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February 4, 2003

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TWB-204
Washington, DC 20554

Re: Notice of Written Ex Parte Communication, In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket Nos. 01-338, 96-98 and 98-147

Dear Ms. Dortch:

On January 14, 2003, SBC filed an ex parte submission with the Commission that purported to offer a refutation of an analysis of UNE-L cost impairment offered by WorldCom and to propose its own preferred margin-based method for determining impairment.¹ SBC's effort succeeds at neither. First, even accepting SBC's error-ridden and understated analysis of CLEC cost impairment demonstrates that CLECs will be incapable of competing for customers served by analog lines if they must use UNE-L to reach these customers. Second, the margin method proposed by SBC to evaluate impairment is improper as both a matter of law and of economics. This submission provides a detailed evaluation and refutation of the positions taken in SBC's ex parte.²

¹ See ex parte letter from James C. Smith, SBC to Chairman Michael Powell, January 14, 2003 and ex parte letter from Gil M. Strobel, representing WorldCom to Marlene H. Dortch, January 8, 2003. Note that AT&T filed evaluations of CLEC economic impairment in an ex parte submission from Joan Marsh, AT&T to Marlene H. Dortch, on January 17, 2003. To the best of AT&T's knowledge, SBC has not attempted any refutation of this analysis.

² Although SBC has filed a further ex parte on these issues (letter from James C. Smith to Michael Powell, January 28, 2003, this latest submission makes no effort to correct any of the data or methodological errors that were present in its January 14, 2003 submission save correcting (without comment) an arithmetic error in this earlier submission. Similarly, BellSouth has also filed an undocumented viewgraph presentation (ex parte letter from Glenn T. Reynolds to Marlene Dortch, January 17, 2003) in which it appears follow the

Although SBC calculates that a CLEC seeking to use UNE-L to access unbundled loops faces a substantial cost disadvantage of roughly \$10 per line per month relative to its own costs, it claims that impairment should be evaluated only on the basis of a cursory margin analysis that (i) incorporates a panoply of telecommunications services, not just the local services that a CLEC may seek to offer; and (ii) assumes that this cost impairment can be dismissed so long as there is a small segment of extremely high revenue customers who (at least hypothetically) offer the CLEC sufficient margin to cover its calculated \$10 cost disadvantage. SBC's hypothetical "impairment" analysis is factually wrong in its calculation of actual cost impairment levels, wrong in its hypothetical assumptions about customer revenues, and, most important, wrong on the law and the underlying basic economics.

This analysis is divided into three parts. First, it evaluates the accuracy of SBC's development of the cost impairments suffered by CLECs seeking to provide voice service to customers served by analog loops. It finds that SBC makes numerous basic errors in its financial analysis. These include use of incomplete or inaccurate data, misunderstanding standard analytic practice for converting capital costs into monthly recurring costs, and errors in simple arithmetic. As a result of these numerous errors, SBC's overall cost impairment calculation of \$10 per line per month is significantly understated relative to the amount that would result if SBC's most basic errors were corrected. Second, this analysis shows that SBC's contention that CLEC impairment be measured with respect to expansive profit margins for a high-volume customer segment, rather than local service costs for all POTS customers, has no basis in economics and is properly precluded by the plain language of the Telecommunications Act. Furthermore, the analysis also demonstrates that only a very tiny fraction of the total residence market generates revenue levels that are as generous as SBC hypothesizes. Finally, the analysis examines SBC's actual calculation of hypothetical CLEC profit margins. It demonstrates that even if, *arguendo*, one accepts SBC's inadmissible impairment test, simple correction of either SBC's overstatement of the revenues available to CLECs or understatement of CLEC costs necessary to earn these putative revenues, demonstrates that CLECs will be unable to profitably address the residence market using UNE-L.

SBC's Inaccurate Calculation of Overall Cost Impairments

Attachment A to this paper demonstrates that SBC has made a number of significant errors in calculating the individual cost impairments that CLECs must suffer if they attempt to use their own switch to serve customers with voice-grade loops. The net effect of SBC's errors and omissions in calculating the cost of the "extra" network that CLECs must employ to access and extend their customers' loops is to substantially understate the CLECs' overall cost impairment. These errors and omissions result from SBC's failure to: (i) account for all of a competitor's collocation equipment and space requirements; (ii) employ accurate CLEC capital carrying costs including taxes; (iii)

same flawed procedures and employ similarly exaggerated hypothetical revenue data as SBC's submissions.

account for all of a competitor's operating and maintenance costs associated with this additional "backhaul" network; and (iv) recognize that CLEC backhaul networks can never be 100% "filled." SBC's failure to account correctly for all of these costs leads to an estimate of CLEC cost impairments that is probably too low by half.³

But despite SBC's inaccurate and understated execution of its cost impairment analysis, it nevertheless yields impairment figures that are of very great competitive significance. When added together, the individual components of SBC's analysis add up to about \$10 per line per month -- even before its patent data and methodological errors are corrected.⁴ Given the significance of the uncorrected SBC figure, the remainder of this analysis then assumes *arguendo* that SBC's \$10 cost impairment figure is correct.

