason, the Joint CLECs' assertion that fall-out should be 2% for both simple *and complex* UNE orders, AT&T's assertion that fall-out for complex UNE orders should be 10%, and Staff's proposed 2% fall-out for EELs are particularly unreasonable. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 71-72; AT&T Ex. 3.0 (Turner Direct) at 104; Staff Ex. 11.0 (McClerren Direct) at 24. Orders for complex UNEs like EELs may require multiple service orders and involve significantly more interdepartmental coordination and engineering than orders for, *e.g.*, UNE-P POTS. SBC Ill. Ex. 11.1 (McNiel Rebuttal) at 8. While SBC Illinois, in consultation with CLECs, evaluates its processes on an on-going basis to determine the most economical way to provide UNEs, some tasks, like processing and provisioning complex orders, are best performed with some planned manual intervention. *Id.* at 8-9; SBC Ill. Ex. 11.0 (Mitchell Direct) at 5-6.

Indeed, the CLECs' one-size-fits-all approach to fall-out defies common sense. There is no reason to believe that fallout from the ordering process will necessarily be the same as fall-out from the provisioning phase. Moreover, there is no reason to believe that the fallout from provisioning one type of order will be identical to the fallout associated with every other type of

order. AT&T witness Turner conceded that fallout will vary by order type. Tr. 1538-39 (Turner). Indeed, he asserted that for some order types, there is only one place in the provisioning process where the order can fallout (*e.g.*, loop migrations, *see* Tr. 1539 (Turner)), but for other order types, an order can fall out at multiple places (*see* Tr. 1539-40 (Turner)). That is simply inconsistent with an across-the-board application of a single fallout rate. SBC Illinois, on the other hand, properly recognizes that fallout can occur at multiple places within the service ordering and provisioning processes, depending on the UNE ordered, and has proposed different fallout rates that reflects this reality.

With respect to EELs in particular, SBC Illinois' current service order flow-through rate is zero; all EEL orders are designed to fall-out for manual handling by the LSC. Nevertheless, SBC Illinois anticipates that *some* EEL orders will be efficiently designed to flow-through electronically, and thus proposes a fall-out rate of about 50%. *See* SBC Ill. Ex. 5.0 (Currie Direct) at 47-48. Staff, however, proposes a sky-high 98% flow-through rate for EELs, based apparently on nothing more than *speculation* that systems could be designed to achieve such flow-through. Staff Ex. 11.0 (McClerren Direct) at 23. But EELs are complex services that require multiple service orders and significant interdepartmental coordination (SBC Ill. Ex. 11.1 (McNiel Rebuttal) at 8), and Staff makes no effort to show (and nowhere appears to even claim) that the benefits of achieving such flow-through rates outweigh the costs of doing so.

The Indiana Commission recently revisited the issue of fallout rates in its Cause No. 42393. Like this Commission, the Indiana Commission had ordered a 2% fallout rate for simple orders in an earlier TELRIC proceeding.[64] As it has done here, SBC asked the Indiana Commission to revisit its earlier decision and order higher fallout rates going forward. In its

[64] Unlike this Commission, the IURC recognized that complex orders are likely to experience higher fallout and ordered a fallout rate of 10% for such orders.

Order in Cause No. 42393, dated January 5, 2004, the Indiana Commission did just that. The Indiana Commission recognized that the actual fallout experience of SBC is a key ingredient when determining forward-looking fallout rates. *Indiana UNE Order* at 114. Consequently, the Indiana Commission ordered that SBC Indiana run its cost studies using, as upper bounds, fallout rates from ranging 5% to 23% based on the type of order. *Id.* at 114-15. Moreover, different upper bounds were established for the Support Activities included in the service order cost studies. *Id.* The resulting fallout rates used to develop the approved UNE nonrecurring service order rates in Indiana are substantially higher than those proposed by AT&T and the Joint CLECs in this proceeding. SBC Ill. Ex. 5.2 (Currie Surrebuttal) at 8.

6. Other Issues (Including Rate Design)

The CLECs and Staff assert that SBC Illinois should be required to disaggregate connection and disconnection charges. They make the same assertion with respect to SBC Illinois' cost studies, and, as demonstrated below in the provisioning nonrecurring cost study discussion, their disaggregation proposal should be rejected.

C. Provisioning (Loops and EELs) Nonrecurring cost Studies

The nonrecurring cost study for unbundled loops identifies the nonrecurring costs associated with provisioning analog and digital loops, both on a stand-alone basis and as part of a "new" UNE-P combination. *See* SBC Ill. Ex. 6.0 (Cass Direct) at 8-25. The provisioning costs for analog and 2-wire digital loops are recovered through a "line connection charge" rate element, while the provisioning costs for DS1 and DS3 loops are recovered through a "service provisioning" rate element. The nonrecurring cost study for EELs, a combination of unbundled loops, multiplexing, and dedicated transport, identifies the nonrecurring costs associated with provisioning such combinations, and contains a number of rate elements whose application

depends on the particular types of loops, multiplexing, and transport ordered by a CLEC. *See id.* at 25-28.[65]

The methodology SBC Illinois used to identify its nonrecurring costs of provisioning unbundled loops and EELs is substantially similar to that used in the service order nonrecurring cost studies. In particular, SBC Illinois relied on the experts responsible for performing the provisioning activities in question to identify the forward-looking activities, activity times, and occurrence probabilities of the tasks necessary to provision these CLEC orders. *See id.* at 5-6. The CLECs propose several adjustments to these cost studies, but, as demonstrated below, those adjustments are unsupported and inconsistent with the FCC's TELRIC pricing methodology.

1. Identification of Tasks

IDF Cross-connects. AT&T asserts that all cross-connect activities for performing cross-connects on an Intermediate Distribution Frame ("IDF") should be eliminated because IDFs are not "forward-looking" technology. AT&T is wrong. IDFs are an essential part of a forward-looking network for SBC Illinois, and SBC Illinois' current methods and procedures for the planning and engineering of central office frames direct the placement of IDFs. SBC Ill. Ex. 16.0 (Deere Rebuttal) at 4. Among other reasons, IDFs help mitigate premature exhaust of the Main Distribution Frame ("MDF"), and provide a point of termination for certain low utilization services. *Id.* at 5. In addition, in large or multi-floor central offices, an IDF is often used to consolidate circuits that are then connected to the MDF, to allow greater flexibility and more efficient cross connection and access to the outside loop cables terminated on the MDF. *Id.* at 6.

[65] Specifically, SBC Illinois' EELs tariff includes the loop-transport combinations identified in the Draft I2A and incorporated by reference in Section 13-801 of the Illinois PUA. *See* SBC Ill. Ex. 3.1 (Silver Rebuttal) at 14-15. It does not, and should not, include the rates, terms and conditions for point-to-point private line circuits. In Docket No. 01-0614, the Commission concluded that the EEL combinations currently in the tariff are the EEL combinations that are properly listed, and found that if a CLEC wishes to order some other loop-transport combination, it could do so via the BFR or BFR-OC process. *Id.*

Validation and Verification Activities. The Joint CLECs propose to indiscriminately eliminate a number of activities based on their alleged short-hand descriptions – *e.g.*, any activity described as a "validation" or "verification" activity. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 80-90. The Joint CLECs speculate that "these activities are excessive and are the result of (a) SBC's poorly designed LSR process, (b) lack of systems integration, and (c) errors in SBC's legacy systems." *Id.* at 143-147. But that speculation is utterly without merit.

The Joint CLECs fail to explain how, even with the super-efficient electronic OSS they speculate could be designed (but which does not exist), orders that fall out or require manual handling will not require any validation or verification activities. That is nonsense. When orders fall out (or are complex orders designed for manual processing), it is perfectly reasonable for the responsible personnel to validate and verify that, for instance, the CLEC has submitted a valid order, that the order was subsequently entered into the electronic ordering systems properly, and that orders have been provisioned properly. *See* SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 6. The Joint CLECs' speculation that some unidentified electronic processes could eliminate the need for these kinds of tasks is simply contrary to common sense. For instance, personal computer-based word processing is surely a huge advancement over, and much more efficient than, manual typewriters, but presumably Messrs. Ankum and Morrison did more than type their written testimony (or cut and paste large portions of it from documents previously prepared for other states) and hit "print" – surely they manually reviewed their written testimony to "validate" or "verify" its accuracy.

The Joint CLECs also take specific issue with SBC Illinois' identification of the activities necessary to inventory circuits in the TIRKS database, asserting that this task should be completely automatic. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 84-86. Because AT&T

also recommends adjustments with respect to this activity (proposing to reduce, but not eliminate, the relevant work times), this assertion is addressed (and refuted) below in the activity time discussion.

The Joint CLECs also propose to eliminate any activity described as "log in," "administrative close out," or "order distributed," on the theory that log-in activities should be performed once at the beginning each shift, and that the remaining tasks "should automatically happen when a technician hits the enter key at the end of a manual input process or the system automatically distributes the order after completion of its prescribed process." Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 143-147. AT&T, on the other hand, does not contest that many of these activities are necessary and appropriate, but recommends several activity time adjustments. As explained below in the activity time discussion, the CLECs' proposals to reduce or eliminate these activities rest upon mischaracterization of the tasks covered by these activity descriptions and activity times, and SBC Illinois' proposed activity times should be adopted.

Designed Loops. AT&T asserts that designed loops are not necessary for EELs. AT&T Ex. 3.0 (Turner Direct) at 27-30. The record, however, demonstrates that all non-UNE-P unbundled loops, including those used in EELs, must be provisioned using the design loop process, to enable SBC Illinois to identify any issues related to the circuit layout. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 3. For instance, SBC's Circuit Provisioning Center or High-Cap Provisioning Center must, in accordance with the Network Channel/Network Channel Interface Code marked on the service order, ensure that the assigned facility satisfies the requirements of the ordered product, must verify the Connecting Facility Assignment ("CFA") information, and must establish the circuit into the TIRKS system. *Id.* In short, as the Indiana

commission recently concluded, "designed loops are necessary to identify issues related to the circuit layout and will prevent any potential errors that may arise." *Indiana UNE Order* at 116.

Cross-Connects. Both AT&T and Staff question whether SBC Illinois has double-counted the cross-connects in the dedicated transport element of its EEL provisioning cost study, because the loop element already accounts for a cross-connect. *See* AT&T Ex. 3.0 (Turner Direct) at 42-43; Staff Ex. 7.0 (Zolnierek Direct) at 49-50. But SBC Illinois has not double-counted these cross-connect activities. In particular, an SBC technician must separately perform a cross-connect at each end of the dedicated transport element, and separately perform the loop cross-connects. *See* SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 12-13; SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 13-14.

2. Activity Times

Travel Times. The CLECs propose several adjustments to the travel times contained in SBC Illinois' nonrecurring provisioning cost studies, which account for the time a technician spends traveling to various work sites in order to provision different unbundled loop or EEL orders. (The work sites include unmanned central offices, the serving area interface/feeder distribution interface ("SAI/FDI"), and, in the case of DS1 and DS3 loops, the customer premises.) The CLECs' proposed modifications are not based any studies, hard data, or first-hand experience performing the relevant provisioning activities on thousands of occasions like SBC Illinois' experts.[66] Rather, they are based on a series of assumptions that, as the record demonstrates and as explained below, are entirely unwarranted. Thus, the CLECs' proposed travel time adjustments should be rejected.

[66] SBC Illinois also provided actual historical data regarding the monthly travel times to unmanned central offices for a 29-month period covering more than 150,000 such trips. These data show that SBC Illinois' SMEs conservatively understated the unmanned central office travel time, by as much as 20%. SBC Ill. Ex. 5.1 (Currie Rebuttal) at 37-38.

AT&T's proposed modifications to unmanned central office travel times. The Joint CLECs do not propose any modification of SBC Illinois' estimate of the average time necessary for a technician to travel to an unmanned central office to perform provisioning activities (*e.g.*, installing cross-connects). *See* Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 115-117. AT&T, however, proposes to significantly reduce this travel time via the application of two sequential adjustments. Both must be rejected.

First, AT&T asserts that the unmanned office travel time should be reduced five minutes to make it the same as the travel time to an SAI/FDI, on the theory that "[t]here is no reason to believe that the travel time to dispatch a technician to an unmanned central office would be any greater than the time to dispatch a technician to an SAI/FDI in the field." AT&T Ex. 3.0 (Turner Direct) at 41. The record, however, demonstrates a clear reason for the different travel times. Work at unmanned central offices and at the SAI/FDI is handled by different groups of technicians; "FOG technicians" or "Rovers" support unmanned central offices, while other technicians perform SAI/FDI work. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 11-12. And Rovers have geographically larger areas of responsibility than the technicians that perform SAI/FDI work, generally as many as 3-4 central offices. *Id.* Because Rovers have larger areas of responsibility, on average they require slightly more travel time. *Id.*

Second, AT&T proposes to divide the unmanned central office time by four, on the assumption that "the technician performs an average of four work orders when dispatched to the unmanned central offices." AT&T Ex. 3.0 (Turner Direct) at 42. This assumption too is unwarranted. In the majority of cases, the technician is dispatched to an unmanned central office for a single service order or trouble ticket. SBC Ill. Ex. 9.1 (Gomez-McKeon Direct) at 11. Nor can SBC Illinois wait for service orders to pile up until it has multiple orders that require work at

the same unmanned central office. Service orders, including CLEC orders for unbundled loops and EELs, have different due dates that must be met. *Id.* at 11-12. And AT&T does not indicate any willingness to have SBC Illinois hold all of AT&T's loop or EEL orders that require dispatch to an unmanned central office until at least three additional orders are received requiring dispatch to the same office. Thus, the Commission should reject AT&T's proposed modification to the unmanned central office travel time.

AT&T's proposed modifications to SAI/FDI travel times. AT&T proposes two adjustments to SAI/FDI travel times that, like its proposed unmanned central office travel time modifications, are entirely unwarranted. First, AT&T asserts that the travel time in the EEL cost study should be reduced to make it the same as the time in the unbundled loop cost study, because, AT&T asserts, it is "the exact same trip." AT&T Ex. 3.0 (Turner Direct) at 51.[67] AT&T is wrong. Technicians from different work groups are responsible for performing cross-connect activities at the SAI/FDI in the case of unbundled loops and for EELs, and the technicians in the work group responsible for EEL loop connection work have different geographic areas of responsibility. Thus, the travel time are different in the two studies. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 21; SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 7.

Second, for both the unbundled loop and EEL cost studies, AT&T proposes to cut travel time to the SAI/FDI in half, on the theory that "the technician performs an average of two work orders when dispatched to the SAI/FDI." AT&T Ex. 3.0 (Turner Direct) at 52. Again, AT&T is wrong. The tasks performed at the SAI/FDI are unique to each service order. Once finished with an order, the technician must then proceed to the next work order, which may be at a different SAI/FDI. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 21-22. Moreover, orders have

[67] Staff proposes this same modification. *See* Staff Ex. 7.0 (Zolnierek Direct) at 38-40.

different commitment times (pursuant to SBC Illinois' service quality obligations for retail and wholesale services), which means that SBC Illinois cannot hoard service orders to complete multiple orders at the same SAI/FDI at the same time. *See id.* In short, based on review of the technicians' method and procedures and "from discussion with actual technicians, there is no indication that the technician will complete additional jumper work for other orders when traveling to an SAI/FDI location," SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 6, and AT&T's proposed travel time modification should be rejected.

AT&T's *proposed modifications to DS1 and DS3 loop-related travel times*. AT&T asserts that the travel time related to DS1 and DS3 loop provisioning activities should be reduced to make it equal to the estimated travel time for a technician to travel to the SAI/FDI for a POTS loop. AT&T Ex. 3.0 (Turner Direct) at 64-66. However, the "Digital Operations Group" ("DOG") technicians responsible for provisioning high-capacity loops like DS1 and DS3 loops have geographically larger areas of responsibility than the technicians that perform POTS-related wiring activities at the SAI/FDI (CPM technicians). SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 27. In particular, SBC Illinois has only **[**********]** DOG technicians, who cover all **[*********]** wire centers out of only **[**********]** garage locations. SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 7. In contrast, there are **[**********]** CPM technicians, with **[*********]** garage locations. *Id.* Because DOG technicians have such larger areas of responsibility, they require additional travel time to reach DS1 and DS3 loop work sites. *Id.*

Joint CLECs' proposed travel time modifications. The Joint CLECs propose to significantly reduce the travel times for technician travel to the FDI/SAI and end user premises. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 103-117. Like AT&T's proposed adjustments, the Joint CLECs' modifications are based on hypothetical assumptions that have no basis in fact.

The Joint CLECs theorize that, if a technician performs 8 jobs in one day, with an average of 1.2 miles in between each job and an initial and final trip length of 2.4 miles, at an average speed of 18 mph, then the average per-job travel time would be 9.5 minutes. *See id.* That may be a neat theory, but the Joint CLECs provide no evidence that it reflects the conditions under which outside plant technicians actually work.

The record demonstrates that the Joint CLECs' theory conflicts with the facts in several ways. For instance, while their mathematical exercise assumes that the technician travels from the central office to the first work site, the facts show that technicians are not housed at central offices, but normally start from garages, which, most critically, generally have a coverage area consisting of many wire centers. SBC Ill. Ex. 5.1 (Currie Rebuttal) at 41. Moreover, the Joint CLECs assume that travel consists solely of travel to a work site, and then a return trip once the job is complete. In the real world, however, technicians installing stand-alone or UNE-P loops must sometimes travel between the NID and SAI. *Id.* at 41-42. Further, the Joint CLECs assume that the technician works all day within the area served a single wire – or even less – and thus need not travel very far between jobs. The facts, however, show that technicians have varying geographic areas of responsibility, and generally cover multiple wire centers. *Id.* at 43. DOG technicians, for instance, cover **[**********]** wire centers out of only **[**********]** garage locations. SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 7. The Joint CLECs go so far as to assume that a technician typically serves a geographic area as small as *one-quarter* of the area served by a single wire center. Tr. 1717-18 (Ankum-Morrison). The evidence shows otherwise, and one can quickly see how this erroneous assumption, on its own, invalidates the

Joint CLECs' proposed travel times.[68] Further, the Joint CLECs overstate the number of jobs that, on average, a technician can complete in one day, as SBC Illinois confirmed with the outside plant foremen that manage the technicians whose travel time is in question. SBC Ill. Ex. 5.1 (Currie Rebuttal) at 42 & Sch. KAC-R24; SBC Ill. Ex. 5.2 (Currie Surrebuttal) at 27.

