

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

Case No. 2003-00379

Direct Testimony of

Steven E. Turner

Exhibit SET-5



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February 4, 2003

Ms. Marlene Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> 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.<sup>1</sup> 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.<sup>2</sup>

<sup>1</sup> 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.

<sup>2</sup> 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)

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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.<sup>3</sup>

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.<sup>4</sup> 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
<b>Total cost impairment</b>	<b>\$10.74</b>	<b>\$9.00</b>	<b>\$10.88</b>	<b>\$7.85</b>	<b>\$10.74</b>	<b>\$8.80</b>

#### *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'

<sup>3</sup> 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.

<sup>4</sup> 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.<sup>5</sup> Thus, measuring CLEC impairment on the basis of current price-cost margins is a trap for the unwary.<sup>6</sup> 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.<sup>7</sup> 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*.<sup>8</sup> 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."<sup>9</sup> Further, the Court held that

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<sup>5</sup> 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.

<sup>6</sup> 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.

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

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

<sup>9</sup> *Id.* at 1673.

TELRIC is quite capable of providing incumbents with a reasonable return.<sup>10</sup> 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.<sup>11</sup> 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.<sup>12</sup>

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.

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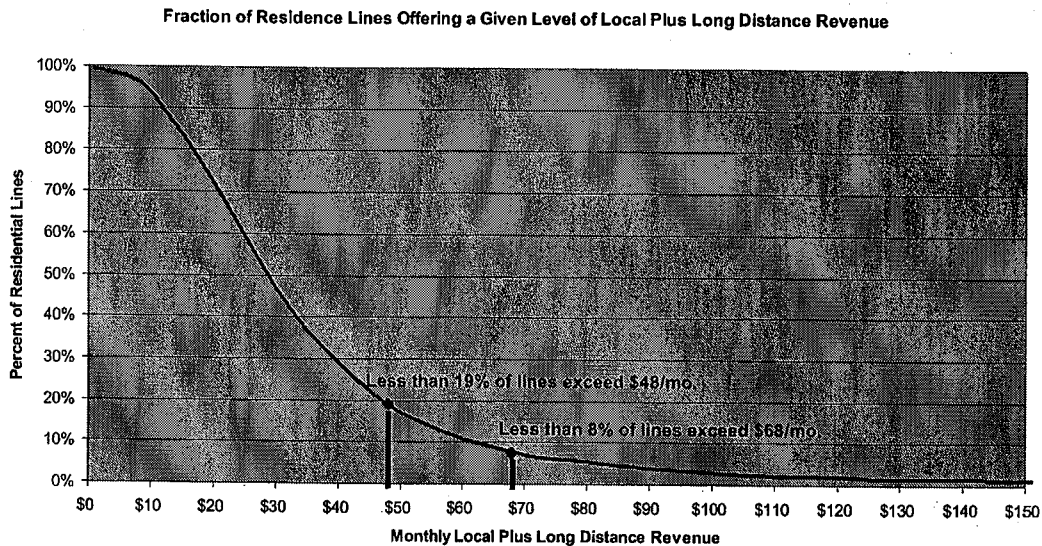
<sup>10</sup> *Id.* at 1677.

<sup>11</sup> *Id.* at 1679, 1680.

<sup>12</sup> 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.<sup>13</sup> 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.<sup>14</sup>

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.<sup>15</sup> 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<sup>®</sup> data

<sup>13</sup> 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.

<sup>14</sup> 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.

<sup>15</sup> 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.<sup>16</sup> 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.<sup>17</sup> 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."<sup>18</sup> 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.

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<sup>16</sup> 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.

<sup>17</sup> See SBC January 14, 2002 *ex parte* at p. 3.

<sup>18</sup> 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](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.<sup>19</sup> 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<sup>®</sup> 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.

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<sup>19</sup> 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.<sup>20</sup> 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.

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<sup>20</sup> 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.<sup>21</sup> 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.<sup>22</sup> 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.<sup>23</sup> 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.<sup>24</sup> For small collocations of the type that SBC examines, necessary space accommodations for this additional equipment could itself

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<sup>21</sup> 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.

<sup>22</sup> 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.

<sup>23</sup> 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.