SBC-calculated CLEC cost impairments

Impairment	California		Michigan		Texas	
	250 Lines	500 Lines	250 Lines	500 Lines	250 Lines	500 Lines
Collocation	\$2.43	\$1.22	\$5.11	\$2.63	\$2.75	\$1.47
Digital loop carrier	\$1.30	\$0.77	\$1.30	\$0.77	\$1.30	\$0.77
Backhaul transport	\$5.49	\$5.49	\$2.89	\$2.87	\$5.11	\$4.98
Hot cut	\$1.52	\$1.52	\$1.58	\$1.58	\$1.58	\$1.58
Total cost impairment	\$10.74	\$9.00	\$10.88	\$7.85	\$10.74	\$8.80

SBC's Faulty Impairment Test

SBC states that the cost impairment it has calculated should be irrelevant for the purposes of satisfying the Telecom Act. Rather, SBC claims that impairment should be measured only with respect to the overall profit margins that a CLEC might receive from a broad portfolio of services sold to a particular customer segment. In particular, SBC argues that a CLEC is not impaired in providing the services it seeks to provide so long as it could earn a positive profit margin from serving a hypothetical set of high volume customers that purchase an expansive suite of local and long distance services. SBC's proposed "impairment" test is wrong as to the law, wrong as to economics and even wrong in its "facts" about available customer revenues.

"Profit margins" are not a rational test for impairment - As noted by the Commission and elsewhere, profit margins are not the proper basis upon which to determine whether interconnection pricing is consistent with the Telecommunications'

³ SBC's error is especially large with respect to the 250 or 500 line backhaul networks that it investigates. Such "thin" backhaul networks are likely to have extra costs that are disproportionately higher than those incurred to provide "thicker" networks that would be used to serve more dense areas.

⁴ SBC's basic arithmetic error has been corrected in deriving these figures.

Act's pro-competitive intent and instruction that prices for unbundled network elements (and ultimately the retail services provided using those inputs) should be based on cost. The reason for this is simple. Because of the incumbents' monopoly position, current ILEC retail pricing frequently bears little relation to costs. Indeed, on average, current ILEC retail prices for telecommunications services are set well above cost.⁵ Thus, measuring CLEC impairment on the basis of current price-cost margins is a trap for the unwary.⁶ Competitors that enter based on such price bait and lacking cost parity will soon be squashed when the ILEC decides to exercise its cost advantage and reduce prices to the point at which entrants are made unprofitable.⁷ Critically, this is not just an academic concern. When faced with CLEC entry in Michigan, Illinois and California, SBC itself has dramatically reduced its retail prices – and focused these reductions on the high volume retail customer segments that it claims are the most profitable.

Indeed, SBC appears to recognize that a margin-based impairment test would violate basic economic principles. Thus, it offers two reasons to justify its otherwise prohibited use of this test. First, SBC asserts that impairment should be measured with respect to margins rather than costs because TELRIC costs are lower than what the ILECs' claim to be their "actual" costs. Second SBC claims that even if a CLEC enters at an impaired level of cost, it will not be driven from the market because the ILEC cannot exercise downwards pricing power – presumably because regulatory commission rules prevent ILECs from offering residence customers price cuts. These arguments are sheer nonsense.

The first argument is nothing more than a thinly disguised version of the ILECs' six-year refrain that "TELRIC is too cheap." That argument, however, was fully put to rest by the Supreme Court in *Verizon v. FCC*.⁸ In that case, the Court found that TELRIC pricing is lawful and that the kind of embedded cost methodology that the incumbents sought to impose would "defeat the competitive purpose of forcing efficient choices on all carriers whether incumbents or entrants."⁹ Further, the Court held that

⁵ See Lee Selwyn, "Subsidizing the Bell Monopolies: How Government Corporate Welfare Programs are Undermining Telecommunications Competition," *Economics and Technology*, April 2002 (finding that RBOC switched service revenues exceed their efficient costs by \$29 billion per year). Note that such pricing practices are completely consistent with economic theory. The managers and owners of firms that do not face close discipline from competitive suppliers always seek to raise their retail prices above competitive levels in order to return supracompetitive profits to their owners. See Jean Tirole, *The Theory of Industrial Organization*, MIT Press, 1988, pp. 62-94.

⁶ See Robert D. Willig, "Determining 'Impairment' Using the *Horizontal Merger Guidelines*' Entry Analysis," in ex parte letter from C. Fredrick Beckner, III representing AT&T to Marlene Dortch, November 14, 2002; Robert H. Bork, letter to Michael K. Powell attached to ex parte letter from C. Fredrick Beckner, III representing AT&T to Marlene Dortch, January 10, 2003; Laurence J. Kotlikoff, "Natural Monopoly and the Definition of 'Impairment'," attached to ex parte letter from Penelope K. Alberg, AT&T to Marlene Dortch, January 22, 2003 and ex parte letter from Gil M. Strobel, representing WorldCom to Marlene H. Dortch, January 27, 2003.

⁷ See Jean Tirole, *The Theory of Industrial Organization*, MIT Press, 1988, pp. 367-375.

⁸ *Verizon Communications, Inc. v. FCC*, 122 S.Ct. 1646 (2002).

⁹ *Id.* at 1673.