Finally, SBC Illinois recreated the Joint CLECs' mathematical exercise, but using more accurate assumptions based on the actual on-the-ground facts. That exercise demonstrates that SBC Illinois' proposed travel times are reasonable, and should be approved by the Commission. SBC Ill. Ex. 5.1 (Currie Rebuttal) Sch. KAC-R24.

Cross-Connect Times. Both the Joint CLECs and AT&T assert that the cross-connect times in SBC Illinois' loop and EEL provisioning cost studies should be reduced. The Joint CLECs' proposal to randomly reduce several activity times for placing cross-connects based on the assumed use of "one-sided cosmic frames" (see Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 117-25) was addressed above. In short, the Joint CLECs fail to show that such frames constitute the most efficient (or even efficient) currently available technology, in light of the high costs and operational limitations of such frames. *See* SBC Ill. Ex. 16.0 (Deere Rebuttal) at 7-8.

AT&T's proposed adjustments to the cross-connect activity times fare no better. First, AT&T asserts that the cross-connect time for 4-wire analog loops should be reduced from **[*** ******]** minutes to 5 minutes based on Mr. Turner's "experience," whatever that might be. AT&T Ex. 3.0 (Turner Direct) at 45. But the record demonstrates that performing the cross-connect at issue is not a simple, 5 minute process. Rather, the technician must establish the cross-connect by first placing 50 to 100 feet of wire from appropriate points within the central

[68] For instance, if a technician covers the area served by four wire centers, that means that the locations of his or her jobs are spread over an area *16 times* greater than that assumed by the Joint CLECs, and the average distance between jobs will be far more than the 1.2 miles arbitrarly assumed by the Joint CLECs.

office. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 15. The connections consist of eight wire wraps on the frame, and may include connections across multiple floors within the building. *Id.* Further, the cable racks or trays are primarily located overhead, which means the technician must move up and down ladders to complete the wiring. *Id.* at 15-16; Tr. 1482-83 (Gomez-McKeon). SBC Illinois' proposed activity time accurately reflects the time reasonably necessary to complete these tasks; AT&T's does not.

Second, AT&T asserts that the cross-connect time for central office multiplexing DS1 to voice grade loops should be reduced from **[*********]** minutes to two minutes. AT&T Ex. 3.0 (Turner Direct) at 45. This kind of cross-connect, AT&T asserts, uses "pre-connectorized quick connect jumpers that allow the technician to easily establish the cross-connect." *Id.* AT&T is wrong. Pre-connectorized jumpers are the exception rather than the rule. The majority of the time, the technician must wire wrap the termination of the cross-connect. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 16. Moreover, every DS1 (and DS3) cross-connect is dependent on the configuration of the EEL as ordered by the CLEC, and this activity time includes time to locate the frame "to" and "from" points within DSX frames. *Id.*

Testing Activities. Both AT&T and the Joint CLECs propose numerous modifications to the activity times of various provisioning-related testing activities. The CLECs' assertions are based on an oversimplification of the necessary testing activities, and should be rejected.

For instance, the FOG pre-service testing for 4-wire analog and DS1 loops is not merely a simply continuity test, as the CLECs suggest. *See* AT&T Ex. 3.0 (Turner Direct) at 45-46; Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 125-126. Rather, the technician must perform a continuity test, an office to office test, convert the dial tone from an analog to digital from one central office to another (for 4-wire analog loops), and perform an additional series of tests for

DS1 loops. *See* SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 16-17 & Sch. VGM-R2. Moreover, the testing may involve cross-connects on multiple floors in a central office. SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 10. The testing performed by a DOG technician when installing loops also involves a similar series of tests, as defined in SBC's Methods and Procedures. *Id.* at 22 & Sch. VGM-R2.

Similarly, SBC Illinois' testing time for DS1 CKL testing by the SSC reasonably reflects the multiple tasks involved, and should not be reduced as the CLECs propose. AT&T Ex. 3.0 (Turner Direct) at 48; Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 134-38. The relevant activity time includes not just the time necessary to perform the test itself, but also preparation and set-up time. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 18-19. Moreover, contrary to the Joint CLECs' assertion, this testing time does not assume that technicians are sitting around while waiting for a test to complete. Rather, this test requires close coordination between multiple work groups and the CLEC, and assumes an immediate response by all parties involved. *Id.*; *see also* SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 7-8.

<u>Log-in, order retrieval, and close-out activities</u>. The CLECs propose a number of adjustments to reduce or eliminate the activity times for various log-in, order retrieval, and close-out activities. As explained below, their recommendations are without merit.

The CLECs propose reducing the activity time for "retrieving the next order from PAWS" to zero on the theory that such an activity should be "automatic." *See* AT&T Ex. 3.0 (Turner Direct) at 37, 69-70. It is not, and the CLECs' theory that electronic systems should be designed so that the tens or hundreds of thousands of work orders SBC Illinois' technicians fulfill each year constantly pop-up on their workstation screens is unreasonable and unsupported. Rather, when a technician is ready to process the next order, the technician must enter a series of

keystrokes or click an icon to retrieve the next order. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 7. While this activity takes little time (less than a minute, as indicated in SBC Illinois' nonrecurring cost studies), it is not "automatic" or instantaneous, and the CLECs' proposed adjustment should be rejected.

AT&T suggests reducing the "log-in and completeness check" activity time for a FOG technician from **[********]** minutes to 2 minutes, and the time for each additional circuit from **[********]** minutes to 30 seconds. AT&T Ex. 3.0 (Turner Direct) at 44, 71. The Joint CLECs apparently propose to eliminate this activity time entirely because SBC Illinois used the phrase "log-in" in describing the activity. *See* Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 144-46. Both proposals should be rejected. The technician at issue must retrieve a work request for an order, as well as a separate workstep ticket for each circuit within the order. Then, the technician must review each ticket and determine whether to work the request or file it to be completed later, based on the due date. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 14-15. SBC Illinois' proposed activity times for these activities, supplied by the experts responsible for these very tasks, are a reasonable estimate of the time necessary for these tasks, and the CLECs' proposed modifications should be rejected.

SBC Illinois' provisioning cost studies assume activity times for "order completion and closeout" activities of **[********]** minutes for the first loop (or **[*********]** minutes for DS1 or DS3 loops) and the same time for each additional loop. AT&T proposes that these activity times be reduced to one minute for the initial loop (or five minutes in the case of DS1 or DS3 loops), and zero minutes for additional loops, because "[t]he focus of this activity . . . is on the closeout of the order – not on the individual loops themselves." AT&T Ex. 3.0 (Turner Direct) at 47; see *Id.* at 68-69. The Joint CLECs propose to eliminate all these activity times entirely, on the

theory that somehow these activities could be made completely automatic. These proposals should be rejected.

SBC Illinois' proposed activity times are supported by the estimates of the experts that actually perform these activities. Moreover, when an order involves multiple circuits, the technician will receive a separate workstep ticket for each circuit, and must separately close out each workstep ticket. The technician cannot close out all the tickets on one service order-wide basis, as AT&T suggests. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 17-18.[69] Indeed, the technician may make separate comments on multiple items within the order before closing each out. SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 10-11.

TIRKS inventory. AT&T suggests that the activity time for assigning multiplexing equipment in the TIRKS database should be reduced from **[**********]** minutes to three minutes, and asserts that "the time it takes to assign the first DS1 increment of capacity . . . should not vary from the time it takes to assign an additional DS1 increment of capacity." AT&T Ex. 3.0 (Turner Direct) at 39-40. The Joint CLECs go even further, speculating that a system could be designed whereby no manual intervention would be required to build a span or inventory circuits in TIRKS. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 84-85. The Joint CLECs provide no evidence, however, that there is any commercially available system that would allow such automation, and point to no ILEC that has developed or implemented such a system.

[69] Similarly, AT&T's suggestion that the "additional" close-out time for the DOG technician's Order Analysis function be eliminated should be rejected. *See* AT&T Ex. 3.0 (Turner Direct) at 50, 63. The technician must review each circuit on the service order individually, including the assignment and equipment information for each. This information is unique to each circuit on the service order, and thus additional time is required to review the record for each circuit. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 20-21.

Indeed, the record establishes that the CLECs have oversimplified the tasks involved in this activity. In particular, the actual assignment of the multiplexer is only one of the functions covered by this activity and activity time. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 9-10. In particular, the relevant personnel must first complete a series of screens, evaluate which multiplexing equipment is available for assignment, and assign the equipment, to create a SCCXR record. *Id.* The SCCXR record not only designates the type of multiplexing equipment to be assigned, but is used to actually initiate the carrier record for the channelized system in TIRKS, and specifies the circuit ID, routing information, due date information, and any special instruction information for the design process. *Id.* In short, the tasks covered by this activity description include multiple, significant steps, and the CLECs' proposed modifications should be rejected.

3. Occurrence Probabilities

DIP/DOP. Some of the occurrence probabilities in SBC Illinois' unbundled loop and EEL provisioning cost studies are tied to what are known as "DIP" and "DOP." "DIP," or Dedicated Inside Plant, refers to the situation where a loop is already wired all the way to a switch port "inside" the central office. "DOP," or Dedicated Outside Plant, refers to the situation where a loop is completely wired through in the "outside" plant environment. Where DIP and DOP are not in place, technicians must manually perform wiring activities in order to provide a working unbundled loop, new UNE-P, or EEL. Conversely, certain manual activities are not required where DIP and/or DOP are already in place.

Thus, the occurrence probabilities for several loop/EEL provisioning activities are represented by one minus the DIP or DOP. For instance, assume that DOP is 60%; that is, 60% of all loops are connected through in the outside plant environment. In this case, the occurrence probability that a technician must be dispatched to perform a cross-connect at the serving area

interface to establish a continuous loop from the customer premises all the way back to the central office is the remaining 40% (one minus 60%). *See* SBC Ill. Ex. 6.0 (Cass Direct) at 17.

In its unbundled loop and EEL provisioning cost studies, SBC Illinois used the DIP and DOP ratios of its current plant. Both AT&T and the Joint CLECs propose adjustments to these ratios, and thus to the occurrence probabilities that are drawn from these ratios. Those proposals are not well-founded, are not consistent with the FCC's TELRIC pricing rules, and should be rejected.

AT&T proposes sky-high DIP and DOP ratios of about 95%. AT&T Ex. 3.0 (Turner Direct) at 60. To its credit, AT&T does not attempt to assert that an efficient, forward-looking network would actually be operated at those DIP and DOP levels. Rather, AT&T proposes to "adjust" SBC Illinois' DIP and DOP based on (faulty) assumptions about "the types of orders that are placed by CLECs." *Id.* In particular, AT&T asserts that at least 90% of CLEC orders are for facilities where there is an existing SBC Illinois customers (and thus facilities are already wired), and the remaining 10% of orders are for new service. *Id.* at 59. Thus, AT&T asserts, SBC Illinois' actual DIP and DOP should be applied only to 10% of CLEC orders, resulting in "weighted" DIP and DOP ratios of about 95%. *Id.* at 59-60. But AT&T's proposal makes no sense.

First, even if most CLEC orders are for migrations of an existing SBC Illinois customer, that is because most CLEC orders are for existing UNE-P migrations. The nonrecurring charges for existing UNE-P migrations, however, are covered by different rate elements, which reflect the fact that physical provisioning is not required. *See* SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 23-24. The rate elements at issue here, on the other hand, are for new connects. *Id.*

Second, the data conclusively establish that AT&T's assumptions are wrong. Over the most recent three months, AT&T's new UNE-P service orders were not 10% of all of AT&T's UNE-P orders, but nearly **[**********]**. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 23. And of these new UNE-P orders, only **[**********]** had facilities connected all the way through (DIP and DOP). *Id.* In short, AT&T's proposal is not just contrary to common sense, but contrary to the actual hard data. That proposal, designed solely to artificially lower UNE prices without regard to SBC Illinois' TELRIC-compliant costs, thus must be rejected.

The Joint CLECs' proposed DIP and DOP (75%), while not as extreme as AT&T's, fares no better. *See* Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 94-103. The Joint CLECs' proposed 75% DIP rate is based solely on the twin propositions that (1) where IDLC is used, DIP is 100%, and (2) SBC Illinois' forward-looking network should contain more than 50% IDLC. *See id.* at 99-100. But, as explained above in the discussion of the LoopCAT recurring cost model, it would be inefficient to deploy such high levels of IDLC. *See* SBC Ill. Ex. 8.1 (White Rebuttal) at 51-58. Rather, in light of the numerous economic and practical constraints on the use of IDLC, the relative weighting assumed by SBC Illinois constitutes the most efficient deployment of currently available technology. *See* SBC Ill. Ex. 8.2 (White Surrebuttal) at 26-27.

With respect to DOP, the Joint CLECs merely assert that SBC Illinois has "fail[ed] to adjust for all the inefficiently deployed and stranded pairs in SBC's network." *Id.* at 101. But that makes no sense. As the Joint CLECs state, the goal is to determine "how often it is unnecessary to dispatch a technician . . . because there are facilities already cross-connected." *Id.* at 102. Thus, even if SBC Illinois' count did include "inefficiently deployed and standard pairs," that is irrelevant if the frequency with which these pairs are connected through in the outside plant environment (DOP'd) is no different than other loop pairs. And the Joint CLECs

provide no evidence to show that, even if such pairs were included, such inclusion had the effect of depressing SBC Illinois' DOP.

Finally, the Joint CLECs' proposal is fundamentally inconsistent with TELRIC. The Joint CLECs nakedly assert (without any real evidence, explanation, or data to back up their assertion) that their proposal is based on "an efficient network that has no more spare facilities than what is needed to serve total demand." *Id.* at 102. But, as explained in the fill factor discussion, the Joint CLECs' concept of a network designed without regard to future demand is not "efficient" at all, and would not be deployed by any rational, efficient carrier using currently available technology.

New EEL DOP. Several parties pointed out their direct testimony that SBC Illinois' new EEL provisioning cost study omitted the DOP-based WGOF for cross-connects. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 124-125, 138-140; AT&T Ex. 3.0 (Turner Direct) at 50; Staff Ex. 7.0 (Zolnierek Direct) at 31. SBC Illinois agrees that this WGOF should be set to match the identical loop-related tasks in the loop cost study, but the CLECs' suggestion to use 75% or 95% DOP is inconsistent with TELRIC and must be rejected. *See* SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 20.

Miscellaneous Occurrence Probabilities. AT&T asserts that the WGOF for the Loop Assignment Center ("LAC") should be replaced with the WGOF for the AMWLAC Code, because "LAC fallout for this process is specifically monitored for the AMWLAC." AT&T Ex. 3.0 (Turner Direct) at 37-38. However, the AMWLAC is not involved in provisioning EELs or unbundled loops, but handles UNE-P orders. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 8. Thus, the substitution proposed by AT&T should be made, but only for the UNE-P product. With respect to unbundled loops and EELs, the WGOF should continue to reflect the occurrence

probabilities experienced by the workgroups that are actually involved in the relevant provisioning activities, as originally proposed by SBC Illinois. *Id.* at 8-9.

Finally, AT&T asserts that the WGOFs for the HPC and SSC in the unbundled loop study should assume that 50% of CLEC orders for DS1 and DS3 loops are for migrating loops from working SBC Illinois service to CLEC service. AT&T Ex. 3.0 (Turner Direct) at 75. However, AT&T did not attempt to provide any data to support its speculation. Indeed, SBC Illinois explained that AT&T's speculation "is not consistent with the practices that CLECs currently follow." SBC Illinois Ex. 9.1 (Gomez-McKeon Rebuttal) at 34. Rather, CLECs generally use the SA2UNE process to order DS1 and DS3 loops, or order new DS1 or DS3 loops. *Id.* Thus, AT&T's proposed WGOF modification should be rejected.

4. Fall-out Rates

Fall-out rates are discussed above. For all the same reasons that the Commission should reject the CLECs' and Staff's proposal to use artificially low fall-out factors that do not reflect any currently available telecommunications technologies in SBC Illinois' service order nonrecurring cost studies, the Commission should also reject their use in the provisioning cost studies.

5. Disaggregation of Connect and Disconnect Charges

SBC Illinois proposes to continue recovering its nonrecurring installation costs and disconnect costs via a single nonrecurring charge that is applied when a CLEC orders a UNE. SBC Illinois' nonrecurring cost studies separately identify and estimate SBC Illinois' nonrecurring installation costs and its nonrecurring disconnection costs. Disconnection costs are developed upon the assumption that disconnection activities will occur, on average, two years after installation, and are based on labor rates that have been inflated two years beyond the labor rates used to develop installation costs. In order to combine installation and disconnection costs

into a single nonrecurring charge, SBC Illinois first brought the disconnection costs to present value, using its proposed cost of money. *See* SBC Ill. Ex. 5.0 (Currie Direct) at 9-10.

The CLECs assert that SBC Illinois should be required to "disaggregate" its installation and disconnection costs, and establish separate nonrecurring charges for each. *See* AT&T Ex. 3.0 (Turner Direct) at 30; Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 90-91. However, requiring SBC Illinois to establish and apply separate charges for installation and disconnection activities may leave SBC Illinois unable to recover its TELRIC-compliant nonrecurring costs associated with disconnection activities. Thus, the CLECs' proposal should be rejected.