<sup>24</sup> 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.<sup>25</sup>

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.<sup>26</sup> 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,

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<sup>25</sup> 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](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.

<sup>26</sup> 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.<sup>27</sup> 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.<sup>28</sup> 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.<sup>29</sup> AT&T also believes that in the numerous state public utility commission meetings where SBC as advocated particular

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<sup>27</sup> 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.

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

<sup>29</sup> 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.<sup>30</sup> 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.

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<sup>30</sup> 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](http://www.sbc.com/Large-Files/RIMS/Missouri/Local_Access/mo-la-03.pdf)

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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 St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION

**1.0 GENERAL DESCRIPTION**

This Section of the Access Service Tariff provides for Virtual Collocation for the purpose of interconnecting to SWBT for the transmission and routing of telephone exchange service and exchange access pursuant to 47 U.S.C. §251 (c)(2), and for access to SWBT's Unbundled Network Elements ("UNEs") pursuant to 47 U.S.C. §251 (c)(3) of the FTA 96 when the virtually collocated telecommunications equipment (hereafter referred to as equipment) is provided by the Collocator. In a Virtual Collocation arrangement, the Collocator designates the equipment to be placed at SWBT's premises. The Collocator, however, does not have physical access to such premises. Instead, the equipment is under the physical control of SWBT, and SWBT is responsible for installing, maintaining and repairing such equipment, except where collocation is provided pursuant to the alternative virtual collocation arrangement set forth in section 14.0. SWBT will offer Virtual Collocation even when physical collocation space is available.

Upon request from a collocator, SWBT will provide one of the following maintenance alternates for its virtual collocation offering:

- (1) In all of SWBT's premises SWBT will offer virtual collocation wherein SWBT maintains and repairs the virtually collocated equipment consistent with the rates, terms and conditions as provided for in Paragraphs 1.1 through 13.4 of this tariff section.
- (2) In CEVs, huts and cabinets where physical collocation space is not available, a Collocator may opt for virtual collocation wherein the Collocator maintains and repairs the virtually collocated equipment as described in Paragraph 14.0 following and consistent with the rates, terms and conditions as provided for throughout this entire tariff section. SWBT may at its option, elect to offer this maintenance alternative in one or more of its central offices, and in one or more of its CEVs, huts and cabinets where physical collocation space is available. As described in Paragraph 14.0, this maintenance alternative is contingent on the provision of a security escort paid for by the Collocator. In the event the FCC determines that SWBT may not require a security escort paid for by the Collocator, then this virtual collocation maintenance alternative as described in this Paragraph 1.0 (2) and in Paragraph 14.0 is null and void and all virtual collocation will be maintained as described in Paragraph 1.0 (1) above.

Virtual Collocation in the Central Office is available for interconnection with SWBT for the transmission and routing of telephone exchange service and exchange access as well as SWBT-provided UNEs. Virtual Collocation in CEVs, Huts and Cabinets is available for interconnection with SWBT-provided UNEs.

Rates for the individual UNEs the Collocator wants to gain access to for virtual collocation purposes can be found in the individual Collocator's Interconnection Agreement with SWBT.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**1.0 GENERAL DESCRIPTION (Continued)**

SWBT will exercise physical control over any equipment deployed for the purpose of Virtual Collocation.

A description of the rate categories applicable to Virtual Collocation for the purpose of interconnecting to SWBT within SWBT's Central Offices is contained in 13.1 and 18.4, Rate Elements for SWBT Central Offices. A description of the rate categories applicable to Virtual Collocation for the purpose of interconnecting to SWBT within SWBT's CEVs, Huts and Cabinets is contained in 13.2, Rate Elements for SWBT CEVs, Huts and Cabinets.

- 1.1** Virtual Collocation for Interconnection to SWBT for the Transmission and Routing of Telephone Exchange Service and Exchange Access, and for Interconnection with SWBT-Provided UNEs when the Equipment is Provided by the Collocator.

Virtual Collocation provides for interconnection between SWBT and the facilities of a virtual Collocator and is available for the transmission and routing of telephone exchange service and exchange access in SWBT Central Offices and for interconnection with SWBT-provided UNEs in SWBT Central Offices and CEVs, Huts and Cabinets.