TELRIC is quite capable of providing incumbents with a reasonable return.¹⁰ Indeed, the Court noted that the ILECs' claim of confiscation was peculiar, because they did not offer a *single* instance of a specific confiscatory rate.¹¹ Accordingly, there is no evidence that TELRIC is in fact too cheap, and every reason to believe that TELRIC rates are fully compensatory, lawful, procompetitive and necessary to support new entry.

SBC's second argument is simply incredible, and flatly refuted by SBC's own actions in lowering local rates in response to competitive entry in California, Michigan and Illinois. Furthermore, Section 254(k) of the Telecom Act requires state regulators to *eliminate* implicit subsidies in telephone rates. SBC has not identified a single State commission that would prohibit it from reducing local rates, nor could it likely do so. The Commission cannot credit SBC's inference that it operates as a charity – collecting from the heavy-use customers and subsidizing the lower-use ones. Seven years ago, the Telecommunications Act directed that any implicit subsidies in retail rates must be made explicit, and SBC has not named any specific remaining subsidy flow to support its claim. Indeed, acting as a rational business, SBC has designed its current retail tariff structure to return the maximum possible total profit and competitive advantage.¹²

And in all events, the best proof that SBC's argument is made of whole cloth is its own actions in the marketplace. SBC has shown that it is fully capable of eliminating any artificial (non-cost-based) profit margin when it feels the need. In Michigan, in Illinois and in California, SBC has responded to residential UNE-P entry by reducing dramatically the local retail rates it charges residential customers – particularly the higher volume segment of these customers.

SBC's improper market definition - SBC appears to believe that a CLEC is not impaired under the Telecommunications Act with regard to a particular UNE if there exists *any* identifiable demand *segment* that offers a profit sufficient to subsidize its acknowledged \$10 per line monthly cost impairment. This view has no grounding in either the Telecommunications Act or in any accepted view of economic public policy. The stated goal of the Telecommunications Act is to bring pro-competitive benefits to “all Americans,” not just a few selected ones. And the market segment that SBC claims to have shown to be open to competition by cost-impaired UNE-L CLECs – assuming that SBC does not close its price umbrella -- is small indeed.

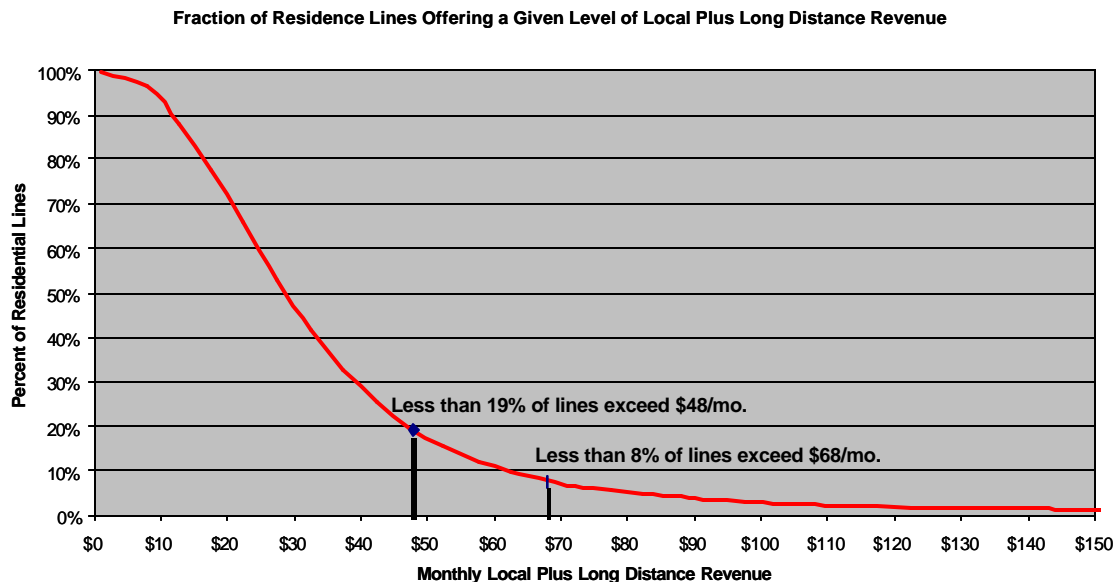
¹⁰ *Id.* at 1677.

¹¹ *Id.* at 1679, 1680.

¹² An example of the ILECs' ability to exercise their downward pricing power to maximize overall profits may be found in their low Centrex rates. Although the ILECs surely would prefer it if they were able to maintain prices for these Centrex local services at parity with their equivalent single and multiline business services, the ILECs have determined that their overall profitability will be higher if they provide Centrex services at deep discounts relative to equivalent business line rates.

SBC only attempts to show that CLECs could serve a residential customer base that offers revenues of \$48 to \$68 per line per month for local and long distance services.¹³ However, SBC has never, either in its initial proposal regarding such hypothetical revenues or in its instant ex parte, provided any documentation of the extent to which these hypothetical revenue figures comport with actual residence customer demand patterns.¹⁴

In fact, the proportion of customers SBC identifies as addressable by CLECs notwithstanding a \$10 cost impairment is tiny. Analysis of data collected by TNS Telecoms show that fewer than 19% of all residence lines provide \$48 in monthly local plus long distance revenue, and fewer than 8% provide \$68 in revenue.¹⁵ The following chart shows the small fraction of residential customer lines that would be addressable to UNE-L competitors under SBC's proposed definition of impairment – as well as the huge fraction that would be redlined from competition based on SBC's definition.