Recovering reasonable, TELRIC-compliant costs of disconnection via separate nonrecurring disconnection charges is a problematic proposition, because when a CLEC disconnects service it may no longer have a relationship with SBC Illinois. *See* SBC Ill. Ex. 3.1 (Silver Rebuttal) at 3. Combining installation and disconnection costs into a single, up-front nonrecurring charge, as SBC Illinois has consistently done for years, is a reasonable method to ensure that SBC Illinois has the opportunity to recover its nonrecurring disconnection costs. *See id*.

<u>Disconnection Cost Life Assumption</u>. In developing its nonrecurring costs associated with disconnection activities, SBC Illinois assumed that, on average, UNEs will be disconnected two years after they are provisioned. In its direct testimony, Staff asserted that "[i]f [SBC Illinois] cannot provide credible support for its 2 year location life assumption," Staff recommends that the average location life of SBC Illinois' comparable end-user offerings be used instead. Staff Ex. 7.0 (Zolnierek Direct) at 10. In the absence of such support, Staff randomly proposed a four-year period, with no attempt to support or even explain that assumption. Staff Ex. 6.0 (Hanson Direct) at 32.

In response, SBC Illinois provided support and specific data for its proposed 2-year location life. The data demonstrate that SBC Illinois' 2-year life is already significantly overstated. In particular, UNE-L and UNE-P data from a nearly three and one-half year period show that the average life of a circuit before disconnection is only 14 to 15 months – not the 24 months that SBC Illinois has assumed. SBC Ill. Ex. 3.1 (Silver Rebuttal) at 4-5 & Sch. MDS-R1.

Finally, if the Commission does conclude that SBC Illinois should be required to develop and apply separate installation and disconnection nonrecurring charges, SBC Illinois requests that the Commission adopt SBC Illinois' proposal for the implementation of such a requirement. SBC Ill. Ex. 3.1 (Silver Rebuttal) at 12-13 & Sch. MDS-R3, -R4, and -R5. The record demonstrates that SBC Illinois would be unable to complete the implementation of the systems changes necessary to implement a disaggregation requirement until late in the first quarter of 2005. *Id.* at 3-4. In particular, a number of steps are required to implement such a requirement, including requesting and receiving a new USOC from Telcordia, modifying the service order to accept the new USOC, testing compatibility and proper flow, and finally adding the new USOC to the next systems release. *Id.* If the Commission were to adopt a disaggregation requirement yet refuse SBC Illinois sufficient time to implement that requirement, then SBC Illinois would unfairly be denied the opportunity to recover its costs for disconnection until the new systems were in place. *Id.*

6. Other Issues (Including Rate Design)

Segregation of Loop and New UNE-P Line Connection Charges. In their direct testimony, the CLECs asserted that SBC Illinois should segregate its nonrecurring loop and new UNE-P line connection charges. Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 148-150;

AT&T Ex. 3.0 (Turner Direct) at 54-56. SBC Illinois concurs with this proposal. SBC Ill. Ex. 3.1 (Silver Rebuttal) at 11-12.

First and Additional Loop Provisioning Costs. AT&T asserts that SBC Illinois should differentiate between the first and additional NRCs for loop provisioning, instead of using a weighting of the two. AT&T Ex. 3.0 (Turner Direct) at 56-57. However, SBC Illinois' rate structure historically has not differentiated between these NRCs and its systems are not set up to make such a differentiation. SBC Ill. Ex. 3.1 (Silver Rebuttal) at 12. Implementing such disaggregation would require complex changes to SBC Illinois' operational and billing systems. SBC Ill. Ex. 3.2 (Silver Rebuttal) at 9. AT&T had failed to demonstrate any compelling reason to require such disaggregation, and its proposal to needlessly burden SBC Illinois should be rejected.

AT&T's Proposal to Establish New Dedicated Transport Nonrecurring Charges. As the Commission is well aware, the cost filing at issue in this case is a scaled-down version of a larger cost filing SBC Illinois originally planned to submit. In response to concerns expressed by Staff, however, SBC Illinois ultimately submitted a much more narrow cost filing, omitting, among other things, proposed new rates for unbundled dedicated transport ("UDT"). *See* SBC Ill. Ex. 3.2 (Silver Surrebuttal) at 7-8. AT&T now proposes that the Commission retroactively expand the scope of the docket and establish new stand-alone UDT nonrecurring charges based on the dedicated transport components of SBC Illinois' nonrecurring EEL cost studies. AT&T Ex. 3.0 (Turner Direct) at 24-27, 31-35. Putting aside the due process problems inherent in AT&T's proposal, AT&T's proposed UDT nonrecurring charges flatly violate TELRIC.

The record in this proceeding conclusively demonstrates that the NRCs in the EEL nonrecurring cost studies are specific to the costs of providing the various components of an EEL

as a combination. These same costs are not necessarily TELRIC-compliant, however, when applied to stand-alone UNEs. In other words, nonrecurring provisioning costs are different when providing a combination than when providing the separate elements on a stand-alone basis. SBC Ill. Ex. 3.1 (Silver Rebuttal) at 5-6, SBC Ill. Ex. 5.1 (Currie Rebuttal) at 44-45; SBC Ill. Ex. 5.2 (Currie Surrebuttal) at 24-25.

If the Commission agrees with AT&T's theory that nonrecurring charges should not differ for a combination and for its stand-alone components, and that establishing combination-specific NRCs is an inappropriate attempt to "establish [] new service-specific UNEs" (AT&T Ex. 3.0 (Turner Direct) at 26), then the Commission should simply disallow all EEL and UNE-P-specific NRCs and order SBC Illinois to add all the relevant stand-alone network element NRCs to produce NRCs for combinations of UNEs. In no event, however, should the Commission penalize SBC Illinois for developing nonrecurring costs studies that recognize the cost efficiencies associated with provisioning UNE combinations, by arbitrarily pretending that all the same efficiencies are present when the component UNEs are ordered on a stand-alone basis.

D. Switch Port And Features Nonrecurring Cost Studies

SBC Illinois presented four switch-related nonrecurring cost studies: (1) Combination Unbundled Local Switching-Ports, which identifies the nonrecurring costs associated with provisioning various stand-alone and UNE-P combination switch ports, (2) Unbundled Port Features, which identifies the nonrecurring costs associated with adding or changing a feature on various port types, (3) Unbundled Centrex System Features, which identifies the nonrecurring costs of establishing a Centrex block, changing or rearranging Centrex features, and activating Centrex features, and (4) Unbundled Custom Routing, which identifies the nonrecurring costs of establishing custom routing. *See* SBC Ill. Ex. 7.0 (Barch Direct) at 64, 69, 70-71.

1. Identification of Tasks

As with its other nonrecurring cost studies, SBC Illinois relied on the experts that perform the relevant activities on a daily basis to identify the tasks necessary to provision the various switch-related UNE orders covered by these four nonrecurring cost studies. *See* SBC Ill. Ex. 7.0 (Barch Direct) at 64-65, 69. It appears that no party has disputed SBC Illinois' identification of the appropriate forward-looking tasks.

2. Activity Times

SBC Illinois presented detailed activity times, provided by the experts that perform the relevant tasks, in support of its switch-related nonrecurring cost studies. *See id.* at 64. AT&T has proposed several adjustment to those activity times, but, as explained below, AT&T's proposals rest on speculation and blatant disregard of the FCC's TELRIC pricing rules.

Switch Translation Provisioning Times. The record establishes that certain switch-related provisioning activities (*i.e.*, performing switch translations) take different times depending on the make of the switch (*i.e.*, Nortel, Lucent, or Siemens). AT&T, however, proposes to use a single time for all switches (the shortest time, identified for Nortel switches) throughout SBC Illinois' nonrecurring cost studies, on the theory that "[n]o such disparity would exist in a forward-looking, efficient environment; indeed, no efficient competitor would allow it to exist." AT&T Ex. 3.0 (Turner Direct) at 131. *See id.* at 14-15, 21, 23. AT&T is wrong, and its proposed modifications violate the FCC's TELRIC pricing rules.

First, AT&T's speculation that "there is no basis in the long run to assume that there would be material differences between the Lucent and Nortel switches from a provisioning standpoint" (AT&T Ex. 3.1 (Turner Rebuttal) at 13), even if accurate, is simply irrelevant. The FCC's rules *require* that costs be based on "currently available" technology. 47 C.F.R. § 505(b)(1). Even if AT&T were correct that in the long run switch vendors will re-design their

switches to have equal provisioning times, AT&T does not dispute that that is not the case today. In other words, "currently available" switches undoubtedly have the different provisioning times identified by SBC Illinois, and thus those different provisioning times are appropriately reflected in the nonrecurring cost studies. *See* SBC Ill. Ex. 18.0 (Cunningham Rebuttal) at 3-4; SBC Ill. Ex. 7.1 (Barch Rebuttal) at 74; SBC Ill. Ex. 18.1 (Cunningham Surrebuttal) at 1-2; SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 38.

Second, AT&T's speculation that in the long run a switch vendor must design its switches to have the same provisioning times as other switches because "otherwise its switches would not be competitive" (AT&T Ex. 3.0 (Turner Direct) at 15) is simply nonsense. Competitive products routinely have varying "provisioning"-like characteristics, and will continue to do so in the future. For instance, changing the oil on some cars is a simple matter of removing an easily accessible plug. Changing the oil on other cars, however, requires the removal of a guard secured with several bolts and a bit of contortion to actually reach and remove the oil plug. The automobile market has been hotly competitive for nearly a century, yet there has been no "standardization" of the process or time required to change the oil across all vehicles. In short, AT&T's speculation about what switches will look like in the future is simply that, speculation.

Trunk Implementation Activity Times. AT&T proposes reducing a number of activity times required to install initial and add subsequent DID trunks and PRI channels. *See* AT&T Ex. 3.0 (Turner Direct) at 17, 20-21; AT&T Ex. 3.1 (Turner Rebuttal) at 10. But AT&T offers no support for its proposed adjustments. Rather, Mr. Turner criticizes SBC Illinois for assuming the use of the average technician rather than "fully trained technicians." *Id.*

Nothing in TELRIC requires the assumption of "fully trained technicians." Indeed, such an assumption is inconsistent with TELRIC. In a forward-looking environment, and no matter what technology is used, SBC Illinois, like every large business, will continue to have employees and technicians with a mix of skills, training, aptitude, and experience. *See* SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 37. AT&T witness Turner agreed. Tr. 1567 (Turner). Moreover, as Mr. Turner himself noted, a telecommunication workforce will include experienced workers, as well as those receiving "on the job" training. Tr. 1565-66 (Turner). Mr. Turner estimated that it may take as long as nine months to fully train a technician. Tr. 1588 (Turner). In short, in the "TELRIC" environment, average task times will continue to be those experienced by the "average" technician. *See id.* Joint CLEC witness Dr. Ankum agrees with SBC Illinois's position. Tr. 1721-22 (Ankum) (agreeing that TELRIC studies should assume work is performed by technicians of average efficiency and experience).

Log-in Times. AT&T proposes to eliminate numerous log-in and retrieve order activity times, on the theory that "personnel will already be logged into their systems." AT&T Ex. 3.0 (Turner Direct) at 130. AT&T's speculation is contrary to the record. SBC Illinois' network operations expert, who has served in various switch technician support capacities and currently has support responsibilities for all types of switches in the SBC Midwest region, explained that switch translation personnel perform a high volume of work each day, for various types of customers, and thus "multiple databases and/or operational systems must be accessed to either pull the work, research (prepare for) the activity, perform the function, and, most importantly, test the work performed." SBC Ill. Ex. 18.0 (Cunningham Rebuttal) at 5. "Each of these computer systems contain a very high level of security," and "most critical systems log users off after several minutes of inactivity." *Id.* at 6-7. *See also* SBC Ill. Ex. 19.0 (Wiesle Rebuttal) at 3

("The systems necessary for provisioning Centrex system features, local switching port, and unbundled port features contain timeout features that do not allow for a technician to continually be logged on an inactive state."). Thus, personnel are not constantly logged on to every system necessary to perform various switch-related work, but must log on to the necessary systems.

3. Occurrence Probabilities

The CLECs exhibit some of their worst abuses of the TELRIC methodology when it comes to the occurrence probabilities and WGOFs for SBC Illinois' switch-related nonrecurring cost studies. In particular, the Joint CLECs attempt to apply their 2% fall-out factor in a random, across-the-board manner, even to activities for which the record conclusively demonstrates that automatic electronic provisioning is simply not feasible using any currently available technology.

"Fall-out" is not necessarily the same as a probability occurrence or WGOF. That is, fall-out reflects the frequency that an order that is normally processed by an automated system "falls out" and must be manually processed. A probability of occurrence, on the other hand, measures the frequency that a particular activity must be performed when manual processing is necessary. *See* SBC Ill. Ex. 7.1 (Barch Rebuttal) at 70. The Joint CLECs, however, destroy this distinction, replacing the WGOFs of many provisioning activities with their proposed 2% fall-out factor, with the goal of reducing most switch-related NRCs *98 to 100 percent*. But some provisioning activities must be done manually, because there is no electronic, automated method available.

For instance, with respect to the custom routing cost study, SBC Illinois' switch translation expert testified that there is "no conceivable way for a Line Class Code build (software translations which enable custom routing to be performed) to be done via mechanized process." SBC Ill. Ex. 18.0 (Cunningham Rebuttal) at 4. This is an entirely manual process, but the Joint CLECs assume (without any discussion or explanation) that it could be performed

completely electronically 98% of the time. That assumption is utterly unsupported, and must be rejected.

To use the Joint CLECs' orbitz.com example, essentially what the Joint CLECs have done is, after asserting that plane tickets can be purchased electronically without any manual processes 98% of the time, applied that same occurrence probability to all downstream functions. That is, under the Joint CLECs' approach, one would assume that manual labor is required only 2% of the time not only in ticket purchasing, but in performing air traffic control and flying the plane as well.

Finally, in addition to randomly lowering particular WGOF and fall-out percentages to 2% in accordance with AT&T's "2%" mantra, without any discussion of the particular activities or functions at issue, AT&T asserts that the WGOF for Centrex feature activations should not be 100% because some features "can be provisioned electronically." AT&T Ex. 3.0 (Turner Direct) at 11. However, the record establishes that "Centrex common block features . . . are not an inherent part of the line provisioning process in that the datafill changes needed to add the feature must be performed manually in the core centrex translations in the switch." SBC Ill. Ex. 18.0 (Cunningham Rebuttal) at 2. In other words, "Centrex common block features . . . must be provisioned by network translations personnel." SBC Ill. Ex. 18.1 (Cunningham Surrebuttal) at 3. Thus, AT&T's proposal to reduce the Centrex feature activation WGOF should be rejected.

4. Fall-out Rates

The CLECs' and Staff's proposal to replace the specific fall-out rates that SBC Illinois is able to achieve for the various UNE processing and provisioning activities with an across-the-board 2% fall-out rate is addressed above.

E. Miscellaneous.

1. Special Access to UNE Conversion Nonrecurring Cost Study

SBC Illinois' special access to UNE conversion nonrecurring cost study identifies the nonrecurring costs SBC Illinois incurs when CLECs request to convert existing special access arrangements to a combination of UNEs. *See* SBC Ill. Ex. 6.0 (Cass Direct) at 28-33. The CLECs' primary objection to this cost study concerned costs associated with "re-tagging" converted circuits in the field, which AT&T estimated accounted for 85% of the costs identified in this cost study. AT&T Ex. 3.0 (Turner Direct) at 78. The CLECs proposed that costs for re-tagging should be substantially reduced (*id.* at 81-82) or even eliminated (Joint CLEC Ex. 1.0 (Ankum-Morrison Direct) at 157). SBC Illinois subsequently reevaluated its re-tagging policies, and determined that it would not tag conversions where there is no change to the design of the existing loop. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 35. Thus, SBC Illinois has removed the work activities and costs associated with re-tagging from this cost study. *Id.*

AT&T proposes further modifications to the special access to UNE conversion nonrecurring cost study, but these modifications should be rejected. In particular, AT&T suggests that the conversion process involves "administrative functions" related to billing only, and asserts that some functions should be "eligible for flow-through." AT&T Ex. 3.0 (Turner Direct) at 77, 82-83. Thus, AT&T proposes that the WGOF for one work group be reduced from 100% to 10%. But the conversion process requires manual activities, and will continue to in the forward-looking network.

In particular, to provision a conversion order, two separate service orders are used, one to disconnect the existing special access circuit ID, and one to add the UNE circuit ID. The provisioning groups involved must ensure that the information across the two orders is identical, to allow error-free completion of the conversion and to ensure that the circuit inventories in the

databases are accurate. SBC Ill. Ex. 9.2 (Gomez-McKeon Surrebuttal) at 2. There is currently no way to complete these tasks mechanically, nor will there be on a forward-looking basis. *Id.* at 2-3.

Moreover, SBC Illinois is unaware of any system available today that would cost-effectively perform these functions automatically, and AT&T is unable to point to any. SBC Ill. Ex. 9.1 (Gomez-McKeon Rebuttal) at 36. And even if it were theoretically possible to design new electronic systems to perform these functions automatically, that does not mean that it would be efficient to do so. As SBC Illinois' witness testified, "[a]ny modification to existing systems or purchase of new systems would require cost justification and given the low volume of orders to date, it is not economical to perform these electronically." *Id.* at 36; Tr. 1533-34 (Turner). Indeed, special access to UNE conversions represent only **[**********]** of overall order activity. SBC Ill. Ex. 10.2 (Christensen Surrebuttal) at 6.