Virtual Collocation is available at SWBT wire centers as specified in the National Exchange Carrier Association, Inc., Tariff F.C.C. No. 4 and in SWBT CEVs, Huts and Cabinets. Upon request, SWBT will provide a listing of locations of SWBT CEVs, Huts or Cabinets.

The rate elements provided in this tariff section are required when Collocators use virtual collocation equipment to access UNEs. Such access is provided through cross connects purchased from the Collocator/SWBT Interconnection Agreement. Unbundled network elements including associated cross connects are obtained from the Interconnection Agreement between the Collocator and SWBT. Cross connects associated with UNEs establish the circuit between the virtually collocated equipment and these cross connects are the point at which services provided and purchased from the SWBT/Collocator Interconnection Agreement begin. Virtually collocated equipment is available as follows:

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Issued: September 12, 2001

Effective: October 12, 2001

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## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 1.0 GENERAL DESCRIPTION (Continued)

Virtual Collocation for Interconnection to SWBT for the Transmission and Routing of Telephone Exchange Service and Exchange Access, and for Interconnection with SWBT-Provided UNEs when the Equipment is Provided by the Collocator. (Continued)

- (A) A Collocator shall purchase from the vendor the equipment to be virtually collocated subject to the provisions as set forth in 1.1 (B) below and the equipment conforming to industry safety standards as described in SWBT's Technical Publication.

The Collocator may locate all equipment necessary for interconnection to SWBT under 47.U.S.C. 251 (C) (2) or accessing SWBT's unbundled network elements under 47.U.S.C. 251 (C) (3) of the FTA 96. In addition, SWBT currently will permit the collocation of DSLAMs, routers, ATM multiplexers, remote switching modules, and certain other equipment, the types of which and conditions upon which such will be permitted must be mutually agreed upon by SWBT and Collocator, in SWBT Eligible Structures. This tariff does not constitute, and shall not be asserted to constitute, an admission or waiver by any party of any rights, remedies or arguments with respect to the issue of what types of equipment Collocators may place in SWBT's premises or any other issue whatsoever before the Missouri Public Service Commission, the Federal Communications Commission, or any other regulatory body or state or federal court. The collocator will certify in writing to SWBT that the equipment is necessary for interconnection or access to unbundled network elements. In the event that SWBT believes that the collocated equipment is not of a type that is necessary for interconnection or access to unbundled network elements, is not of a type that SWBT permits as referenced above, or will not be or is not being used for interconnection or access to unbundled network elements, SWBT shall notify the Collocator and provide Collocator with ten (10) days to respond. In the event SWBT believes that the collocated equipment is not necessary for interconnection or access to unbundled network elements or determines that the Collocator's equipment does not meet Bellcore NEBS Level 1 Safety requirements, the Collocator will be given ten (10) business days to comply with the requirements or remove the equipment from the collocation space. If the parties do not resolve the dispute, SWBT or Collocator may file a complaint at the Commission seeking a formal resolution of the dispute. If it is determined that the Collocator's equipment is not Bellcore NEBS Level 1 Safety compliant, the Collocator will be responsible for removal of the equipment and all resulting damages.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

1.0 GENERAL DESCRIPTION (Continued)

1.1 Virtual Collocation for Interconnection to SWBT for the Transmission and Routing of Telephone Exchange Service and Exchange Access, and for Interconnection with SWBT-Provided UNEs when the Equipment is Provided by the Collocator. (Continued)

- (B) Regarding safety, Collocator equipment or operating practices representing a significant demonstrable technical or physical threat to SWBT's personnel, network or facilities, including the Eligible Structure, or those of others are strictly prohibited. Regarding safety, and notwithstanding any other provision hereof, the characteristics and methods of operation of any equipment or facilities placed in the virtual collocation space shall not create hazards for or cause damage to those facilities, the virtual collocation space, or the Eligible Structure in which the virtual collocation space is located; impair the privacy of any communications carried in, from, or through the Eligible Structure in which the virtual collocation space is located; or create hazards or cause physical harm to any individual or the public. Any of the foregoing would be in violation of this tariff.