Source: TNS Telecoms Bill Harvesting® data

¹³ SBC tries to lighten the appearance of its burden by repeatedly referring to this target market as offering only \$40 to \$60 per line per month in revenues – without highlighting its further assumption that these figures do not include an additional \$8 in assumed SLC and access revenues.

¹⁴ SBC's initial treatment of putative CLEC revenues was provided in an ex parte letter from James C. Smith to Marlene Dortch, dated December 11, 2002. AT&T responded in an ex parte letter from Joan Marsh to Marlene Dortch, dated January 15, 2003. In its instant submission, SBC reinforces the point that its customer revenue figures are entirely hypothetical by declining to present any data or evidence vouching for these figures. Instead, SBC simply states that its entire justification for these figures was provided in its December 11, 2002 ex parte. But this response fails to acknowledge that SBC's December 11 ex parte was itself devoid of documentation or that AT&T's January 15 ex parte provided a documented refutation of the validity of these creamy revenue figures, and that SBC has provided no rebuttal to that showing.

¹⁵ See ex parte letter from Joan Marsh, AT&T to Marlene Dortch, January 15, 2003.

Perhaps in recognition that it lacks any data to demonstrate that the fraction of lines offering over \$48 or \$68 encompasses more than a niche portion of the total residential market, SBC adduces two “reasons” for why its use of these creamy figures may be “excused.”

First, it suggests that even though the typical residential customer line may offer an unprofitably smaller amount of revenue, these are not the customer lines that CLECs have acquired under UNE-P. Rather, SBC asserts, CLECs have been able successfully to “cherry-pick” only high-volume customers from the residential market segment. This undocumented allegation was refuted by AT&T in its January 15, 2003 *ex parte*, and data AT&T has been able to collect since that date make this refutation even more compelling. In the earlier *ex parte*, AT&T demonstrated that in Michigan, TNS data showed average CLEC residential customer local plus long distance revenues to be slightly less than the average residential customer revenues earned by SBC.¹⁶ Over the past two weeks, AT&T has been able to conduct a similar analysis of TNS data for Illinois – and the results agree with those from Michigan. CLEC residential customers generate no more local plus long distance per-line revenue as do residential customers that have stayed with SBC service. Thus, SBC cannot support its use of \$48 to \$68 in customer revenues by implying that such revenue ranges represent typical CLEC customers.

Second, SBC argues that even if \$48 to \$68 per month does not represent the typical residential customer, or even current CLEC customers, it represents CLECs’ aspirational customers. To support this claim, SBC references MCI’s Neighborhood calling plans and claims that these plans return revenues (exclusive of SLC and access) that are a minimum of \$50 to \$70 per line.¹⁷ First, this is false. While MCI is obviously happiest when it acquires a customer that selects its highest volume rate option (called “Neighborhood Complete”) – which in states with reasonable UNE-P rates (*e.g.*, Michigan, Illinois, California, New York, etc.) sells for \$49.99 plus SLC; MCI also offers much lower-cost alternative plans called “Neighborhood Advantage.”¹⁸ These less expensive plans cost only \$21.99 in California and \$27.99 in Michigan and Illinois. At an additional cost of \$0.07 per minute for long distance, a California customer would need to use over 400 minutes per month of long distance (over four times the national average) before it would find the higher-priced “Neighborhood Complete” plan to be advantageous. In Michigan and Illinois, a customer would need to use over 314 minutes per month of long distance (over three times the national average) before it would find the higher-priced plan to be advantageous. Thus, SBC’s focus on MCI’s highest volume plans is misplaced and provides only a far upper bound as to potential CLEC customer revenues.

¹⁶ Michigan was the first state AT&T chose for this analysis because it has been one where UNE-P has perhaps been its most successful at providing residential customers with competitive alternatives.

¹⁷ See SBC January 14, 2002 *ex parte* at p. 3.

¹⁸ MCI’s Neighborhood Complete plan offers unlimited local *and* long distance calling and multiple additional features. Neighborhood Advantage also offers unlimited local calling and multiple features, but generally does not include long distance charges. See http://www.mci.com/Res_Neighborhood_LTS.html.

SBC makes a similar allegation that AT&T chooses to serve only customers generating at least \$50 per month in revenues.¹⁹ AT&T of course seeks to gain as many of the highest value customers as it can, just as every ILEC seeks strongly to retain such customers. However, as the TNS Telecom Bill Harvesting[®] data show, such direct conflict between CLECs and ILECs over this desired customer segment has not to date shown the CLECs to be more successful at winning a higher volume customer mix than the ILECs. Moreover, for a large carrier like AT&T, it is critical to obtain volumes of customers, both large and small, when it enters new markets. Thus, AT&T, like WorldCom, has residential offers that are designed to appeal to all revenue segments. This is the only way for entrants to be successful over the long term and to fulfill the Act's intent to bring the benefits of competition to all Americans.