Finally, AT&T similarly proposes to reduce the work times required for the HPC to perform conversion activities (which are generally electronic, and thus have a probability occurrence of only 10%). AT&T Ex. 3.0 (Turner Direct) at 80-81. But AT&T's proposed modification is entirely unsupported. Rather than review the activities required to perform a special access to UNE conversion (the process at issue in this cost study), AT&T, without explanation, asserts that the Commission should instead just look at the loop provisioning cost study and see which HPC activities in that cost study sound like "administrative" as opposed to "provisioning" activities. *Id.* But that is not how cost studies work. The conversion cost study was developed to identify those tasks and costs that are specific to conversions. AT&T's suggestion that the Commission should simply determine which activities might appear to

overlap between the cost studies, and then ignore whatever additional activities and costs are involved in the conversion process, is unreasonable and not TELRIC-compliant.

2. ULS Billing Establishment

The ULS Billing Establishment cost study identifies the nonrecurring costs that SBC Illinois incurs to establish a new ULS customer in SBC Midwest's billing systems. *See* SBC Ill. Ex. 5.0 (Currie Direct) at 49-50. No party took issue with any aspect of this cost study (except to modify the inflation factor and labor rates, issues addressed elsewhere), and thus the Commission should approve this cost study as filed. *See* AT&T Ex. 3.0 (Turner Direct) at 9.

F. Labor Rates

Labor rates reflect the direct costs of labor expressed on a per productive hour basis. In general, labor rates are used to determine the cost of performing specific activities by multiplying the labor rate of the employee performing an activity by the time it takes to complete that activity. To estimate its forward-looking labor rates, SBC Illinois first identified the basic hourly wage or salary of each type of employee, and adjusted that hourly wage or salary for paid break times, paid absences, and special payments (*e.g.*, paid overtime) to develop a current wage or salary per productive hour of work. "Loading factors" were then applied to that hourly wage to account for social security, Medicare, benefits and other employment-related expenses. SBC Ill. Ex. 7.0 (Barch Direct) at 53-58. These actual labor costs are a reasonable estimate of its efficient, forward-looking labor costs.

AT&T contended that SBC Illinois' labor rates are too high and do not reflect the forward-looking environment required by TELRIC. AT&T Ex. 4.0 (Flappan Direct). AT&T proposed adjustments to three different components of SBC Illinois' labor rates: (1) base wages and salaries; (2) benefits; and (3) other employment-related expenses. None of AT&T's proposed adjustments have merit and they should all be rejected.

First, AT&T's labor cost witness, Mr. Flappan, is operating under a misapprehension as to the FCC's TELRIC requirements. Mr. Flappan's view is that TELRIC requires a "scorched employee" analysis, akin to the "scorched node" approach used in determining network costs. Tr. 1893-94 (Flappan). No such requirement exists. Although TELRIC requires a long-run view in which inputs are considered variable, that simply requires an analysis of what those costs are likely to be in the future. For example, if SBC Illinois is a union company (as it is) and its union contracts are expected to continue over the foreseeable future (as they are), then the level of wages and benefits which SBC Illinois is contractually obligated to provide to its nonmanagement personnel should be the basis for determining nonmanagement labor costs. Similarly, if SBC Illinois' current mix of management employees, with varying salary and benefit costs, will continue over the foreseeable future, then that level of salaries and benefits is the right basis for determining management labor costs. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 52.

Although AT&T did not propose any adjustments to base wages and salaries[70], Mr. Flappan did recommend modifications to the 40-hour work week (management) and paid break (nonmanagement) assumptions in SBC Illinois' studies. AT&T Ex. 4.0 (Flappan Direct) at 13-14, 26-28. No adjustment is needed to account for the fact that management employees typically work more than 40 hours a week, because SBC Illinois' calculations *already* assume that such employees work more than 44 hours per week. AT&T's proposed adjustment (to assume 44.2 hours per week) would thus double-count those additional hours. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 55-56.

[70] AT&T complains generally that SBC Illinois' base wages and salaries appear "high," but concedes that it has no basis on which to make an adjustment. AT&T Ex. 4.0 (Flappan Direct) at 12-13. SBC Illinois notes that its wage rates for two of the most widely used labor rates in its TELRIC studies are *less* than what AT&T pays its union employees under a similar contract. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 56-57.

AT&T's assertion that nonmanagement employees should not be offered two 15-minute paid breaks per 8-hour day has no basis in reasonable labor policy or fact. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 59-60. AT&T's own collective bargaining agreement calls for the same paid breaks, and most large companies and most collective bargaining agreements allow for break time. There is no reason to believe that, in a forward-looking competitive environment, companies would eliminate paid breaks. Moreover, Mr. Flappan himself provided for both nonmanagement and management break time in his alternative labor "fill factor" adjustment. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 60-61. The concept of "fill factors" in the context of labor rates is more than a little odd; fill factors are a *network* concept used to address spare capacity. AT&T suggests that the net effect of its approach is similar to SBC Illinois' – however, if it produces essentially the same result, SBC Illinois is at a loss to understand why the Commission should require the Company to substitute AT&T's approach for its own methodology. SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 24-25. Since AT&T has provided no substantial evidence in support of what is a demonstrably "quirky" approach to break time, it should be rejected.

AT&T also excluded known wage increases for nonmanagement personal. AT&T Ex. 4.0 (Flappan Direct) at 35-36. This adjustment violates the forward-looking principles of TELRIC. Wages generally increase each year in order to account for inflation and to prevent the "real" inflation-adjusted wage rate from declining each year. Thus, wage increases must be taken into account in order to make current wages forward-looking. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 58-59. SBC Illinois' collective bargaining agreements contain specific scheduled wage increases, and those increases are the best evidence of forward-looking TELRIC wage costs. AT&T's assertion that wage inflation should not be accounted for because it is somehow offset by productivity gains is without merit. As explained *infra* with respect to the CLECs'

"productivity factor" proposal, SBC Illinois' cost studies already account for productivity gains. Even if they did not, the CLECs' proposal to add a "productivity factor" to the development of the annual cost factors *and* account for productivity gains by excluding wage inflation in the development of the wage rate is clearly double-counting. *Id.* at 54-55.

The most significant disputed issue connected with labor rates was the costs of benefits SBC Illinois provides to its employees (*e.g.*, health care, pension and savings plans). AT&T contended that SBC Illinois' current benefits levels are too high, and are not consistent with a competitive market. In fact, SBC regularly commissions outside experts to evaluate its benefits policies and compare them to benefits offered by comparable companies in its own and other industries. For example, a 2001 Benefit Index study conducted by Hewitt Associates compared the value of the benefits offered to SBC's employees to similar programs offered by 19 other large corporations, including AT&T. Hewitt concluded that the benefits offered by SBC were well within the range of benefits offered by other major corporations. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 63-64. This conclusion was further bolstered by a more recent Hewitt study that compared benefits costs for SBC's management and nonmanagement employees to benefits costs for management employees at 20 large companies. AT&T Ex. 4.2 (Flappan Surrebuttal) at 2-3. SBC's management benefit costs are *lower* than those of the comparator companies, virtually all of which operate in competitive industries.[71] Tr. 1896-97 (Flappan).

SBC Illinois further noted that its nonmanagement benefit levels are the product of years of collective bargaining. It is contractually obligated to provide benefits at this level to its union employees, and will be obligated to do so in the foreseeable future. Ronald Kastner, the

[71] Although SBC Midwest's nonmanagement costs are somewhat higher, there is no comparable data for the 20 comparator companies' nonmanagement employees. Tr. 1901 (Flappan). In any event, the nonmanagement benefit costs actually included in the TELRIC standings are *lower* than the comparator companies' management benefits cost. SBC Ill. Flappan Cross Ex. 57P.

President and Business Manager of IBEW Local 21, testified that wage and benefits issues are critically important to both the union and management and that neither side will accept an outcome that is out of line with the marketplace. IBEW Local 21 Ex. 1.0 (Kastner Rebuttal) at 6-7. The Commission Staff agreed that labor costs should reflect SBC Illinois' union obligations, and not those of some fictionalized company with a fictionalized employee base. Staff Ex. 35.0 (Hanson Surrebuttal).

AT&T relied on data compiled by the Bureau of Labor Statistic ("BLS") to develop its proposed benefits adjustment. AT&T Ex. 4.0 (Flappan Direct) at 15-19. However, BLS data do not provide a reasonable measure of SBC Illinois' forward-looking benefits costs. While the BLS collects data from thousands of companies in various broad categories, AT&T made no attempt to show that those general categories are comparable to SBC Illinois or that the self-reported data collected by the BLS is inclusive of all benefits-related costs included in SBC Illinois's studies or even that the companies included in the communications industries category (cable, radio, broadcasting, and satellite) – of various nationalities and of various sizes (from a handful of employees up) – are comparable to SBC Illinois. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 61-63, 65-66. Because of confidentiality agreements with BLS, no party can verify what companies were included in the BLS sample. SBC, for example, does *not* provide data to the BLS. SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 26. Furthermore, as Mr. Kastner demonstrated, union companies typically provide higher levels of benefits than non-union companies. IBEW Local 21 Ex. 1.0 (Kastner Rebuttal) at 8-9. It is impossible to determine what portion of the BLS data relied on by AT&T (if any) reflects companies subject to collective bargaining agreements. In short, the BLS data is a "black box" from which no meaningful conclusions can be drawn and AT&T's proposed adjustment to SBC Illinois benefits costs should be rejected.

Finally, AT&T's contention that SBC Illinois' treatment of "Other Expenses" is not TELRIC-compliant should be rejected as well. AT&T Ex. 4.0 (Flappan Direct) at 24-26. This cost study component represents reasonable forward-looking costs that are not accounted for in any other component of SBC Illinois' labor rates, including business travel expenses, jury duty expense reimbursement, meal expense reimbursement, and other similar expenses. These expenses that would be incurred in a forward-looking environment and should be included in SBC Illinois' studies. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 66-67.

V. Shared And Common Factors.

SBC Illinois proposes a shared and common cost factor of **[**********]**, which is composed of a shared cost factor of **[**********]** and a common cost factor of **[********** ***]**. SBC Ill. Ex. 7.2 (Barch Surrebuttal) Sch. DJB-S01. Shared and common costs are costs that are not economically directly attributable to any single product or service, but are instead "shared" by a subset of SBC Illinois's services or network elements ("shared costs") or are "common" to the provision of all services and products ("common costs"). For example, the product management costs that SBC Illinois incurs in providing wholesale products and services are not economically directly attributable to any particular wholesale product, but are shared across all wholesale products and services. Overhead costs, like human resources and executive costs, are common to all services and products, both retail and wholesale. SBC Ill. Ex. 7.0 (Barch Direct) at 7-8. The shared and common cost factor reflects the relationship between shared and common costs, on one hand, and direct costs, on the other hand. The factor is then applied as a fixed percentage mark-up to directly attributable TELRIC costs. Both the FCC and the Commission have approved this approach. *See First Report and Order*, ¶ 696; *1998 TELRIC Order* at 53-54.

A. Issues Common To Shared And Common Factors Development

1. Use of New Methodology Generally

The methodology used by SBC Illinois to develop its shared and common cost factors differs in some respects from the methodology approved by the Commission in the 1998 TELRIC proceeding. In this case, SBC Illinois relied on the then most recently available actual data to determine the shared and common costs numerators (*i.e.*, 2001 ARMIS data, reported by all ILECs to the FCC), and adjusted them to make them more forward-looking. SBC Ill. Ex. 7.0 (Barch Direct) at 8-13. Although this approach differs somewhat from the budget-based analysis used in the 1998 proceeding, it is conceptually similar; in fact, SBC Illinois would have used historical data had it been available at that time. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 44. The denominators were developed by restating book costs on a current cost basis and then adjusting the resulting investments and expenses to forward-looking TELRIC values. SBC Ill. Ex. 7.0 (Barch Direct) at 13-15.[72]

Although Staff questioned the need to replace SBC Illinois' previous methodology, the approach used in this proceeding is an improvement over the past. Staff Ex. 8.0 (Patrick Direct) at 14. Use of ARMIS data minimizes dependency on non-public information and permits the Commission Staff and other interested parties to audit SBC Illinois' analyses more readily. SBC Ill. Ex. 7.0 (Barch Direct) at 9. In addition, the shared and common cost methodology used in the 1998 TELRIC proceeding was prohibitively complex. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 5-

[72] Specifically, SBC Illinois used the 2001 data for all plant-specific investment and expense accounts, including its switching, central office transmission, and cable and wire facilities accounts. A "current cost to booked cost" ratio ("CC:BC ratio") was then applied to the investment accounts to bring the historical booked investment amounts to current replacement cost. Forward-looking adjustments were then made to link these costs to costs developed in SBC Illinois' TELRIC studies. First, the switching and cable and wire facilities investment costs were adjusted to match the forward-looking total TELRIC direct costs for switching and loops (as developed in its TELRIC cost studies for switching and loops). Then SBC Illinois adjusted the switching and cable and wire facilities expense costs in an amount proportional to the investment cost adjustment. Transport costs constitute a small overall component of direct costs and were adjusted only to current replacement cost levels.

6. The updated methodology proposed in this proceeding produces factors that can be straightforwardly applied to TELRIC costs to produce an overall rate.

2. Use Of Regulated And Unregulated Data

SBC Illinois calculated its shared and common factors using total company ARMIS data (*i.e.*, data that includes both regulated and unregulated costs). That is because SBC Illinois' operates a single network and its total network costs cannot be disaggregated in an economically rational manner between regulated and unregulated services. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 7-8. The CLECs contended that SBC Illinois should be required to disaggregate this data based on the FCC's Part 32 and Part 64 accounting rules to remove all costs associated with unregulated activities. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 44-50, 95, 111-12, 139, 150-52.

The CLECs' position is not well-founded. The FCC's Part 64 rules require SBC Illinois to use accounting allocations to create separate sub-accounts for regulated and non-regulated services for ratemaking purposes and to guard against cross-subsidy of unregulated services by regulated services. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 49-50. These accounting allocations are not appropriate for TELRIC pricing purposes. The FCC's TELRIC pricing rules, including its shared and common cost rules, are based on economic cost-causation principles, not on accounting classifications designed to achieve other objectives. In fact, the FCC's Part 64 methodology is biased in favor of assigning as many costs as possible to non-regulated services. As a result, the CLECs' approach would likely assign regulated costs to the non-regulated side of the business. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 7-8; SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 50-51; SBC Ill. Ex. 14.1 (W. Palmer Surrebuttal) at 38-39. SBC Illinois has consistently used total company data in developing its service cost factors and these factors have been routinely approved by the Commission. *Id.* at 51-52, 37-38.

In any event, SBC Illinois implemented a further adjustment to its shared and common factor development after the original filing was made in December of 2002 which largely eliminates this issue. All expenses associated with facilities owned by the customer, rather than SBC Illinois (*e.g.*, customer premises equipment and inside wire), were removed from the factor development, which had the effect of removing virtually all non-regulated expenses. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 9-10. With this adjustment, there is no need to adjust the factors further.[73]

3. Consistency Of Numerators And Denominators

The CLECs argued generally that there was a mismatch between SBC Illinois' shared and common cost numerators and denominators. That is, that while the denominators are forward-looking, the CLECs contended that the numerators were not, because they were based on 2001 ARMIS data. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 18-21, 94-95.

The CLECs' contention that the numerators are not forward-looking enough does not have merit. Nothing in the FCC's TELRIC rules or this Commission's past cost policies preclude the use of historical data where historical data provides a reasonable estimate of the costs SBC Illinois will incur on a forward-looking basis. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 44-45. In fact, the CLECs themselves have used ARMIS data in TELRIC studies. SBC Ill. Ex. 2.1 (Aron Rebuttal) at 14-17. Notably, the CLECs' criticisms are very general and they do not identify any specific costs (shared or common) that they believe would no longer be incurred, or would be incurred at a lower level, on a going-forward basis. In the 1998 TELRIC proceeding, this Commission rejected the same kind of generic and non-specific arguments that

[73] Even the CLECs concede that the impact of their original proposal was small, and it would be even smaller after the adjustment made by SBC Illinois. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Surrebuttal) at 6-7.

SBC Illinois' had not sufficiently reflected the efficiencies it might experience in a forward-looking environment, ruling as follows:

> AT&T/MCI provided insufficient evidence to justify an inference that Ameritech Illinois' calculation of shared and common costs did not already adequately reflect the least cost technology currently available. AT&T/MCI never explained how a cost efficiency review could have been conducted based on the data and time available. If there are factors which support the proposition that Ameritech Illinois has overstated its costs, then it would seem appropriate for AT&T/MCI to identify those factors and their purported effects with specificity, rather than simply raise a generic objection to the Andersen study and suggest that it is Ameritech Illinois' burden to somehow affirmatively prove every dollar of costs as efficiently incurred. *1998 TELRIC Order* at 48-49.

The Commission should do the same here.

4. Productivity And Efficiency

The CLECs complain generally that SBC Illinois' common and shared cost factors include an inflation factor, but do not reflect a productivity adjustment to reflect efficiencies on a forward-looking basis. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 68, 96. For reasons to be discussed in more detail *infra* in connection with the annual cost factors, productivity gains are already inherent in forward-looking studies and applying a productivity factor would double count these same gains. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 11-13. However, this issue need not be resolved in conjunction with the shared and common cost factors. The CLECs acknowledge that it makes no difference in this context, because the inflation factor impacts both the numerator and denominator of the factor proportionately, and, therefore, propose no adjustment.