SWBT requires that all equipment to be collocated in SWBT's Eligible Structures meet Level 1 safety requirements as set forth in Bellcore Network Equipment - Building Systems (NEBS), but SWBT may not impose safety requirements on the Collocators that are more stringent than the safety requirements it imposes on its own equipment. SWBT may not deny collocation of Collocator's equipment because the equipment fails to meet Bellcore NEBS reliability standards. SWBT will publish, at least quarterly, a list of all network equipment installed within the network areas of its facilities within the previous twelve (12) months that fails to meet the Level 1 Safety requirements of Bellcore NEBS, and update the list as needed to keep it current. In the event that SWBT believes that the collocated equipment is not necessary for interconnection or access to unbundled network elements or determines that the Collocator's equipment does not meet Bellcore NEBS Level 1 Safety requirements, the Collocator will be given ten (10) business days to comply with the requirements or remove the equipment from the collocation space. If the parties do not resolve the dispute, SWBT or Collocator may file a complaint at the Commission seeking a formal resolution of the dispute. If it is determined that the Collocator's equipment is not Bellcore NEBS Level 1 Safety compliant, the Collocator will be responsible for removal of the equipment and all resulting damages.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

1.0 GENERAL DESCRIPTION (Continued)

1.1 Virtual Collocation for Interconnection to SWBT for the Transmission and Routing of Telephone Exchange Service and Exchange Access, and for Interconnection with SWBT-Provided UNEs when the Equipment is Provided by the Collocator. (Continued)

(C) A Collocator may arrange for a mutually agreed upon vendor/contractor to engineer and install the virtually collocated equipment the Collocator purchases and the Collocator may pay the vendor/contractor directly. The installation contractor and their activity will be under the direction and control of Collocator who will ensure that the installation contractor meets all standards and requirements for installation of equipment, as required under this Tariff. If SWBT chooses to have its personnel present when the CLEC equipment is installed, then SWBT's presence will be at its own expense. However, if SWBT demonstrates that the CLEC contractor has or would have violated any standard or requirement for installation of equipment, as required under this tariff, the CLEC is responsible for the quantifiable expense incurred by SWBT.

1.2 Federal Telecommunications Act of 1996

SWBT provides virtual collocation for interconnection to SWBT for the transmission and routing of telephone exchange service and exchange access pursuant to 47 U.S.C. §251(c)(2), and for access to SWBT's unbundled network elements pursuant to 47 U.S.C. §251(c)(3).

The use of virtual collocation for (1) interconnection to SWBT or (2) access to SWBT's unbundled network elements, in either case pursuant to 47 U.S.C. §251(c), is available at SWBT wire centers as specified in the National Exchange Carrier Association, Inc., Tariff F.C.C. No. 4, and in SWBT CEVs, Huts and Cabinets.

2.0 PROVISIONING

Virtual collocation for Interconnection to SWBT or access to SWBT-provided UNEs is ordered as set forth in SWBT's Interconnector's Collocation Services Handbook for Virtual Collocation in Missouri. SWBT will designate the location or locations within its wire centers, CEVs, Huts and Cabinets for the placement of all equipment and facilities associated with virtual collocation. Virtual collocation does not involve the reservation of segregated central office or CEV, Hut and Cabinet space for the use of Collocators.

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Issued: September 12, 2001

Effective: October 12, 2001

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## LOCAL ACCESS SERVICE

### VIRTUAL COLLOCATION (Continued)

#### 2.0 PROVISIONING (continued)

Virtual Collocation is available for the direct connection of one Collocator-provided facility to a different interconnected provided facility within the same SWBT wire center, CEV, Hut or Cabinet provided the Collocator is interconnected with SWBT's network.

SWBT will provide Virtual Collocation for comparable equipment as it provides to itself in the central office, wire center, CEV, Hut or Cabinet, as the case may be.

#### 3.0 COLLOCATOR RESPONSIBILITIES

The customer will provide, under this section of the tariff, at its expense, all facilities and equipment required to facilitate interconnection and access to SWBT UNEs. The customer will, at its expense, provide the following:

- All plug-ins and/or circuit packs (working, spare, and replacements),
- All unique tools and test equipment,
- Any ancillary equipment and cabling used for remote monitoring and control,
- Any technical publications and updates associated with all Collocator-owned and provided equipment,
- All training as described in Section 13.1(Q),

The Collocator will provide, at its expense, replacements for any recalled, obsolete, defective or damaged facilities, equipment, plug-ins, circuit packs, unique tools, test equipment, or any other item or material provided by the Collocator for placement in/on SWBT property. Suitable replacements are to be immediately provided to SWBT to restore equipment.