¹⁹ See ex parte letter from Brian J. Benison, SBC to Marlene Dortch, dated January 27, 2003 (noting that AT&T executive John Polumbo stated that high value customers are AT&T's focus and target).

SBC's incorrect margin calculation

Even if SBC were correct that margins, not costs, should measure impairment, and even if SBC were correct that only the profit margins from the highest possible volume customer segment should be used to determine whether CLECs are impaired for the entire market, SBC is still incorrect in its calculation of impairment levels.

SBC's impairment analysis runs as follows:

SBC calculation of CLEC impairment

	Impairment	California		Michigan		Texas	
		250 Lines	500 Lines	250 Lines	500 Lines	250 Lines	500 Lines
1	UNE Loop + hot cut	\$19.73	\$19.73	\$14.15	\$14.15	\$20.69	\$20.69
2	Collocation	\$2.43	\$1.22	\$5.11	\$2.63	\$2.75	\$1.47
3	Digital loop carrier*	\$1.30	\$0.77	\$1.30	\$0.77	\$1.30	\$0.77
4	Backhaul transport	\$5.49	\$5.49	\$2.89	\$2.87	\$5.11	\$4.98
5	CLEC switch	\$4.32	\$4.32	\$3.68	\$3.68	\$4.05	\$4.05
6	Cost of long distance	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
7	SG&A costs @ \$48 rev	\$9.60	\$9.60	\$9.60	\$9.60	\$9.60	\$9.60
8	SG&A costs @ \$58 rev	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60
9	SG&A costs @ \$68 rev	\$13.60	\$13.60	\$13.60	\$13.60	\$13.60	\$13.60
10	Total cost @ \$40 rev**	\$47.87	\$46.13	\$41.73	\$38.70	\$48.50	\$46.56
11	Total cost @ \$50 rev**	\$49.87	\$48.13	\$43.73	\$40.70	\$50.50	\$48.56
12	Total cost @ \$60 rev**	\$51.87	\$50.13	\$45.73	\$42.70	\$52.50	\$50.56
13	SBC assumed revenue**	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00
14	Implied net margin*	\$0.13	\$1.87	\$6.27	\$9.30	(\$0.50)	\$1.44
15	SBC assumed revenue**	\$58.00	\$58.00	\$58.00	\$58.00	\$58.00	\$58.00
16	Implied net margin*	\$8.13	\$9.87	\$14.27	\$17.30	\$7.50	\$9.44
17	SBC assumed revenue**	\$68.00	\$68.00	\$68.00	\$68.00	\$68.00	\$68.00
18	Implied net margin*	\$16.13	\$17.87	\$22.27	\$25.30	\$15.50	\$17.44

* Figures corrected for SBC arithmetic double-count of collocation costs in DLC cost

** Note that SBC-stated revenue figures of \$40/\$50/\$60 do not include \$8 of SLC and access revenue

However nearly every row in the above table is inaccurately or inappositely developed by SBC.²⁰ These errors are set forth in detail in Attachment A and summarized below.

- Row 2:* Because of under-resourcing of collocation needs and failure to account correctly for capital carrying costs, maintenance costs, operations costs and underfill, SBC's calculated collocation cost figure is likely no more than half of what is appropriate.
- Row 3:* SBC's DLC costs are exceedingly low and do not include the costs of other collocation equipment the CLEC would require, such as DS0 point-of-termination panels, DSx-3 termination panels, and assorted test equipment, etc. In addition, correct capital carrying costs, maintenance costs, operations costs and underfill are not accounted for in SBC's calculations. An accurate figure would be roughly three times higher than SBC's stated figure.
- Row 5:* SBC omits completely the costs a CLEC would incur for an interoffice transport network necessary for its customers to complete calls to customers served from other local switches. Overall figure is likely \$1 to \$2 too low.
- Row 6:* The cost of long distance is dramatically understated. The \$5 figure used by SBC was AT&T's estimate of just an *ILEC's* incremental cost to offer national average quantities of long distance (about 97 minutes per month for residence lines). A customer generating \$48 to \$68 in monthly local plus long distance revenue is almost surely using far more than 97 minutes of long distance per month. A more accurate long distance cost figure for customers generating these high revenue levels would be \$10/month in long distance cost for a \$48 customer and \$20/month for a \$68 customer.
- Rows 7-9:* AT&T does not agree that 20% SG&A costs are accurate for a CLEC entering a new market and seeking to acquire new customers. More than likely, these costs are significantly higher.

When just the cost errors detailed above are corrected, even SBC's high-volume local plus long distance customer margin impairment analysis shows that for all except the highest of the high-revenue customers in Michigan, a CLEC would earn a *negative* net margin, and thus not enter the local business in California, Michigan and Texas if it was unable to use UNE-P. And if SBC's hypothetical high-volume customers are discarded and the analysis focuses upon a residence line offering TNS' national average local plus long distance revenue of \$41 per month, net margins are significantly *negative* in *all* of SBC's examples.

²⁰ These errors are in addition to SBC's arithmetic error in double-counting collocation costs which has been corrected in the above table.