B. Common Cost Factor

1. Development Of The Denominator

Based on their (incorrect) contention that SBC Illinois' common cost numerator is insufficiently forward-looking, they insist that the denominator should be restated on an

embedded, book cost basis. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fisher Direct) at 18-21, 94-95. The CLECs' proposed "cure" for this alleged problem is worse than the "disease." Calculating the shared and common factors based on an embedded cost denominator will *guarantee* that SBC Illinois does not recover its costs. That is because SBC Illinois' forward-looking TELRIC costs are substantially lower than its embedded costs. Compare SBC Ill. Ex. 7.2 (Barch Surrebuttal), Sch. DJB-S01 (line 23) with AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct), Attachment MS/WF-5, page 3 (line 24). This produces a mismatch between the way the factor is developed (*i.e.*, from historical data) and the way that it is *applied* (*i.e.*, to forward-looking data). To avoid either over-recovery or under-recovery of common and shared costs, the denominator *has* to reflect TELRIC costs to the extent practicable. SBC Ill. Ex. 7.0 (Barch Direct) at 15-17; SBC Ill. Ex. 7.1 (Barch Rebuttal) at 14-15; SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 42. That is why the Commission order in the 1998 TELRIC proceeding approved use of a forward-looking "extended TELRIC" denominator. SBC Ill. Ex. 14.0 (W. Palmer Rebuttal at 42). The Commission Staff fully agrees that a forward-looking denominator is required. Tr. 1964-65 (Chang). Therefore, the CLECs' embedded cost denominator should be rejected.

2. The 67XX Accounts (Including Retail Cost Adjustment)

The 67XX accounts comprise the bulk of the common costs allocated between wholesale and retail services through the common cost factor. SBC Ill. Ex. 7.0 (Bach Direct) at 10-11. As a general proposition, the 67XX Accounts are the classic "common overhead" accounts. They include the costs for senior executives at SBC (including the "President's desk", the most commonly cited example of a common cost), accounting and finance, human resources, payroll, shareholder relations, procurement, and similar functions. Part 32 of the FCC's rules requires that these costs be treated as overheads; consistent with these rules and economic principles, SBC treats these costs as "common" in studies that have been filed in numerous jurisdictions and

have been approved as TELRIC-compliant. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 18; SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 4. All of the functions booked to these accounts touch wholesale and retail services, in that they are attributable to the business as a whole. For this reason, they are appropriately treated as common costs and apportioned across all of the products and services offered by SBC Illinois (including UNEs).

The CLECs complained that SBC Illinois could have, and should have, allocated many of these costs more directly to retail services, thus producing a smaller numerator. Although they suggest that there are "literally dozens" of functions that support only retail services, their testimony contains only a handful of examples and, in fact, all of them support both retail and wholesale services. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 28-37. The CLECs' examples follow, along with an explanation of how they are *not* retail-only in nature:

> *Account 6722*: Account 6722, with Account 6721, includes the costs associated with managing SBC Illinois' interconnection arrangements with independent telephone companies (I-Co's) outside of SBC Illinois' service territory, so that each company's customers can originate calls to and receive calls from customers of the other. The CLECs are now part of that interconnected web of carriers and independent company relations personnel interface with both I-Cos *and* CLECs. For example, they coordinate trunking and routing arrangements with CLECs operating in I-Co territory and enter into appropriate compensation arrangements, just as if they were an I-Co. SBC Illinois' independent company relations personnel have, at times, also assisted CLECs operating in SBC Illinois' territory with arrangements that need to be put in place with the I-Cos and they typically participate in planning sessions where CLECs and I-Co's coordinate their facility requirements to ensure that SBC Illinois' network will operate properly together with the those networks.
>
> *Account 6722*: Account 6722 also includes costs associated with tariff development. Contrary to the CLECs' assertions, tariff development includes both retail *and* wholesale products. For example, the costs of SBC Illinois' regulatory personnel who are responsible for reviewing and filing UNE tariffs, interfacing with the ICC Staff to answer questions about these tariffs and providing docket support for wholesale tariffs that are suspended and/or investigated are booked to this account.
>
> *Accounts 6725 and 6728:* Accounts 6725 and 6728 include legal expenses. Contrary to the CLECs' assertions, SBC Illinois incurs legal expenses in

> connection with both its retail *and* wholesale products. Significant legal costs are booked to these accounts that directly result from the provision of UNEs. These costs include the legal group within the Industry Markets organization that negotiates interconnection agreements with CLECs, assists in resolving legal issues associated with the implementation of FCC and state commission orders impacting wholesale products, review wholesale tariffs for legal compliance and provides legal input into the resolution of disputes raised by CLECs.
>
> *Account 6728:* Account 6728 also includes costs associated with governmental and legislative activities. The CLECs object to the inclusion of these costs on the assumption that they include lobbying expenses. In fact, lobbying expenses are booked "below the line" in USOA series 7000 accounts. The legislative activities whose costs *are* booked to this account and which *are* in SBC Illinois' cost study include monitoring all legislation that is proposed in Springfield to determine whether SBC Illinois is impacted, including tax bills, bills that impact labor practices, environmental legislation and rights-of-way bills. This kind of legislation impacts the entire company, wholesale *and* retail. Other governmental relations activities include interfacing with the municipalities where SBC Illinois provides service, managing franchise agreements (where franchise agreements still exist), arranging for permits that allow SBC Illinois' construction crews to dig up the streets to install cable and so forth. These activities benefit all of SBC Illinois' customers, wholesale *and* retail. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 19-22.

In short, the CLECs' arguments that significant portions of the costs in the 67XX accounts benefit only retail services have no basis in fact. Furthermore, these costs are *not* being assigned disproportionately to the CLECs. Since the vast majority of the costs in the denominator of the common cost factor (*i.e.*, total direct costs) support retail services, use of SBC Illinois' factor approach necessarily assigns the vast majority of the common costs booked to the 67XX accounts to retail as well. *Id.* at 22; SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 45-46.

Since there is no basis for the CLECs' contention that the 67XX accounts need to be precisely allocated, there is no need to consider their proposal to use a "meat cleaver" to reduce common costs by 22%. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 39-44; SBC Ill. Ex. 14.0 (W. Palmer Rebuttal) at 46. However, their proposal suffers from serious methodological infirmities as well. *First*, the CLECs are mixing apples and oranges. The

wholesale avoided cost discount used by the CLECs for this adjustment was developed based on a bottoms-up analysis of the *retail operations costs* that SBC Illinois would avoid if it offered only wholesale services. The common costs in SBC Illinois' common cost factor do not include retail operations. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 22-23. Therefore, the Joint CLECs are effectively removing costs that were not there in the first place. *Second*, the absolute amount of the adjustment is extremely large. Given the small number of examples they provided of "problem" accounts (in their view) and the lack of merit in even those examples, the CLECs have not come close to making a case that there should be any adjustment at all, much less one of this magnitude. *Id.*

Finally, if "retail costs" are to be taken out of the numerator, then the retail portion of the direct costs would have be to removed from the denominator. Otherwise, there will be a *CLEC*-created mismatch between the numerator and the denominator. *Id.* at 23-24. Even the CLECs acknowledged the need for such an adjustment. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Surrebuttal) at 26-27. Their response to this issue, however, was patently insufficient: they removed only Customer Services expenses and none of the retail-related network investments and expenses in the denominator. SBC Ill. Ex. 7.2 (Bach Surrebuttal) at 8-10. In fact, if the direct costs in the denominator associated with retail services were fully removed, there would likely be no change in the common cost factor. *Id.* Accordingly, the CLECs' retail adjustment to common costs should be rejected out-of-hand.

3. Transition Benefit Obligation

Transition Benefit Obligation ("TBO") expenses are expenses that SBC Illinois incurs as a result of the issuance of Statement of Financial Accounting Standards ("SFAS") No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions," in December of 1990. SFAS 106 changed the rules regarding the accounting for post-retirement non-pension

benefits, such as health care and life insurance, provided to SBC retirees. Prior to 1991, when SFAS 106 became effective, postretirement benefits were accounted for on cash (*i.e.*, pay-as-you-go) basis. SBC Ill. Ex. 7.0 (Barch Direct) at 22; SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 6. For example, when an SBC retiree made a visit to a medical office, a bill for a doctor's services was submitted, SBC paid the bill and recorded the expense on its books. SFAS 106 changed that accounting practice by requiring the recognition of the expected cost of postretirement benefits for each employee on an accrual basis during the years that the employee provides service. *Id.*

As SFAS 106 recognized, the change from pay-as-you-go to accrual accounting gave rise to the Transitional Benefit Obligation, which represents the amount of postretirement benefits obligations that the Company would have accrued on its books as of the effective date of SFAS 106, if it had been operating under the accrual method all along, but which was never recognized as an expense because the Company was accounting for such benefits on a pay-as-you-go method. For regulatory reporting purposes, the FCC, in RAO 20[74], expressly required all carriers to recognize TBO by amortizing it as an expense over the average remaining service period of the active plan participants, rather than immediately recognizing the TBO as a one-time expense, in order to avoid distortions to earnings. The FCC's ruling explicitly directed local exchange carriers to recognize TBO costs as a forward-looking expense to be incurred over an eighteen year period. SBC Ill. Ex. 7.0 (Barch Direct) at 23; SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 5-6.

In accordance with SFAS 106 and the FCC's requirements, SBC Illinois has been recording a TBO liability and corresponding expense on its regulatory books of account each year since the adoption of SFAS 106. Specifically, each year SBC Illinois records a liability and

[74] FCC Responsible Accounting Officer Letter 20 (RAO 20), Released: May 4, 1992, ¶ 6, which provides amortization period guidance on *In the Matter of Southwestern Bell and GTE, Notification of Intent to Adopt Statement of Financial Accounting Standards 106, Employers' Accounting for Postretirement Benefits.*

corresponding expense equal to one-eighteenth (which is attributable to the average remaining service life of the active employees) of the previously unrecognized TBO liability. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 8. SBC Illinois will continue to do so for the remainder of the 18-year amortization period, which expires in 2008. *Id*. at 9.

Because the TBO expense will continue to be incurred each year through the year 2008, the expense is forward-looking and should be recognized in establishing UNE rates. The TBO is not attributable to any particular services or group of services for TELRIC ratemaking purposes and, therefore, should be considered common in nature. Accordingly, SBC Illinois has included the annual TBO expense as a common cost in its Shared and Common Factor. SBC Illinois made corresponding adjustments to remove TBO expenses from all accounts used in its ACF labor rate, and support asset development, thereby eliminating any double counting of such expense. SBC Ill. Ex. 7.0 (Barch Direct) at 24; SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 9; SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 8-9.

Staff and the Joint CLECs objected to including TBO expense on the grounds that the TBO is related to "past operations" and represents a cost that "will not be incurred in the future" and has "no cash flow implications." Staff Ex. 9.0 (Smith Direct) at 7; Staff Ex. 29.0 (Smith Rebuttal) at 2; Joint CLEC Ex. 2.1 (Starkey/Fischer Rebuttal) at 30. These objections are unwarranted. In fact, TBO is a form of deferred compensation expense that SBC Illinois incurs and will continue to incur to cover the post-retirement medical benefits that retirees receive. It is a continuing obligation that is owed to employees today that has been earned during their employment with SBC Illinois. The annual TBO amortization will continue to be recorded as an expense by SBC Illinois for years to come. Moreover, the employee benefit amounts represented by the TBO will have to be paid out as cash to relieve the postretirement liability in

the future. Accordingly, TBO expense can and should be recognized as a forward-looking cost. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 7; SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 6-8.

Furthermore, the annual TBO amortization represents the recognition of a liability for employee benefits that has not previously been recognized either for regulatory accounting purposes or ratemaking purposes. Accordingly, failure to include TBO expense in the shared and common factor would cause benefit costs incurred by SBC Illinois to go unrecognized (*i.e.*, unrecoverable), in violation of the FCC's required adoption of SFAS 106. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 7.

The Staff and Joint CLEC position on TBO expense is also directly contrary to precedent established in past Commission orders. For example, in SBC Illinois' first Alternative Regulation Order, Docket Nos. 92-0448/93-0239 (Consol.) at pp. 114-115 (Oct. 11, 1994), the Commission allowed the normal one year amortization of the TBO as a test year expense. This decision was supported by a Staff witness who testified that the TBO amortization is a normal operating expense which should be recognized in the year incurred. Other orders in which the Commission has expressly recognized the TBO amortization as a proper test year expense for ratemaking purposes include Central Illinois Public Service Company, Docket No. 91-0193 (March 18, 1992) and Illinois Power Company, Docket No. 93-0183 (April 6, 1994), both of which established rates on the basis of fully projected future test years. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 8; SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 5. The purpose of a test year is to develop expenses and revenues representative of the period in which the rates to be determined in the proceeding will be effective. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 5. Accordingly, although the cases cited above did not involve UNE rates, the decisions to allow

TBO costs as a test year expense represent a recognition by the Commission that TBO expense is, indeed, "forward-looking." *Id.*

More recently, the Indiana Commission recognized TBO expense as a "forward-looking" expense properly recoverable through the shared and common factor used to establish UNE rates for SBC Indiana.[75] In doing so, the Indiana Commission stated as follows:

> …the Commission is satisfied that this cost is a forward-looking cost associated with employee benefits that SBC Indiana will continue to incur in the immediate future. Contrary to the CLECs' assertion, the Commission finds that the TBO is not a one-time "write-off," but represents real costs associated with providing employee benefits on a forward-looking basis that have not previously been recognized. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 6.

4. Pension Settlement Gains

Under accounting rules, a company is required to accelerate recognition of deferred pension losses or gains and immediately recognize those losses or gains via its "pension settlement" reporting when certain triggering events occur. A pension settlement can occur when the employer settles a pension obligation through lump-sum cash payments, which effectively ends the company's obligation to pay future pension costs. When the amount of these lump-sum cash pension payments made by a pension plan in a given year exceeds a given threshold (established by the FASB), that triggers a requirement that the company accelerate the unamortized balance of any transition assets and immediately recognize the net gain or loss in its earnings. Such an occurrence is not directly related to the operation of the pension plan and is not in the ordinary course of business.

In calculating the shared and common factor, SBC Illinois removed from the 2001 data a pension settlement gain in the amount of **[**********]**. As Mr. Dominak explained, this was necessary because the pension settlement gains recognized in 2001 and the two previous

[75] *Indiana UNE Order* at 137.

years were abnormal and resulted from an anomalous confluence of events. In particular, the period of 1999-2001 was an unprecedented period of time, combining never before seen gains on pension fund assets with the departure of an abnormally large number of employees who requested lump sum payments of their pension benefits. This triggered the need to recognize the pension asset gains on an accelerated basis, which resulted in large pension settlement gains. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 13-14, 16-17.

It is highly unlikely that SBC Illinois will experience anything approaching this set of conditions in the foreseeable future. To the contrary, the SBC Illinois landscape going forward will be characterized by increasing pension expense. Thus, the SBC Illinois 2001 pension settlement gain is not forward-looking and should not be included in the UNE cost studies. In fact, SBC Illinois experienced *no* pension settlement gain in 2002 or 2003. Based upon the lower market returns of recent years, if events similar to those which triggered the pension settlement gain in 2001 occurred in 2003, SBC Illinois would have recognized pension settlement losses. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 17-18.

The Joint CLECs argued that an adjustment should be made to add back what they considered to be a normalized level of pension settlement gains in the amount of **[**********]**, based on the average level of pension gains recorded during the 14 year period from 1987 through 2001. The effect of this adjustment would be to reduce by that amount the level of pension expense reflected in SBC Illinois' common costs. The Joint CLECs adjustment, however, is heavily weighted by the extraordinary level of pension settlement gains experienced during the 1999-2001 period. For the reasons discussed, the gains experienced in those years were caused by an abnormal set of events that is unlikely to reoccur in the future. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 18.

Moreover, in contrast to pension costs, which are part of overall employee compensation and related directly to the ongoing operation of the business, pension gains have nothing to do with the Company's regular, ongoing business. The size and timing of pension settlement gains are largely reflective of the skill of the portfolio managers engaged to manage the pension plan and the insight of the pension plan sponsor in hiring the portfolio managers and establishing investment policies. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 19.

Accordingly, pension settlement gains should be removed in their entirety from the 2001 expenses used to develop the shared and common cost factor, and the Joint CLECs' proposal to include a portion of those gains should be rejected. Staff witness Smith concurred with this position, stating that "while certain events have occurred in the recent past to create conditions that have resulted in pension settlement gains, I am aware of no evidence to support a conclusion that pension settlement gains will occur regularly in the future. It is my opinion that [the Joint CLECs'] adjustment is inappropriate." Staff Ex. 20.0 (Smith Rebuttal) at 11-12.[76]

5. Merger Savings

SBC Illinois' shared and common factors reflect the merger savings resulting from the SBC/Ameritech Merger, as required by the Commission's Merger Order. *Merger Order* at 149-50. As noted previously, the Company used 2001 ARMIS data as the starting point in determining these factors. The majority of the merger savings achieved by SBC Illinois were already being experienced in 2001 and, therefore, are reflected in the ARMIS results. Therefore, an appropriate amount of merger savings are being flowed through to the CLECs on a going-

[76] If the Commission were to adopt the Joint CLECs' pension settlement gain adjustment in principle (and it should not), it would be necessary to recalculate their adjustment to reflect all pension settlement losses, as well as gains, during the period 1987 through 2003. Doing so would result in an average net pension settlement gain of **[**************]**. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 16; SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 11-12, Rev. Sch. TD-R2.

forward basis. SBC Ill. Ex. 7.0 (Barch Direct) at 25-27; SBC Ill. Ex. 7.1 (Barch Rebuttal) at 28.[77]

The CLECs complained that they had not received a large enough credit, and that merger savings achieved after 2001 should have been flowed through to the common cost factor as well. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 61-65. The CLECs are incorrect. *First*, the data supplied in their own testimony demonstrates that the level of merger savings achieved in 2001 (and reflected in 2001 ARMIS data) represents a substantial majority of the total savings expected once all of the merger initiatives have been fully implemented. Moreover, the merger savings initiatives that would have most impacted common costs (*e.g.*, consolidation of headquarters staffs and other managerial/executive functions) were completed in the 1999-2001 timeframe and would have been fully reflected in 2001 ARMIS data. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 28-29. Therefore, there is no reason to assume that there are significant levels of merger savings "missing" from the common cost numerator and certainly not at the level reflected in the CLECs' proposed adjustment. The CLECs essentially pulled their 30% adjustment out of a hat and it should be disregarded. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 30.