The Collocator will provide at least the minimum number of usable equipment spares specified by the manufacturer. Replacements must be delivered to the SWBT central office using the equipment spare within five (5) days of notification that a spare was used or tested defective.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

**4.0 COOPERATIVE RESPONSIBILITIES**

SWBT will work cooperatively with the Collocator to develop implementation plans including timelines associated with:

- Placement of Collocator's fiber into the central office vault,
- Location and completion of all splicing,
- Completion of installation of equipment and facilities,
- Removal of above facilities and equipment,
- To the extent known, the Collocator can provide forecasted information to SWBT on anticipated additional Virtual Collocation requirements,
- To the extent known, the Collocator is encouraged to provide SWBT with a listing of the equipment types that they plan to virtually collocate in SWBT central offices or CEVs, Huts and Cabinets. This cooperative effort will insure that SWBT personnel are properly trained on Collocator equipment.

**5.0 INTERVALS AND PROVISIONING****5.1 Quote Intervals**

In responding to an application request, SWBT shall provide the quotation of the applicable nonrecurring and recurring tariff rates, and the estimated construction interval no later than as specified below. The Collocator has forty-five (45) business days from receipt of the quotation to accept the quotation. The quotation expires after forty-five (45) business days. After forty-five (45) business days, a new application and application fee are required.

Price quote intervals are as follows and will run concurrent with the ten (10) day notification interval for availability of virtual collocation interconnection:

Number of Applications by One Collocator	Quotation Interval
1- 5	10 Business Days
6-20	25 Business Days

Should the Collocator submit twenty-one (21) or more applications within five (5) business days, the quotation interval will be increased by five (5) business days for every five (5) additional applications or fraction thereof. Any material revision to an application will be treated as a new application and will be subject to the time intervals set forth above.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 5.0 INTERVALS AND PROVISIONING (Continued)

## 5.1 Quote Intervals (Continued)

A Collocator may obtain a shorter interval for the return of price quotes for virtual collocation arrangements when submitting 6 or more applications if the Collocator files complete applications, including identification of specific rate elements and the applicable rates contained in this tariff, the exact quantity of the rate elements, and an up-front payment of the nonrecurring application fee from paragraph 13.1 of this Tariff and schedules a meeting with SWBT at least twenty (20) business days prior to submission of the first application to discuss, coordinate and prioritize the Collocator applications. In addition, the applications must include an accurate front equipment view (a.k.a. rack elevation drawing) specifying bay(s) for the Collocator's point of termination. The shortened intervals are:

Number of  
Applications by One  
Collocator  
1-5  
6-20

Quotation Interval  
10 Business Days  
20 Business Days

Should the Collocator submit twenty-one (21) or more applications within five (5) business days, the quotation interval will be increased by five (5) business days for every five (5) additional applications or fraction thereof. Any material revision to an application will be treated as a new application and will be subject to the time intervals set forth above.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 5.0 INTERVALS AND PROVISIONING (Continued)

## 5.1 Quote Intervals (Continued)

Once SWBT has completed its review of the virtual collocation application form inquiry, the entire completed quote package will be forwarded to the potential interconnector in writing with a cover letter. The interconnector has 45 days to remit a signed confirmation form along with a check for 50% of all the applicable nonrecurring charges.

If the interconnector fails to respond within the 45-day interval, should the interconnector decide at a later time to proceed with virtual collocation, a new application and Planning Fee will be required.

## 5.2 Implementation Intervals

A virtual collocation arrangement is not reserved until the quotation is accepted. When the quotation is accepted, unless otherwise mutually agreed to by the Parties in writing, SWBT will allow the Collocator's vendor to begin equipment installation no later than 90 days from acceptance of the quotation. The virtual collocation interval ends when roughed in, unterminated DC power and interconnection cabling is provided to the virtual collocation area.