Corrected SBC-style calculation of CLEC impairment

	Impairment	California		Michigan		Texas	
		250 Lines	500 Lines	250 Lines	500 Lines	250 Lines	500 Lines
1	UNE Loop + hot cut	\$19.73	\$19.73	\$14.15	\$14.15	\$20.69	\$20.69
2	Collocation	\$4.86	\$2.44	\$10.22	\$5.26	\$5.50	\$2.94
3	Digital loop carrier*	\$3.90	\$2.31	\$3.90	\$2.31	\$3.90	\$2.31
4	Backhaul transport	\$5.49	\$5.49	\$2.89	\$2.87	\$5.11	\$4.98
5	CLEC switch	\$5.82	\$5.82	\$5.18	\$5.18	\$5.55	\$5.55
6	Cost of LD @ \$48 rev	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
6	Cost of LD @ \$50 rev	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
6	Cost of LD @ \$60 rev	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
7	SG&A costs @ \$48 rev	\$9.60	\$9.60	\$9.60	\$9.60	\$9.60	\$9.60
8	SG&A costs @ \$58 rev	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60
9	SG&A costs @ \$68 rev	\$13.60	\$13.60	\$13.60	\$13.60	\$13.60	\$13.60
10	Total cost @ \$40 rev**	\$59.40	\$55.39	\$55.94	\$49.37	\$60.35	\$56.07
11	Total cost @ \$50 rev**	\$66.40	\$62.39	\$62.94	\$56.37	\$67.35	\$63.07
12	Total cost @ \$60 rev**	\$73.40	\$69.39	\$69.94	\$63.37	\$74.35	\$70.07
13	SBC assumed revenue**	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00
14	Implied net margin*	(\$11.40)	(\$7.39)	(\$7.94)	(\$1.37)	(\$12.35)	(\$8.07)
15	SBC assumed revenue**	\$58.00	\$58.00	\$58.00	\$58.00	\$58.00	\$58.00
16	Implied net margin*	(\$8.40)	(\$4.39)	(\$4.94)	\$1.63	(\$9.35)	(\$5.07)
17	SBC assumed revenue**	\$68.00	\$68.00	\$68.00	\$68.00	\$68.00	\$68.00
18	Implied net margin*	(\$5.40)	(\$1.39)	(\$1.94)	\$4.63	(\$6.35)	(\$2.07)
	Average TNS revenue	\$41.00	\$41.00	\$41.00	\$41.00	\$41.00	\$41.00
	Implied net margin*	(\$12.00)	(\$7.99)	(\$8.54)	(\$1.97)	(\$12.95)	(\$8.67)

* Figures corrected for SBC arithmetic double-count of collocation costs in DLC cost

** Note that SBC-stated revenue figures of \$40/\$50/\$60 do not include \$8 of SLC and access revenue

Conclusion

Regardless of whether SBC's understated calculation of CLEC cost impairment is accepted or corrected, CLECs who are forced to use current collocation, hot cut and backhaul architectures to gain access to ILEC voice-grade loops will be at a substantial cost disadvantage relative to the ILEC. Even using SBC's understated \$10 figure for cost impairment results in the CLEC's disadvantage amounting to over 33% of CLEC average local revenues and over 24% of CLEC average local plus long distance revenues. These

are assuredly *not* “minor” disadvantages that can be made up in competitive markets. They simply will foreclose any competition by CLECs to serve analog line customers.

Consistent with Commission rules, I am filing one electronic copy of this notice and request that you place it in the record of the above-referenced proceedings.

Sincerely,

A handwritten signature in black ink, appearing to be 'JM', with a long horizontal line extending to the right.

Joan Marsh

cc: William Maher
Jeff Carlisle
Michelle Carey
Brent Olson
Rich Lerner
Scott Bergmann
Thomas Navin
Jeremy Miller
Rob Tanner

ATTACHMENT A

SBC's Calculation of CLEC Cost Impairment Is Understated and Wrong

SBC follows fairly standard practice in dividing the extra costs that a CLEC faces to access an unbundled analog line into four categories: collocation costs, digital loop carrier (DLC) costs, backhaul transport costs and hot cut costs.²¹ However, the validity of SBC's cost calculations varies substantially over these different categories. For some categories it fails to provide the source data and technical assumptions that it uses to develop the identified costs. For other categories, SBC appears to omit completely certain baseline costs that a CLEC must incur in order to successfully connect unbundled loops to its switch, and it also makes patent errors in other data assumptions, financial analysis methods and basic arithmetic.

Collocation costs - As a threshold matter, it is impossible to verify SBC's proposed virtual collocation cost figures because SBC provides no breakout of the virtual collocation resources that it assumes are needed for a CLEC to collect, digitize, concentrate, multiplex and otherwise prepare loops for backhaul.²² While it is possible that SBC's cost-out provides for all of this required equipment, this seems doubtful. The only snippet of technical information concerning collocation space that SBC offers is a claim that DLC equipment serving 2,048 customers could be located within a single bay. While SBC does not state what DLC equipment it believes meets this specification, the most common model of DLC that SBC currently uses is Alcatel Litespan-2000. However, such DLC equipment is capable of serving only 672 lines out of a single bay.²³ Thus, this suggests that SBC may be underestimating, possibly by a factor of *three*, a CLEC's collocation resource requirements.