Second, the CLECs ignore the fact that the common cost factor is a *ratio*. Merger savings would have been achieved both in common costs (the numerator) and direct costs (the denominator). In fact, it is likely that the merger savings initiatives that had not been fully implemented by 2001 were the more difficult ones to accomplish – *e.g.* those involving network technicians and related personnel. These are functions that would impact the direct costs in the *denominator*, not the numerator as the CLECs contend. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 28-

[77] The CLECs obtained their *pro rata* share of merger savings for the prior 2001-2004 period in a lump sum payment in SBC Illinois' Alternative Regulation Plan proceeding. August 13, 2002 Interim Order, Docket Nos. 98-0252/98-0335/00-0764 at 9-10, 21-22; SBC Ill. Ex. 7.1 (Barch Rebuttal) at 27-28.

30. Adjusting the numerator but not the denominator (as the CLECs propose) will flow merger savings through to the CLECs that SBC Illinois has not and will not achieve. *Id.*

Finally, the CLECs simply assume that they are entitled to 100% of merger savings "attributable" to UNEs. This assumption is inconsistent with the plain terms of the Commission's *Merger Order*. The Commission's Order provides that only *50%* of the net merger savings are to be flowed through to ratepayers, and that SBC Illinois is to retain the remaining 50%. *Merger Order* at 148. The allocation mechanism prescribed by the Commission for the customers' 50% share was as follows:

> It is the ruling of this Commission that the net merger-related savings should be allocated to Ameritech Illinois' customers as follows:
>
> (1) Carriers purchasing AI's UNEs, interconnection, and transport and termination services will benefit from merger-related savings through updated rates resulting from modifications of its TELRIC, shared and common costs.
>
> (2) Once the share of the merger-related savings allocable to UNEs, interconnection, transport and termination purchasers have been identified, the remaining balance of savings will be allocated to interexchange, wholesale and retail customers. This will be done by dividing the remaining merger-related savings between IXCs on the one hand and end users (whether served via retail or wholesale on the other), based on the relative gross revenues of each of these two groups. *Id.* at 149.

The CLECs' adjustment proposal in this proceeding appears to stem from a belief that CLECs purchasing UNEs were given a preferred position under the *Merger Order* – that is, that they were to receive 100% of merger savings achieved in the Company's wholesale operations (and assigned to UNEs), while all other customers would be limited to sharing the remainder of the 50% overall allocation to ratepayers. This is not a reasonable interpretation of the *Merger Order*. The allocation and rate mechanisms are *subordinate* to the 50/50 sharing principle. Certainly nothing in the Order suggests that the Commission intended to favor CLECs at the expense of all other customer groups. This would be the necessary result of the CLECs'

approach, because the end user, reseller and IXC shares of the flow-through amounts in paragraph (2) above are calculated on a residual basis (*i.e.*, "Once the share of the merger-related saving allocable to UNEs, interconnection, transport and termination purchasers have been determined, the remaining balance of savings will be allocated to interexchange, wholesale and retail customers"). If CLECs purchasing UNEs were to receive more than their fair share, then all other customer groups would receive less.

Thus, UNE-related merger savings should be flowed through to CLECs at a 50% level, not at a 100% level. In fact, the merger savings reflected in SBC Illinois' common cost factor represent well more than 50% of the merger savings that will be achieved once all of the initiatives are implemented. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 30. In other words, the CLECs are already receiving *more* than they are entitled to, not *less*, and no further adjustment is warranted.[78]

6. Employee Levels

The Commission Staff contended that SBC Illinois' common costs should be adjusted downwards to reflect a reduction in SBC Illinois' employee headcount between the end of 2001 and the end of 2002. Staff Ex. 9.0 (Smith Direct) at 13-14. This adjustment should not be adopted by the Commission. Staff has not demonstrated that the headcount change represents a *net* reduction in expenses. SBC Illinois incurs employee costs from personnel on its own payroll and from cross-charges related to employees on the payroll of subsidiaries and affiliates who perform work for SBC Illinois. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 31. In fact, a significant number of employees were transferred from SBC Illinois to the SBC services and Ameritech

[78] Because SBC Illinois cannot separately identify merger-related savings inherent in the ARMIS data for any given year, as a practical mater, SBC Illinois cannot implement the 50/50 sharing principle. SBC Ill. Ex. 7.0 (Barch Direct) at 27. Therefore, 100% of the savings achieved in common overhead accounts in 2001 and apportioned to UNEs is being flowed through to the CLECs. That does not mean, however, that the amount of merger savings in the factor should be further increased as the CLECs propose.

services organizations in 2002. The costs associated with these personnel would still be incurred by SBC Illinois – just as affiliate billing, rather than as direct payroll expense. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 26-27. In addition, Staff missed the numerator/denominator issue discussed above in connection with merger savings. There is no evidence that the headcount reduction is solely related to common costs and not to direct costs. Appropriate adjustments would have to be made to both sides of the ratio, not just to one side as Staff proposed. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 31.

7. Agreed Upon Issues

Staff proposed adjustments to SBC Illinois' common costs related to a number of issues, including OSS testing costs, Tier 1 remedy payments, digital divide payments and the treatment of sales tax as between Chicago and other parts of the state. Staff Ex. 8.0 (Patrick Direct) at 37-46; Staff Ex. 3.0 (Lazare Direct) at 34-35. SBC Illinois accepted all of these adjustments and they have been flowed through to its revised common cost factor presented in this proceeding. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 75-77, Sch. DJB-R12.

VI. Shared Cost Factor

A. Definition Of Wholesale Shared Costs

In developing its shared cost factor, SBC Illinois included all shared costs associated with the provision of wholesale services, not just those associated with the provision of UNEs. The two categories of costs in SBC Illinois' shared cost factor are: (1) uncollectible expense and (2) wholesale marketing expense. The CLECs contended that this approach is overbroad and that SBC Illinois should have developed a UNE-only shared cost factor. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 71-76. The CLECs are incorrect.

First, ARMIS data does not separately identify wholesale shared costs associated with UNEs as compared to other wholesale services. Similarly, SBC Illinois does not itself track

uncollectibles or wholesale marketing expenses at the UNE level and it would have to incur considerable expense to do so. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 32; SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 21-22. SBC Illinois developed an appropriate factor to apply to UNEs by establishing a ratio between total wholesale shared costs (numerator) and total wholesale direct costs (denominator), which ensures that wholesale shared costs are apportioned *pro rata* to all wholesale services. Therefore, use of aggregate wholesale data to develop the factor is reasonable and appropriate.

Second, SBC Illinois' approach undoubtedly understates, not overstates, the shared costs associated with the provision of UNEs. With respect to uncollectibles, it is likely that the *entire* wholesale uncollectible ratio is attributable to UNEs: the primary cause of wholesale uncollectibles is bankruptcies and CLECs account for most wholesale bankruptcies. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 22. With respect to wholesale marketing expense, the two major customer groups within the wholesale organization are the long distance carriers ("IXCs") that purchase switched and special access services and CLECs. Switched and special access are mature services, they are purchased out of tariffs, the choice of service arrangements is relatively straightforward, the intercompany relationships are stable, the systems and processes are well known to all parties, there are relatively few new entrants and little is required in the way of day-to-day "hand-holding." Millions of dollars of interstate and intrastate access revenues pass through SBC Illinois' systems annually with minimal human intervention (dollars that dwarf UNE revenues several times over). Therefore, marketing costs associated with access services are likely to be relatively small. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 33-34.

In contrast, SBC Illinois' relationships with the CLECs are very resource-intensive. SBC Illinois must enter into an interconnection agreement with every CLEC that must be negotiated

and then approved by the Commission. Account managers spend significant amounts of time helping CLECs navigate the complex array of services and products available to them, interface with SBC Illinois' systems, and resolve disputes over whether CLECs are receiving the products to which they think they are, or should be, entitled. These complications are exacerbated by the fact that the UNE products available to CLECs, the constraints on how they can be used, and their prices are constantly changing as a function of both state commission and federal orders (*e.g.*, the FCC's *Triennial Review Order*). This creates work effort for SBC Illinois personnel at the customer level (*e.g.*, account managers) and at the product level (*e.g.*, product managers). *Id.* Thus, by spreading wholesale uncollectible and marketing expense over *all* wholesale direct costs, a significant – and likely disproportionate – share of these costs are being assigned to wholesale products and services other than UNEs (*e.g.* switched and special access). In short, CLECs are likely paying *less* than their fair share of shared wholesale expenses under SBC Illinois' approach, not *more*, and have nothing to complain about.

1. Uncollectible Expense

There are two issues in dispute relative to uncollectible expense: (1) the *amount* to be recovered and (2) the *methodology* used to recover it. SBC Illinois and Staff are not very far apart on the *amount* issue. SBC Illinois takes the position that it should be based on the levels of uncollectibles actually incurred in 2001, because that matches the 2001 ARMIS data used to develop the other components of the shared cost factor. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 12-13. Staff proposed an averaging of 2001 and 2002 uncollectible data. Staff Ex. 9.0 (Smith Direct) at 12. Although SBC Illinois believes its approach is superior, Staff's proposal is not inherently unreasonable with respect to the *amount* of uncollectible expense, and could be used. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 12-13.

Both SBC Illinois and Staff opposed the CLECs' proposal to average uncollectible expense over the entire period between 1998-2003. As Mr. Smith testified on behalf of Staff: "A five-year history would be misleading because it would ignore the realities of developing competition in the IBT local exchange marketplace" – *i.e.*, the fact that the wholesale UNE market was just developing between 1998-2000. Staff Ex. 9.0 (Smith Direct) at 12; SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 22-23. It would also be inappropriate to include 2003 in the average because SBC Illinois' bad debt experience was atypical that year. Because Worldcom was in bankruptcy in 2003, it was ordered to pay for all telecommunications services in a prompt manner, which reduced SBC Illinois' bad debt exposure; this court-ordered protection will end when Worldcom emerges from bankruptcy. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 16.[79]

However, Staff and SBC Illinois are farther apart on *how* to recover uncollectible expense. SBC Illinois proposes that it be treated as a *cost* and included in the numerator of its shared cost factor. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 37-38. Staff takes the position that uncollectibles should be recovered in a *revenue*-based mechanism, where the 2001-2002 uncollectibles would be ratioed against wholesale revenues in those years. This ratio would then be applied against the UNE rate (rather than the TELRIC cost). Staff Ex. 9.0 (Smith Direct) at 8-12.[80]

SBC Illinois' cost-based approach is superior to Staff's revenue-based approach. Because contribution and demand levels vary across wholesale products and services, which in

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[79] The CLECs also propose use of the write-offs in Account 1181, instead of uncollectible expense in Account 5301, to determine wholesale uncollectible costs. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 86-91. This is not the approach advocated by either SBC Illinois or Staff. Account 1181 is a backwards-looking measure of final write-offs made years after the relevant amounts were due and recorded as uncollectibles. Thus, the CLECs' proposal is inconsistent with generally accepted accounting principles ("GAAP") and would constitute a backward-looking, rather than forward-looking, approach to costs. SBC Ill. Ex. 17.0 (Dominak Rebuttal) at 24; SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 15-16.

[80] The Attorney General supported Staff's approach. AG Ex. 1.1 (Dunkel Rebuttal) at 15-18.

turn drive the revenues associated with those products and services, use of a revenue-based allocator inflates the denominator and can skew the recovery of uncollectibles to those wholesale products that are more profitable, on a relative basis, than UNEs. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 37-38; SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 13-17. As described above, uncollectible expense is primarily CLEC-related. Staff's approach will have the effect of shifting even more of this expense to other wholesale customers (e.g., the IXCs). In contrast, inclusion of wholesale uncollectibles in the shared cost factor ensures that an appropriate amount is recovered from purchasers of UNE products. In addition, Staff's approach rested on the implicit assumption that, as wholesale revenues increase, wholesale bad debt will decrease. In fact, there is no consistent relationship between uncollectible expense and revenues. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 13-14. Accordingly, the Commission should adopt SBC Illinois' approach.

2. Wholesale Marketing Expense

The second major component in the shared cost factor is wholesale marketing expense. Although Staff initially recommended that all marketing expense be excluded, Staff's proposal was based on a misunderstanding of what "wholesale marketing expense" constituted. Staff assumed that these were costs associated with promoting or advertising UNEs and, therefore, would not be appropriate for inclusion in UNE rates. Staff Ex. 9.0 (Smith Direct) at 13. Staff later conceded that it *would* be appropriate to include wholesale marketing costs associated with customer information, customer assistance and interconnection agreement negotiation in a shared

cost factor, as long as they were not "promotional" in nature. Staff Ex. 29.0 (Smith Rebuttal) at 13.[81]

In fact, all (or virtually all) of the marketing expenses included in SBC Illinois' shared cost factor *do* meet Staff's criteria. Wholesale marketing expense includes the costs of product managers responsible for developing, pricing and facilitating wholesale products and services; managers who negotiate interconnection agreements; and account team members who assist CLECs on a regular basis. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 39-40. The only arguable "promotional" costs are those associated with SBC Illinois personnel appearing at trade shows, logo usage and media relations costs. However, these functions are *de minimis* as a proportion of all wholesale marketing costs and would have no material impact on overall marketing expense levels. SBC Ill. Ex. 17.1 (Dominak Surrebuttal) at 18-19.[82] Therefore, the Commission should include wholesale shared marketing expense in the shared cost factor.

The CLECs proposed that wholesale marketing expense be apportioned between UNEs and all other wholesale products based on revenues. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 75-76. This approach is inappropriate. As noted previously, not all of the products and services in the wholesale category are priced on a cost-plus, TELRIC basis. For example, switched access, special access and resale are all priced based on LRSIC costs and generate widely differing levels of contribution (*i.e.*, the difference between the cost floor and the price). Use of a revenue-based allocator (which is derived from the *prices* charged for these products, not their *costs*) will over-allocate marketing expense to those products generating higher levels of contribution than UNEs and under-allocate marketing expense to UNEs. SBC Ill. Ex. 7.1

[81] The CLECs agreed that product management and sales functions were appropriately included in a shared cost factor. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 74-75.
[82] Even trade shows would likely be more informational than promotional in nature (*e.g.*, responding to questions from CLECs that have not yet entered Illinois).

(Barch Rebuttal) at 34-36. The CLECs have presented neither a factual basis to support such an over-allocation, nor any persuasive methodological argument that revenue-based allocators produce more accurate results that cost-based allocators. Therefore, the Commission should reject the CLECs' proposal.

3. Calculation Of Wholesale Shared Cost Denominator

The denominator of the shared cost factor represents the wholesale portion of the total direct costs used in the common cost denominator. Because retail and wholesale products and services share a common network, and capital investments cannot be attributed exclusively to either category, SBC Illinois developed a wholesale cost ratio based on wholesale operating expenses as a percentage of total operating expenses (where retail and wholesale-specific data *are* available). This wholesale cost ratio was then applied to total SBC Illinois' forward-looking direct costs to develop the wholesale-only shared cost denominator. This approach is reasonable and provides an appropriate basis for developing the shared cost factor. SBC Ill. Ex. 7.0 (Barch Direct) at 20-21.

Conceptually, SBC Illinois and Staff are in agreement on what a shared cost denominator should be: that is, it should represent SBC Illinois' direct costs of providing wholesale products and services and it should correspond, to the extent practicable, to the forward-looking costs used to develop SBC Illinois' UNE rates. Staff Ex. 28.0 (Chang Rebuttal) at 4-5; Tr. 1964-65 (Chang). Staff disagrees only with the *methodology* used by SBC Illinois to separate wholesale direct costs from total direct costs. *Id.* at 5-6; Tr. 1966-67 (Chang). Therefore, Staff recommended that the Commission order SBC Illinois to develop a shared cost denominator based on "extended TELRICs," similar to the approach used in the 1998 TELRIC proceeding. Tr. 1968 (Chang). SBC Illinois believes that its methodology is reasonable and produces valid results. It is derived from the same direct cost analysis used for the common cost denominator,

and therefore provides for a consistently applied methodology across the entire shared and common factor development process. The development of a new "extended TELRIC" denominator would require the analysis of demand and cost data for all wholesale services provided by SBC Illinois. Nevertheless, if the Commission concludes otherwise, Staff's proposal would also be reasonable and SBC Illinois would work with Staff immediately following issuance of the Commission's order to develop such a methodology.[83]

The CLECs, in contrast, insist on use of an embedded cost denominator for shared costs, just as they did for common costs. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 94-95. Both SBC Illinois and Staff agree that the CLECs' approach is methodologically unsound for the same reasons discussed previously and it will result in an under-allocation of wholesale direct costs to UNEs.

VII. Annual Cost and Other Factors.

A. Annual Cost Factors.

Annual cost factors capture the annual expenses that SBC Illinois incurs with respect to plant investment. Because operating expenses generally fluctuate in proportion to the level of fixed plant investment, these expenses are expressed as a percentage factor. SBC Illinois Ex. 7.0 (Barch Direct) at 35-36. Annual cost factors that raised disputed issues included maintenance factors, the ad valorem tax factor, and the capital cost factor.

1. Adjustments To Maintenance And Other Expense Factors

SBC Illinois developed a maintenance factor for each type of plant (including buildings, switching, operator systems, circuit equipment, and cable & wire facilities) to account for the annual maintenance expenses associated with each type of plant. Each maintenance factor is

[83] The wholesale category includes products that are priced on a TELRIC basis (*e.g.*, UNEs) and services that are priced on a LRSIC basis (*e.g.*, switched access, special access and resale). Although Staff referred to "extended TELRICs," in fact the required methodology would include both "extended TELRICs" *and* "extended LRSICs."

developed as a ratio of the annual maintenance expenses associated with a particular type of plant (as reported in the relevant expense account) to the total investment associated with that type of plant (as reported in the relevant plant investment account). *See* SBC Ill. Ex. 7.0 (Barch Direct) at 35-40. A current cost-to-booked cost ratio is applied to the plant investment account to bring the historical booked investment cost to a current replacement cost level. *Id.* at 37-39.