The construction intervals for virtual collocation arrangements are noted in Table 2-1. For Virtual Collocation in Active Collocation Space where the Collocator is requesting maximum DC Power of 50 amps, either in a single or in multiple feeds of 50 amps (maximum 50 amps per feed), the Virtual Collocation construction intervals remain as stated below. For Virtual Collocation in Active Collocation Space where a Collocator is requesting DC Power that exceeds 50 amps from a single source (e.g., 100 amps) per feed, the construction interval is 90 days. These same construction intervals apply for virtual collocation in Eligible Structures such as CEVs (Vaults), Huts and Cabinets.

When the quotation is accepted, unless otherwise mutually agreed to by the Parties in writing, the construction intervals for virtual are as follows:

Type	Description	Interval	Exception
Virtual	Active collocation space	70 days	With SWBT installation of bays/racks/frames
Virtual	Active collocation space	55 days	With CLEC installation of bays/racks/frames

Table 2-1

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**5.0 INTERVALS AND PROVISIONING (Continued)**

**5.2 Implementation Intervals (continued)**

Virtual collocation space is not reserved until the quotation is accepted. When the quotation is accepted unless otherwise mutually agreed to by the Parties in writing, SWBT will complete construction of Active Collocation Space requests for virtual collocation in 55 days from the receipt of the Collocator's acceptance of the quotation where power is available and the Collocator is installing all of its own bays. The virtual collocation construction interval ends when roughed in, unterminated DC power and interconnection cabling is provided to the collocation area. SWBT will complete construction of Active Collocation Space requests for virtual collocation in 70 days from the receipt of the Collocator's acceptance of the quotation where SWBT will be installing all or some of the bays. SWBT considers power to be available if sufficient power plant capacity exists, the BDFB (if used) is within 100 feet of the Collocator's space and sufficient termination capacity on the power plant and/or BDFB exists.

If a completion date outside the time period required herein is not agreed to by the parties, the issue may be presented by either party to the Missouri Public Service Commission for determination

**5.3 Installation of Virtual Collocation Equipment**

SWBT does not assume any responsibility for the design, engineering, testing, or performance of the end-to-end connection of the Collocator's equipment, arrangement, or facilities.

SWBT will be responsible for using the same engineering practices as it does for its own similar equipment in determining the placement of equipment and engineering routes for all connecting cabling between collocation equipment.

In this arrangement, telecommunications equipment (hereafter referred to as equipment) is furnished by the CLEC and engineered and installed by a mutually agreed upon vendor for the Collocator. The Collocator will have the authority to select installation vendors. All installations of equipment will be in accordance with the Collocator-provided installation design and must comply with manufacturer's specifications and applicable published national standards approved by the FCC, and other governmental authorities that have jurisdiction.

The Collocator and SWBT must jointly accept the installation of the equipment and facilities prior to the installation of any services using the equipment. As part of this acceptance, SWBT will cooperatively test the collocated equipment and facilities with the Collocator.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**5.0 INTERVALS AND PROVISIONING (Continued)**

**5.3 Installation of Virtual Collocation Equipment (continued)**

SWBT will provide TIRKS and/or SWITCH print out of actual point of termination/connection facilities assignment (APOT/CFA) to CLEC's at collocation space turnover. This information is used to request access and line sharing services. The CLEC is responsible for payment of all non-recurring charges, where applicable, prior to receiving APOT/CFA information.

**5.4 Revisions**

All Revisions to an initial request for a virtual collocation arrangement submitted by the Collocator must be in writing via a new application form.

**Major Revisions:**

**Major revisions include:**

- adding telecommunications equipment that requires additional electrical power
- accelerating the project schedule
- adding additional Collocator bays or equipment that impact the existing/proposed floor-space area provided to the Collocator in their quote package.

If the revision is major, a new interval for the virtual collocation arrangement will be established which shall not exceed two months.

**Minor Revisions**

**Minor revisions include:**

- adding bays of equipment that do not significantly impact the existing/proposed electrical systems
- adding light fixtures and outlets which do not exceed the capacity of the existing/proposed electrical system
- adjustments to the heat release projection which do not cause a change in the proposed/existing mechanical system

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**5.0 INTERVALS AND PROVISIONING (Continued)**

**5.4 Revisions (Continued)**

However, minor revisions will not require that a new interval be established. No additional application fees shall be applicable if the revision is minor.