In addition, the only piece of CLEC equipment that SBC mentions as being housed in this virtual collocation space is a GR-303 DLC. But as AT&T has documented, there must also be room to accommodate DS0 point-of-termination panels, DSx-3 termination panels, and assorted test equipment.²⁴ For small collocations of the type that SBC examines, necessary space accommodations for this additional equipment could itself

²¹ In this submission, SBC continues its practice of avoiding calling digital loop carrier equipment digital loop carrier (DLC) equipment. In its November 14 submission, SBC called DLC "loop converters" or "CLEC equipment." Here, SBC introduces another two names for DLC, "GR 303 concentration equipment" and "digitizing equipment." But, SBC also finally uses the term, "GR-303 DLC concentration equipment" on page 5 of its Attachment 3.

²² A list of the most significant of these elements required for physical collocation was provided by AT&T in its January 17, 2003 ex parte.

²³ Litespan-2000 documentation states that a 7-foot bay can accommodate four shelves of Litespan-2000 equipment. The first shelf would have to hold a common control assembly, the next three shelves could hold channel bank assemblies – each capable of supporting up to 224 lines. This yields a first bay capacity of 672 lines. See <http://www.alcatel.com/doctypes/opgdatasheet/pdf/datasheet/lsp2000.pdf> and DSC Practice, Litespan[®] General System Description, OSP 363-205-200, Issue 13, June 1998, Part 1 – Litespan-2000.

²⁴ AT&T January 17, 2003 ex parte.

require as much virtual collocation resource as is needed for just the DLC. Furthermore, SBC's assumption that CLECs will use virtual collocation imposes other costs that SBC does not account for. These include the CLEC's costs of (i) either maintaining its own remote monitoring and alarming equipment or paying SBC to perform this function; and (ii) paying SBC to train its central office personnel to provision, test and maintain its equipment, or to pay SBC to provide "escort" service if it wants its own technicians to perform these functions. Thus, without a more detailed accounting of what collocation resources SBC is including in its cost analysis, it is impossible to determine whether it has calculated correctly the complete virtual collocation costs that a CLEC would need to incur to use unbundled analog loops.²⁵

In any event, there are several reasons why SBC's claimed "amortized monthly cost per line" figures for collocation are significantly understated – even if SBC has calculated correctly and fully incorporated total CLEC capital costs for a virtual collocation adequate to serve 250 or 500 lines.

First, SBC uses faulty financial assumptions to convert nonrecurring costs (NRCs) into an amortized monthly equivalent. SBC's cost of capital assumption for a CLEC is 12.19% -- barely above the 11.25% that the Commission ascribes to the ILECs. Given the substantially greater risks faced by new entrant CLECs (especially ones that must employ UNE-L rather than UNE-P), as well as the acknowledged scarcity of capital for competitors, a more appropriate CLEC cost of capital is at least 15%, and possibly much higher. This error alone causes SBC to underestimate collocation NRC costs by 11.5%. SBC also fails to account for income taxes that would have to be paid on the equity component of this return.²⁶ Assuming a composite federal, state and local income tax rate of 40% and a 60% equity component would raise calculated NRC costs by another 25%. Thus, accounting for taxes and a more realistic cost of capital would produce amortized monthly costs of NRCs that are about 36% higher than the levels calculated by SBC.

Second, SBC divides its calculated figures for per-month amortized NRCs and monthly recurring costs by the full line capacity of the facility (*e.g.*, 250 or 500 lines). This is valid only if a CLEC can run its collocation facilities at 100% of their capacity. In the real world, of course, this is nonsense. The collocation facilities SBC has costed are "lumpy." That is, they vary on a coarser than per-line basis (*i.e.*, per frame, per 10 amp fuse, etc.). Thus, unless a CLEC always has just enough customers to fill completely all of its leased facilities, a unit cost developed by dividing total costs by 100% of potential capacity will overstate, perhaps severely, the actual per-sold-customer line cost. Indeed,

²⁵ To get a flavor for the variety and magnitude of the charges that ILECs impose for virtual collocation, it is useful to examine an ILEC virtual collocation tariff. Attached as an Exhibit to this filing is a copy of SBC's virtual collocation tariff for Missouri (accessed at: http://www.sbc.com/Large-Files/RIMS/Missouri/Local_Access/mo-la-03.pdf). This virtual collocation tariff was chosen because it has the most compact and readable format of the several that are available on SBC's website.

²⁶ It is possible that SBC's reasoning for ignoring income taxes is that it is assuming that CLECs will operate under 100% debt financing. Given the current unwillingness of the bond market to supply capital to the CLECs, this is fanciful.

even if a CLEC could control its customer counts in each ILEC LSO so as always to match exactly the facilities capacity it has in that LSO, it is still not possible to run a network at 100% of capacity. Spares must be available for maintenance and testing, and to accommodate ordinary customer churn. Such buffer needs typically limit effective to fill to 94%, and, indeed, the Commission's Synthesis model assumes that fill on DLC common equipment will be no higher than 82.5%. Accounting for this necessary but unsalable capacity would further increase SBC's estimates of per-line collocation costs.²⁷ Furthermore, SBC does not appear to include any costs that the CLEC might incur to operate and manage its virtual collocation facilities.