While booked data is used to develop maintenance factors, these factors are forward-looking. For example, SBC Illinois' recent experience as to the relationship between maintenance expenses and investment is an accurate indicator of a forward-looking maintenance/investment relationship. Because the investment denominator is adjusted to current cost, and because the resulting maintenance factors are applied to forward-looking investment costs (not SBC Illinois' embedded investment costs), the maintenance factors produce forward-looking maintenance costs. *Id.* at 39-40.

The CLECs took issue with the maintenance factor utilization adjustment, on the grounds that it would increase maintenance expense if higher fill levels are assumed. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 123-24. However, the CLECs misconstrued the elected of the utilization adjustment. It does not result in increased maintenance expenses. Rather, it holds per unit maintenance expenses *constant* as fill levels increase. SBC Ill. Ex. 7.0 (Barch Direct) at 45; SBC Ill. Ex. 7.1 (Barch Rebuttal) at 41-43. Without a utilization adjustment, SBC Illinois' per unit maintenance expenses would decline if higher fill levels are assumed, which is inconsistent with the realities of running a network. Indeed, the maintenance factor utilization adjustment is conservative, because in reality maintenance expenses actually increase dramatically at higher fill levels. SBC Ill. Ex. 8.0 (White Direct) at 14-15; SBC Ill. 7.1 (Barch Rebuttal) at 43. Further, the utilization adjustment does not prevent higher fill levels from ultimately resulting in lower

overall TELRIC costs. Rather, per unit direct TELRIC costs still decline, as only per unit maintenance and other expenses are held constant. SBC Illinois Ex. 7.1 (Barch Rebuttal) at 42-43. Therefore, this adjustment is appropriate and the CLECs' objections should be disregarded.

2. Ad Valorem Factor

The CLECs argued that, in its ad valorem tax factor calculation, SBC Illinois failed to apply a current cost-to-booked cost ratio to bring the denominator (plant investment) to current cost. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 125-29. However, bringing plant investment to current cost would be inappropriate with respect to the ad valorem tax factor. Such taxes are not assessed on the basis of current replacement cost. Rather, they are assessed on the basis of actual booked cost. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 43-44. Therefore, SBC Illinois' approach is reasonable and should be approved.

3. Capital Cost Factor

The CLECs contend that application of inflation factors to investment overstate capital costs because the cost of money portion of capital costs already accounts for inflation. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 155-56. They are incorrect. As Dr. Avera explained, while the inflation expectations built into nominal capital costs may compensate investors for the erosion in purchasing power due to inflation, this is distinct from the impact of inflation on the future costs of equipment and capitalized labor used to provide products and services, such as UNEs. SBC Ill. Ex. 12.1 (Avera Rebuttal) at 75. Therefore, there is no double-counting of inflation and the Joint CLECs' proposed adjustment should not be adopted.

B. Investment Factors

With respect to the Land and Building investment factors, the CLECs asserts that the investment associated with space leased to collocating and non-affiliated entities should be

removed. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 132-33. However, there is no reasonable basis for making such an adjustment. Collocating CLECs do not sign leases, commit to lease space, or even provide projections regarding any definite length of stay. It would be speculative to reduce SBC Illinois' building factor by anticipated collocation space that may be volatile and short term. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 44-45. In their Rebuttal testimony, the CLECs presented a new proposal, which reduced their adjustment by about *95%*. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Surrebuttal) at 58-59. Although this new factor is clearly more reasonable than the original factor, more importantly it demonstrates that leased space is too variable to be the subject of any adjustment at all. SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 30. Therefore, the CLECs' proposal should not be adopted.

C. Support Asset Factors

"Support assets" are assets that, in terms of cost-causation, are directly tied to labor. For instance, support assets include the capital and operating costs of providing certain computers, office equipment, furniture, buildings and land, and motor vehicles that employees use in performing their duties. SBC Ill. Ex. 7.0 (Barch Direct) at 60. SBC Illinois proposed to recover such costs via a "support asset ratio" that is applied to the maintenance factor and labor rates. The support asset factor is based on the ratio of support asset costs to salaries and wages, thus tying SBC Illinois' labor costs to the additional support asset costs that its workforce causes. SBC Ill. Ex. 7.0 (Barch Direct) at 60-63.

Staff contended that support assets costs should not be recovered in non-recurring costs all, but should be recovered in either recurring costs or the common cost factor. Staff Ex. 6.0 (Hanson Direct) at 9-21. Staff is incorrect. Under cost causation principles, costs are assigned on the basis of the cause that underlies the incurrence of a cost. In the case of support assets, those costs are directly incurred because of labor activities. SBC Ill. Ex. 7.1 (Barch Rebuttal) at

46-47. For instance, just as SBC Illinois avoids social security and benefits costs if it does not require employees, it also avoids the costs of providing a computer workstation to those employees. *Id.* at 47. Further, because service technicians require trucks to install, maintain, and repair the network, the cost of those trucks is caused by that labor activity. *Id.* The labor costs at issue here are incurred in performing the one-time activities of service ordering, provisioning and so forth. Customers causing SBC Illinois to perform those activities should properly pay for both the labor time and a *pro rata* share of the costs of the truck, computers and so forth required to complete those tasks.

Staff has fundamentally confused the nature of the asset cost (*i.e.*, capital vs. expense) with whether it should be recovered in recurring or non-recurring studies. These are two entirely separate questions. For example, Staff contended that these costs should not be included in non-recurring costs studies because the assets are not "depleted" or "consumed" on a one-time basis. However, the FCC's cost causation principles do not turn on how "long-lived" an asset is; they turn on cost causation. Thus, the question should be: are those assets used to provide a non-recurring function (*e.g.*, a computer used to complete a service order) or are they used to provide a recurring function (*e.g.*, the monthly investment and operating costs associated with a loop)? If it is the former, then the support asset cost belongs in the non-recurring cost study – not in the recurring loop cost study. Assigning these costs solely to the recurring study would require customers who are not placing service orders to shoulder the costs of customers who are. Thus, SBC Illinois' support asset factor is a reasonable method to link SBC Illinois' labor costs to support asset costs and they are properly included in both the recurring and the non-recurring

cost studies where the associated labor costs are recovered and the recurring cost studies that incorporate a maintenance factor. *Id.*[84]

Based on the record, SBC Illinois' support asset factor approach should be approved as reasonable. In the event the Commission disagrees, support asset costs should be reassigned to the common cost factor. SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 28-29. Staff's alternative approach of assigning these costs solely to recurring studies is economically incorrect, because they do not belong there. It is also not viable as an administrative matter, because SBC Illinois' recurring cost models would have to be completely reconfigured, an undertaking that could not be accomplished in the time frame required to prepare compliance tariffs in this proceeding. *Id.*

D. Inflation/Deflation Factors

SBC Illinois applies inflation factors to both investments and expenses to reflect cost changes on a going-forward basis. SBC Ill. Ex. 7.0 (Barch Direct) at 49. The inflation factors applied to investments are based on the Telephone Plant Index and the inflation factors applied to expenses are based on CPI-W, a widely used indicator of changes in labor costs and other expenses. *Id.*

The CLECs complained that SBC Illinois should have used PPI in lieu of CPI-W. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 161. This debate is much ado about very little. CPI-W is a reasonable measure of inflation in the context it is used in these studies. The majority of SBC Illinois' loop TELRIC costs are labor-related and CPI-W is a good measure for translating wages and salaries into inflation-adjusted dollars. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 49. State commissions have variously relied on both PPI and CPI as measures of inflation for

[84] Notably, the CLECs do not object to SBC Illinois' treatment of support assets. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 117-18. Rather, they object only to SBC Illinois' use of a Service Order Activity Adjustment ("SOAA") based on SBC Southwest data. Subsequent to the filing of SBC Illinois' direct testimony, the Company developed an SBC Midwest-specific adjustment, which turned out to be nearly identical to the original adjustment. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 48. Therefore, there is no basis to the CLECs' complaint.

ILECs. SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 31-32. Therefore, there is no one "right" answer to what inflation measure should be used send. *Id.* In any event, the difference between PPI and CPI-W is small. Therefore, use of PPI instead of CPI-W would not materially impact the level of SBC Illinois' annual cost factors.

E. Productivity Offset

Future productivity gains are addressed in SBC Illinois' studies through the use of forward-looking technologies, and current cost-to-book cost ratios. SBC Ill. Ex. 7.0 (Barch Direct) at 49-51. The CLECs contended that SBC Illinois had not addressed the full spectrum of influences on productivity and proposed use of an explicit productivity factor based on SBC Illinois' historic expense-to-investment ratios over the period 1990-2002. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct) at 162-63.

The CLECs' proposed adjustment is inappropriate and should not be adopted. As noted previously, SBC Illinois' cost studies are forward-looking and account for future productivity gains by identifying forward-looking resources, activities, inputs, values, and other data. Anticipated productivity gains are inherent in forward-looking studies, such that applying a "productivity factor" on top of those studies would double-count future cost reductions. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 11. For example, productivity factors used to measure productivity improvements over time are based on the *embedded* base of equipment and *current* processes. *Id.* at 11-12. That is, a productivity measure may reflect the cost savings that result as the embedded base of equipment is replaced over time with more efficient technology. However, SBC Illinois' cost studies already assume the use of forward-looking, efficient technology. *Id.*

Even if some productivity factor were to be applied (and it should not be), the CLECs' proposed factor is fundamentally flawed. As the Bureau of Labor Statistics notes, productivity is "a measure of economic efficiency which shows how effectively economic inputs are converted

into outputs." *Id.* at 12, n.10. The CLECs developed their factor based on changes in the expense-to-investment ratio over time. However, both expenses and investments are *inputs* to the products and services that a company produces. Thus, the CLECs' proposed factor merely measures the relationship of one input (expenses) to another input (capital equipment costs). *Id.* at 12-13. A productivity measure, on the other hand, measures the relationship between *all* inputs (expenses and investment) used to produce a product or service, on one hand, and the company's output (those products and services). The CLECs' proposed "productivity factor" utterly fails to account for output, and is, thus, not a measure of productivity at all. *Id.* SBC Illinois further notes that the productivity gains which the CLECs purport to be capturing occurred *prior* to 2002 and have already been reflected in SBC Illinois' forward-looking studies. SBC Illinois' productivity changes for 2002 and 2003 have actually been *negative*. AT&T/Joint CLEC Ex. 1.0 (Starkey/Fischer Direct), Attachment MS/WF-17 ("QSI Recommended Inflation and Productivity Factors"), line 6. Thus, there is no legitimate basis for the CLECs' productivity adjustment.

In their Surrebuttal testimony, the CLECs quote SBC executives' comments to Wall Street regarding cost-cutting initiatives in further support of their productivity adjustment. AT&T/Joint CLEC Ex. 1.2 (Starkey/Fischer Surrebuttal) at 67-71. These comments provide no basis for a further adjustment. There is no way that the effect of these initiatives can be quantified or related to the particular factors which SBC Illinois is using in its studies at this time. Many of the specific operational measures described in those comments have nothing to do with loop costs (*e.g.*, consolidation of call centers, creation of a national service bureau, and consolidated nationwide technical support). This Commission has always disfavored reliance on mere estimates (or worse yet, "guesstimates"). For example, in the *Merger Order*, the

Commission did not order immediate flow-through of merger savings based on pre-merger estimates, but rather waited for actual data:

> Given the Commission's strong preference for dealing in matters of certainty, we believe that both the savings and the costs of this transaction, as well as their reasonableness, must be determined when actual data, as opposed to estimates, are available. *Merger Order* at 147.

The same principle applies here. There are no estimates of the effect of those particular initiatives at the level of detail that could be applied in SBC Illinois' TELRIC studies, nor is it known whether or when SBC will actually achieve the savings it anticipates.[85] SBC Illinois further notes that the adjustment proposed by the CLECs bears no relationship to the initiatives described by SBC's executives. Rather, the productivity factor developed by the CLECs is based on *historic* data and the cost-cutting initiatives inherent in those data have already been reflected in SBC Illinois' studies.

Finally, the CLECs once again ignore the numerator/denominator issue. SBC's executives projected $1.3 billion in annual *capital and expense* savings by 2006. Thus, it is likely that these initiatives will impact both the numerator and denominator underlying the Annual Cost Factors. If expected reductions in investment costs are proportional to expected reductions in expenses – and there is no reason to expect that they would not be – SBC Illinois' factors will change little, if at all. SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 33-35. These cost changes will be duly reflected in SBC Illinois' cost studies the next time they are updated, when the net effect of all these factors, as they play out in the real world, can be assessed based on a full record.

[85] Although SBC's representations to the financial markets are based on the best information available, uncertainties are always inherent in forecasts.

F. Depreciation And Net Salvage

The CLECs pointed out that FASB 143 became effective on January 1, 2003, just after SBC Illinois filed its direct testimony in this proceeding. AT&T/MCI Ex. 1.1 (Majoros Rebuttal) at 5-15. SBC Illinois agreed that, if an adjustment were made to its depreciation rates to remove negative net selvage, an offsetting adjustment would have to be made to the maintenance expense factor. SBC Ill. Ex. 7.2 (Barch Surrebuttal) at 35-36. SBC Illinois calculated the overall net effect and it had a miniscule impact on the Company's Annual Cost Factors and, therefore, on UNE loop prices. *Id.*

VIII. Imputation And Price Squeeze

Under the 1996 Act, UNEs must be priced so as to cover their TELRIC costs and a reasonable apportionment of shared and common costs. It is not relevant to a *TELRIC analysis* what relationship the resulting UNE rates have to retail rates offered by the ILEC or the retail prices offered by competitors in the marketplace. These are, to use the economic jargon, "downstream" impacts of the price changes. Contrary to the impression created by some parties, the Commission may not lawfully "reverse engineer" the UNE rates produced by this proceeding to avoid any possible collateral impacts. These effects are what they are.

Nonetheless, Staff and the CLECs contended that the increased UNE rates proposed by SBC Illinois will require changes in SBC Illinois' retail rates (as a result of imputation) and will impact the ability of CLECs to serve customers in Illinois (as a result of a price squeeze). As demonstrated below, Staff and the CLECs are incorrect. First, it is unclear whether imputation is required at all. Even if it is required, Staff and the CLECs predicted a massive impact on retail rates only because they are recommending a rigid *form* of imputation which is not required by the PUA or relevant policy considerations. Using a more economically sound and reasonable approach, SBC Illinois retail business rates pass with flying colors and no retail rate changes are

required. There also will be no price squeeze. The CLECs enjoy very high profit margins in Illinois today and will continue to make ample profits if the rate changes proposed by SBC Illinois are approved by the Commission.

A. Imputation

Section 13-505.1 of the PUA requires that an imputation test be performed for competitive services to the extent that the ILEC provides "noncompetitive services" or "service elements" to competitors providing the same services. Section 13-505.1 provides in pertinent part as follows:

> (a). . . If a carrier provides noncompetitive services or noncompetitive service elements to other telecommunications carriers for the provision by the other carriers of competitive services, switched interexchange services, or interexchange private line services . . . then the telecommunications carrier shall satisfy an imputation test for each of its own competitive services, switched interexchange services, or interexchange private line services, that utilize the same or functionally equivalent noncompetitive services or noncompetitive service elements. . .The imputed costs of a service for purposes of this test shall be defined as the sum of:
>
> (1) specifically tariffed premium rates for the noncompetitive services or noncompetitive service elements, or their functional equivalent, that are utilized to provide the service;
>
> (2) the long-run service incremental costs of facilities and functionalities that are utilized but not specifically tariffed; and
>
> (3) any other identifiable, long-run service incremental costs associated with the provision of the service.

The threshold question is whether Section 13-505.1 applies to UNEs at all. SBC Ill. Ex. 1.0 (Panfil Direct) at 23-24. Section 13-505.1 is triggered only when SBC Illinois provides "services" or "service elements" to its competitors. The FCC has consistently ruled that UNEs are not "services." *First Report and Order*, ¶¶ 264, 358.[86] UNEs are also not "service

[86] Some wholesale products *are* services, such as SBC Illinois' resale and carrier access offerings.

elements." Section 13-505.1 became law in 1992 and, at that time, UNEs did not exist. The term "service element" refers to rate elements within a "service" that are separately priced. For example, when imputing switched carrier access rates to interexchange calling services, SBC Illinois separately evaluates the costs that should be included in the overall analysis for each of the various rate (or "service") elements which comprise switched access on a rate element-by-element basis, *e.g.*, local switching, tandem switching, common or dedicated transport at various mileage bands, entrance facilities and so forth.[87] Consistent with the FCC's interpretation, when the General Assembly added the concept of "network elements" to the PUA in 2001, they were defined as being a "facility or equipment" used in the provision of a service – *not* as a "service element." 220 ILCS 5/13-216. If UNEs are not "service elements," then Section 13-505.1 does not apply. *See also Globalcom, Inc. v. Ill. Comm. Comm.*, Nos. 1-02-3605, 1-03-0068 Consol., Slip Op. at 20-21 (1st Dist. 2004).

Even if the Commission concludes that Section 13-505.1 does apply here – which it should not – both SBC Illinois and Staff agree that the Commission has considerable flexibility in determining how to define the "service" which is subject to the test. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 11; Staff Ex. 24.0 (Koch Rebuttal) at 19-20. Nothing in Section 13-505.1 defines a "service" for purposes of this Section and the general definitional sections of the PUA are either unhelpful or circular. For example, the definition of a "telecommunications service" in Section 13-203 is intended to distinguish telecommunications services from *non*-telecommunications services—not one telecommunications service from another. Section 13-220 defines a "retail telecommunications service" as "a telecommunications service sold to an end user". Although

[87] The principal focus of Section 13-505.1, as originally enacted, was the imputation of carrier access charges to calling services. That is why there is a reference to "premium rates" for the noncompetitive service in Section 13-505.1(a)(1) of the Act; this concept of "premium rates" derived from FCC carrier access policies in the 1980s when presubscription had not been fully implemented.

this distinguishes a retail service from a service provided to a carrier, it does not establish a dividing line between one retail service and another.

The purpose of a price squeeze test, at the most general level, is to promote competitive "fairness". That is, to ensure that an efficient competitor has an equal chance to compete, at least where they are dependent on SBC Illinois for a critical input. This requires, or at least permits, the Commission to evaluate the scope of the "service" subject to imputation in a policy context so as to promote "fairness"— for both the incumbent provider and the competitor. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 14.

Both Staff and the CLECs choose to assume that the business network access line on a stand-alone basis should be treated as the "service" at issue under Section 13-505.1. Staff Ex. 4.0 (Koch Direct) at 36-37; Joint CLEC Ex. 3.0 (Ankum Direct). However, business network access lines are significantly different from other services to which imputation tests have been applied. Unlike interMSA toll calling or Centrex service or private line services, the business network access line is not a stand-alone product that competitors vie for separately. Along with the network access line come a host of other products that, today, cannot be or are not typically offered by another carrier separately from the line itself: *e.g.* central office features, local calling, and switched access to IXCs that want to originate or complete toll calls to that customer. In other words, CLECs do not compete with SBC Illinois in the provision of business network access lines alone to customers: they compete in the provision of local exchange services, of which the network access line is only one element. It is for that reason that imputation for network access lines presents unique policy issues. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 11-12. A properly constructed imputation test would include all of the revenues and costs that make up the complete local exchange service provided by SBC Illinois and CLECs to customers in the

marketplace. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 14-15. Based on an appropriate imputation test, SBC Illinois' business services produce positive margins in all three access areas, even without the inclusion of switched access revenues. *Id.* at 9, Schedule ELP-R1 (Confidential).

Thus, the dire retail rate consequences ballyhooed by the CLECs and Staff are *not* the result of imputation *per se*. Rather, they result from the very narrow, and inappropriate, UNE loop/port-to-business network access line form of the analysis that they insist that the Commission adopt. In fact, the harmful consequences of their approach would be considerable. SBC Illinois would have to reprice all of its business services: the prices for business network access lines would have to increase substantially and, to prevent its customers from being adversely affected, compensating rate reductions would have to be made in other services like central office features and local calling. Although this could be accomplished on a revenue-neutral basis for SBC Illinois, it would impact every customer differently. For example, business customers who are heavy users of network access lines, but not features, would pay more; business customers who are heavy users of features, but not access lines, would pay less. Moreover, making rate changes of this magnitude would be extremely disruptive to customers, would require the reprogramming of SBC Illinois' billing systems and would generate hundreds (if not thousands) of calls to the Company and the Commission from confused and/or disgruntled customers. In addition, the Commission would have to address the question whether 1-4 line business customers would be exempt from this rate restructure until July of 2005, due to the rate restrictions in Section 13-505.2 of the Act. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 17.

Moreover, this massive rate restructure would not make any material difference in the end to the competitive positions of SBC Illinois and the CLECs. SBC Illinois presented an analysis of a possible price restructure, on a before-and-after basis. SBC Illinois' overall

revenues would be the same, the CLECs' revenues and costs would be the same, their margins would be the same, and nothing would change from a competitive standpoint. In fact, this type of restructuring might actually harm the CLECs, since it would result in reduced SBC Illinois rates to the higher-margin business customers that the CLECs generally target, reducing the "cream skimming" opportunities that they currently enjoy. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 18-19.

This outcome would be inconsistent with both the PUA and the FCC's TELRIC policies. In effect, the Staff/CLEC approach would require SBC Illinois to reprice its retail business services based on TELRIC principles, rather than on LRSIC principles. The PUA and the Commission's rules specifically establish a *LRSIC* price floor for competitive retail services, not a *TELRIC* price floor (see Section 13-502 (d)). LRSIC, not TELRIC, cost studies have been the basis for the Commission's decisions in every SBC Illinois retail rate proceeding since the late 1970's. Moreover, because the TELRIC pricing rules are so rigid, it places the FCC in the position of dictating retail rate structures and pricing in Illinois, which the FCC never intended. For example, the FCC specifically declined to impose imputation test requirements on state commissions in its *First Report and Order*. *First Report and Order*, ¶¶ 484-850. In addition, in developing its price squeeze analysis, the FCC explicitly recognized that the state commissions have jurisdictional authority over the level and structure of retail rates. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 19-20.[88]

Staff and the CLECs contended that their narrow form of imputation is required so that CLECs can compete for business customers who do not make many calls or subscribe to central office features. Staff Ex. 24.0 (Koch Rebuttal) at 21-22; Joint CLEC Ex. 3.1 (Ankum Rebuttal)

[88] *In re Joint Application by SBC Communications., et al. for Provision of In-Region, InterLATA Services in Kansas and Oklahoma,* 16 F.C.C. Rcd. 6237 (2001) at ¶ 92.

at 14-15. In effect, they posit a hypothetical competitor with a business plan that targets only the low-profit subset of business customers that make little or no use of the network. Needless to say, this has not been the CLECs' marketing strategy to date and neither party identified any actual carrier that intends to pursue such a business plan. It makes little sense to design an imputation test around a purely hypothetical and unlikely construct. All carriers (including SBC Illinois) serve a mix of customers, some of whom are more profitable than others. It would be more consistent with the actual conduct of the CLECs and the operation of this marketplace to look at whether they can compete profitably for customers *overall*. SBC Ill. Ex. 1.2 (Panfil Surrebuttal) at 5.

In addition, both Staff and the CLECs ignored the fact that CLECs can use resale, in conjunction with UNEs, to serve segments of the market. The FCC made exactly this same point in both its *Kansas/Oklahoma Remand Order*[89] and its recent *Massachusetts Remand Order*,[90] both of which dealt with price squeeze analysis in the context of a Section 271 proceeding. In the *Massachusetts Remand Order*, the FCC found the price squeeze analyses of complaining parties to be "materially insufficient" because, among other inadequacies, they

> did not … consider whether using a mix of the UNE-Platform and resale to provide service would affect their price squeeze arguments." *Massachusetts Remand Order*, ¶ 14.

The *Massachussetts Remand Order* refers for confirming support to the earlier *Kansas/Oklahoma Remand Order*, in which the FCC stated:

> In Oklahoma, even if we assume that appellant's basic analysis was correct, we find the analysis to be materially insufficient because it did not consider potential

[89] Order on Remand, *In re Joint Application by SBC Communications Inc. et al. for Provision of In-Region, InterLATA Services in Kansas and Oklahoma*, CC Docket No. 00-217, FCC 03-285 (FCC rel. Nov. 12, 2003) ("*Kansas/Oklahoma Remand Order*").

[90] Order on Remand, *In re Application of Verizon New England, Inc. et al. for Authorization to Provide In-Region, InterLATA Services in Massachusetts*, CC Docket No. 01-9, DA 04-422 (FCC rel. Feb. 20, 2004) ("*Massachusetts Remand Order*").

> revenues from interLATA or intraLATA toll or universal service support, nor did it consider whether using a mix of the UNE-Platform and resale to provide service would affect its price squeeze arguments. *Kansas/Oklahoma Remand Order*, ¶ 20.

See SBC Ill. Ex. 1.2 (Panfil Surrebuttal) at 6; SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 22. And, unlike UNEs, resale *is* a "service" and is clearly imputable under Section 13-505.1.[91] In short, SBC Illinois' form of imputation should be adopted by the Commission, not Staff's or the CLECs'.

There are also a number of technical issues associated with whatever imputation test is performed. Staff, for example, took the position that nonrecurring costs and revenues should not be included in an imputation test. Staff Ex. 4.0 (Koch Direct) at 34-35. Both SBC Illinois and the CLECs disagreed with Staff. Nonrecurring charges are part of the overall costs incurred to provide the total local service package that carriers other to end users. In competitive situations, carriers may even choose not to recover all nonrecurring costs in up-front charges to customers, but instead recover those costs over the life of the service in recurring charges. It is inappropriate from a ratemaking and economic perspective to assess nonrecurring costs and revenues separately from recurring costs and revenues. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 23.

On the other hand, the CLECs contend that nonrecurring costs and revenues should be amortized over a two-year "location life," rather than the four-year location life used by SBC Illinois. Joint CLEC Ex. 3.0 (Ankum Direct) at 13. SBC Illinois' four-year assumption is appropriate because it is based on actual customer data and reflects the period of time that an access line remains in service for individual customers at individual locations. Tr. 190-91 (Panfil). Since nonrecurring costs are incurred once by SBC Illinois at the time that service is

[91] Since resale rates are developed by subtracting an avoided cost discount from retail rates, all of SBC Illinois' business services would *per se* pass an imputation test based on resale.

installed for that customer, this is the appropriate period of time over which to ensure their recovery.

Staff also contended that, in an imputation test, the cost of the local switch port should be calculated by imputing the cost of a UNE local switch port, rather than by using its LRSIC cost. Staff Ex. 4.0 (Koch Direct) at 36-37. Staff is incorrect. Cost elements should be imputed only when competing providers have no choice (or almost no choice) but to obtain them from SBC Illinois. That is not the situation in the case of local switching. CLECs purchase over 25% of unbundled loops on a stand-alone basis (*i.e.*, not as part of a UNE-P that includes SBC Illinois' unbundled switch port), and provide the switching themselves. Therefore, the switch port should not be considered an imputed element in an imputation study. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 23-24.

Finally, the Joint CLECs claimed that "proxy retail-related expenses" should be included in an imputation test based on the average wholesale discount used by SBC Illinois to develop resale rates. Joint CLEC Ex. 3.0 (Ankum Direct) at 13-14. This is incorrect. Over the many years since imputation requirements were first incorporated into the PUA in 1992, SBC Illinois has never included "proxy retail" costs in any imputation study submitted to the Commission. SBC Ill. Ex. 1.1 (Panfil Rebuttal) at 22. Staff agreed that proxy retail-related costs have no place in an imputation test. Staff Ex. 16.0 (Koch Rebuttal) at 8.

B. Price Squeeze

SBC Illinois also provided analyses responsive to the more general concern that increases in UNE prices could result in a price squeeze for competitors and negatively impact their ability to compete in Illinois. *See, e.g.*, Staff Ex. 2.0 (Staranczak Direct) at 6-7, 13-14; CUB Ex. 1.0 (Baldwin Direct) at 8. In fact, the price changes proposed by SBC Illinois in this proceeding will have no such effect. Like imputation, a price squeeze analysis must account for *all* of the retail

service revenue opportunities that are available to CLECs using the UNE-P, including vertical features, calling services, carrier access, and other services. If an efficient CLEC can reasonably expect all of these revenues when it provides service to a typical customer, and if these revenues exceed the price it pays for UNE-P plus the costs it would incur to provide retailing functions, then there would be no price squeeze. SBC Ill. Ex. 7.0 (Aron Direct) at 26-27.

Dr. Aron conducted such an analysis, following guidelines established by the FCC in its Section 271 proceedings. Based on revenue data for SBC Illinois' customers in aggregate (including those who are very low users of telecommunications services), CLECs' margins would range from over $8 to over $22 per customer, per month, depending on the rate zone (and before considering available access revenues), significantly exceeding the $5 minimum used by the FCC as a benchmark. SBC Ill. Ex. 2.0 (Aron Direct) at 32; SBC Ill. Ex. 2.1 (Aron Rebuttal) at 65; SBC Ill. Ex. 2.2 (Aron Surrebuttal) at 28. CLECs, moreover, typically design their product offerings to appeal to the more intensive telecommunications users and could be expected to generate average revenues per line substantially in excess of SBC Illinois'. SBC Ill. Ex. 2.0 (Aron Direct) at 31.

It should be noted in this regard that Illinois has been one of the CLECs' *most* profitable states, nationwide. For example, by AT&T's own admission in its Triennial Review *ex parte* presentations to the FCC, CLECs can earn a gross margin in Illinois of *56 percent* under currently-effective UNE prices, the highest gross margin in the country. Using the assumptions provided by AT&T in its own *ex parte* analysis, AT&T would still earn at least a $10.43 gross margin per line under SBC Illinois' proposed rates. Similarly, a report by investment analysts at Banc of America Securities concluded that, at current UNE-P prices, AT&T generates a gross margin of $26.71 (*68 percent*) per local line in Illinois. Moreover, Banc of America's analysis

fails to include the access charges that AT&T stands to earn from its customers for originating and terminating long distance calls. When access charges are included, under SBC Illinois' *proposed rates*, AT&T's profit margins will be in the neighborhood of $20.86 per line (*49 percent*), according to Banc of America's revenue estimates. This is greater than the margin (in dollar terms) that AT&T admitted to the FCC was "sufficient," and substantially in excess of the minimum amount the FCC considered to be sufficient in its 271 decisions. SBC Ill. Ex. 2.1 (Aron Rebuttal) at 65-66. Finally, AT&T and MCI offer service today in states with UNE-P rates higher than SBC Illinois' proposed rates, and at retail price levels comparable to those they currently offer in Illinois. SBC Ill. Ex. 2.1 (Aron Rebuttal) at 67-72. In short, the UNE rate increases proposed by SBC Illinois will not create a price squeeze and should not result in CLEC rate increases – unless they choose to do so for political reasons.

IX. Other Legal Issues

A. Preemption, Tariffing And Related Issues

Tariffing issues were already addressed in the briefs filed early this year when this case was resumed. SBC Illinois incorporates its arguments from those briefs by reference, and will respond to any new arguments other parties choose to make now.

B. Procedural And Evidentiary Issues

In its rebuttal testimony, SBC Illinois provided more current labor rate data and reran its cost studies to reflect the updated labor rates. The Joint CLECs moved to strike certain portions of SBC Illinois's rebuttal testimony (and surrebuttal testimony), including the updated labor rate information and the rerun costs studies. Over SBC Illinois' objections, the Administrative Law Judges granted the motion with respect to the labor rate information. For the reasons set forth below, SBC Illinois respectfully suggests that the Administrative Law Judges erred in granting

the motion to strike and requests that the Commission use the updated labor rates as the basis for the rates that it is setting as part of this TELRIC proceeding.

First, notwithstanding the Joint CLECs' protestations, the updated labor rate information was legitimate rebuttal testimony. "Rebuttal evidence is that which answers, explains, repels, contradicts, or disproves evidence introduced" by an opposing party. *Gabrenas v. R.D. Werner Co.*, 451 N.E. 2d 1307, 1312, 116 Ill.App.3d 276, 283 (Ill. App. Ct. 1st Dis. 1983); *see also Brown v Sexner*, 405 N.E.2d 85, 1090, Ill.App.3d 139, 149 (Ill. App. Ct. 1st Dis. 1980) ("The fact that testimony might also be admissible in chief does not render it improper for rebuttal.") "[W]here a defendant introduces evidence of an affirmative matter in defense or justification, the plaintiff, as a matter of right, is entitled to introduce evidence in rebuttal as to such affirmative matter." *Gabrenas*, 451 N.E. 2d at 1312, 116 Ill.App.3d at 283 (citation omitted).

Here, AT&T's own witness, Robert Flappan, submitted 48 pages of testimony criticizing SBC Illinois labor rates, including complaining that they were out-of-date. *See, e.g.*, AT&T Ex. 4.0 (Flappan Direct) at 8 ("SBC's labor rates are based on embedded accounting data from 1999 . . . and are not consistent with TELRIC.") In direct response to Mr. Flappan's testimony, SBC Illinois witness David Barch provided up-to-date labor rates, which he and Dr. Currie used in the cost studies that each sponsored. SBC Ill. Ex. 7.1 (Barch Rebuttal) at 53-55, 76; SBC Ill. Ex. 5.1 (Currie Rebuttal) at 2-3.

Second, SBC Illinois updated its labor rates based on 2001 data, which makes it consistent with the vintage of the rest of the data used in its cost studies. Updating the labor rates to 2001 makes the costs and resulting rates more forward-looking and thus more in compliance with TELRIC. In addition, using updated labor rates is consistent with the decision by the Seventh Circuit Court of Appeals in *AT&T Communications*, in which the Seventh Circuit made

clear that it wanted the Illinois Commerce Commission to determine rates based on data more recent than 1998. *AT&T Communications*, 349 F.3d at 411.

Third, again contrary to the Joint CLECs' claims, updating labor rates was not inconsistent with SBC Illinois' commitments made at the December 19, 2003, status hearing in this matter. Updating labor rates, while implicating a number of studies, was not a massive redo of the entire studies. In fact, counsel for SBC Illinois made clear at the status hearing that, although it intended to proceed with the case as it existed in May 2003, when the docket was abated, SBC Illinois would obviously make adjustments based on the testimony and recommendations by the other parties. 12/19/03 Tr. 212. SBC Illinois also indicated that in response to certain assertions regarding the staleness of certain data, the rebuttal testimony would include some updating, again in the nature of rebuttal to comments made in the direct testimony of the Staff, CLECs and other intervenors in this docket. *Id.*

Fourth, none of the parties were prejudiced by SBC Illinois' update of the labor rates. This update constituted a very simple adjustment to the cost studies that did not require extensive analysis by the other parties or require them to rerun any costs studies. (Though it would not have been a difficult task, as SBC Illinois was able to back out the updated rates in just a few days in response to the order granting the motion to strike.)

For these reasons, the Commission should reverse the ruling of the Administrative Law Judges and order that SBC Illinois' rates be based on the updated labor rates contained in the rebuttal testimony of David Barch.[92]

[92] SBC Illinois will respond in its reply to any procedural or evidentiary issues raised by the CLECs in their initial brief.

X. Conclusion

For the reasons stated above, the Commission should approve the changes proposed by SBC Illinois for its UNE loop rates and non-recurring charges.

April 5, 2004

Respectfully submitted,

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