Thus, even assuming that SBC has included all of the virtual collocation resource costs that a CLEC would incur (and it seems likely that SBC has included only a *third* of these costs), just correcting SBC's procedures for translating these costs into amortized monthly per-line figures would raise SBC's stated figures by about 36%. And if SBC has under-resourced a CLEC's collocation requirements, the truly correct figure could be three times again higher.

Digital loop carrier costs - SBC states that the costs it presents for DLC are the EF&I cost of the hardware, software, cabling and wiring associated with GR-303 DLC concentration equipment employing a 4:1 concentration ratio. It also states that that these costs reflect the actual prices paid by SBC's own CLEC affiliate for similar equipment installed in virtual collocation space. And it claims the above capital costs amount to \$50.38 per line (\$0.77 per line per month on an amortized basis) for a 500 line facility and \$84.98 per line (\$1.30 per line per month on an amortized basis) for a 250 line facility.

These figures are extraordinarily low. First, these DLC capital costs do not appear to be consistent with prior figures SBC has advocated, and they are vastly lower than the costs assumed in the Commission's Synthesis model. On November 14, 2002 SBC submitted an *ex parte* communication in this docket that claimed the capital cost of a 100-line DLC system was \$150/line, and implied that the cost of a 500 line system would be somewhat less, perhaps in the \$100 range.²⁸ The figures that SBC provides here are only about half as large. Indeed, a 500-line DLC system is priced by the Commission's Synthesis model at between \$200 and \$275 per line in capital costs.²⁹ AT&T also believes that in the numerous state public utility commission meetings where SBC as advocated particular

²⁷ AT&T is not aware of any regulatory proceeding in which SBC has advocated that per-line telecommunications costs be developed on the basis of 100% fill.

²⁸ See *ex parte* letter from Jan Bennett, SBC to Marlene Dortch, November 14, 2002.

²⁹ Because the Synthesis model assumes that DLCs are placed in remote terminals rather than located in central offices, a modest portion of total Synthesis model costs (attributable to the protective cabinet and a few other items) might be unnecessary in the current application. Unadjusted, the Synthesis model estimates the per-sold-customer line cost of a 500 line GR-303 DLC at about \$275. Elimination of the unnecessary items in this cost estimate is not likely to reduce the implied cost below \$200 to \$225 per-sold-customer line. Indeed, just the per-line cost of DLC channel cards in the Synthesis model is \$75 – already 50% higher than SBC's quote for a completely equipped DLC.

DLC costs, it has never proposed capital cost figures nearly as low as it has here. Even the HAI model -- a model that SBC has denigrated in every regulatory proceeding where it has been introduced -- would generate over \$138 in per line capital investments for a 500-line DLC as costed by SBC. Because SBC does not provide any piece-by-piece accounting for its DLC costs, it is impossible to determine exactly the source of its error, but conservatively, SBC's estimate of DLC costs is no more than half of what a CLEC would need to spend for such equipment.

In any event, even if SBC were correct that DLC-specific capital costs are as inexpensive as it claims here, SBC's quoted figure understates the *total* capital costs of collocated CLEC equipment because it does not appear to account *at all* for the other equipment that a CLEC must collocate (*e.g.*, DS0 POT panels, DSx-3 panels, etc.) in order to collect unbundled analog loops. Furthermore, SBC's conversion of these DLC and other capital costs into an amortized monthly per-line cost suffers from the same understatements (due to understated cost of capital, omission of taxes, failure to account for necessary underfill, etc.) that affect its development of virtual collocation costs.

Backhaul transport costs - SBC's calculation of backhaul transport cost is much more detailed than its development of other impairment costs. These figures are credible given the assumptions SBC has made (*e.g.*, 25 miles of DS1 transport, one LSR, etc.) about the character of facilities being acquired.

Hot cut costs - Although SBC's description of its hot cut capabilities is hyperbolic, its calculation of direct ILEC charges for hot cuts is reasonable.³⁰ AT&T does believe, however, that current inefficient ILEC hot cut practices will cause CLECs to incur internal costs that exceed \$10/loop to coordinate and accept these cross-connects.

Summation of impairment costs - SBC appears to make a basic arithmetic error in summing a CLEC's individual impairment costs to calculate "Total CLEC Facility Expense" in its Attachment 6. In particular, SBC double-counts the cost of collocation by accounting for it in its own individual column, and then also adding its cost into the column listing GR-303 expense. This SBC arithmetic error explains why SBC's Attachment 6 shows different costs for DLC in different states -- when these costs are not specific to any jurisdiction. This double-count error also infects SBC's "CLEC Margin Analysis" reported in Table A. In all of the subsequent analysis performed in this submission, AT&T corrects for the effects of this SBC arithmetic error.

³⁰ AT&T strongly disagrees with SBC's self-assessment of its hot cuts capacities and quality. But since these issues are extraneous to the current exercise we will not address them here.

EXHIBIT

SBC-Missouri virtual collocation tariff attached and accessed via the internet at:

http://www.sbc.com/Large-Files/RIMS/Missouri/Local_Access/mo-la-03.pdf