This list is not all-inclusive. Any revisions to the Collocators application not specified above must be reviewed by SWBT to determine whether the revision is major or minor.

**5.5 Augments**

In order to request an augment, the Collocator must submit a Virtual Collocation Application Form to SWBT Collocation Service Center (CSC) indicating in Section 3 of the application that this is an "Augmentation to an Existing Arrangement." The price quote will contain the charges and the construction interval for that application.

SWBT will work cooperatively with Collocators to negotiate mutually agreeable implementation intervals for augments.

**6.0 EQUIPMENT PROVISIONING**

The Collocator will arrange to deliver to the SWBT central office where the equipment is located a reasonable number, as recommended by the manufacturer, of all appropriate plug-ins, circuit packs and cards and any other equipment, plus all necessary circuit design and provisioning information on an agreed-upon date which is no later than two (2) business days prior to the scheduled turn-up of the Collocator's equipment.

For the disconnection of circuits, the Collocator will provide all circuit information no later than two (2) business days prior to the scheduled disconnection of the Collocator's circuit.

SWBT does not assume any responsibility for the design, engineering, testing, or performance of the end-to-end connection of the Collocator's circuits.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

## LOCAL ACCESS SERVICE

### VIRTUAL COLLOCATION (Continued)

#### 7.0 REPAIR OF EQUIPMENT

Except in emergency situations, the Collocator-owned fiber optic facilities and central office terminating equipment will be repaired only upon the request of the customer. In an emergency, SWBT may perform necessary repairs without prior notification. The labor rates specified in Section 13.3(R) apply to SWBT central offices and SWBT CEVs, Huts and Cabinets and are applicable for all repairs performed by SWBT on the Collocator's facilities and equipment.

When initiating repair requests on Collocator owned equipment, the Collocator must provide SWBT with the location and identification of the equipment and a detailed description of the trouble.

Upon notification by the Collocator and availability of spare parts as provided by the Collocator, SWBT will be responsible for repairing the Virtually Collocated equipment at the same standards that it repairs its own equipment.

#### 8.0 MAINTENANCE OF EQUIPMENT

The Collocator will request any and all maintenance by SWBT on its Virtually Collocated facilities or equipment. When initiating requests for maintenance on collocated equipment, the Collocator must provide SWBT with the location and identification of the equipment and a detailed description of the maintenance requested.

Upon notification by the Collocator and availability of spare parts as provided by the Collocator, SWBT will be responsible for maintaining the Virtually Collocated equipment at the same standards that it maintains its own equipment.

#### 9.0 ALARM COLLECTION

The Collocator has the ability to purchase its own remote monitoring and alarming equipment. If the Collocator prefers SWBT to perform this function, it may elect to provision this arrangement under Section 25.5.1(A) of the FCC 73 Access Service Tariff. If the Collocator purchases this equipment, it must be identical to equipment specified in Section 25.5.1 of the FCC 73 Access Service Tariff.

Since the maintenance of the Collocator's equipment is at the direction and control of the Collocator, SWBT will not be responsible for responding to alarms and will only conduct maintenance and repair activities at the direction of the Collocator.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

**10.0 TERMINATION OF VIRTUAL COLLOCATION**

Upon termination of the Virtual Collocation arrangement, the Collocator will work cooperatively with SWBT to remove the Collocator's equipment and facilities from SWBT property subject to the condition that the removal of such equipment can be accomplished without damaging or endangering other equipment located in the central office. SWBT is not responsible for and will not guarantee the condition of such equipment. The Collocator is responsible for arranging for and paying for the removal of virtually collocated equipment including all costs associated with equipment removal, packing and shipping. Arrangements for and the removal of the Collocator virtually collocated equipment must be made within 30 business days after termination of the virtual collocation arrangement, unless a different time period is mutually agreed upon. SWBT shall be responsible for exercising reasonable caution when removing virtually collocated equipment. SWBT will only be responsible for damage done to such equipment caused by gross negligence on the part of SWBT or its contractors during the removal process. However, Collocators will indemnify and hold SWBT harmless for any damage done to virtually collocated equipment if SWBT permits the Collocator to hire a SWBT approved contractor to remove virtually collocated equipment. Any equipment not removed in this time frame may be removed by SWBT and stored in a non-SWBT location, at the expense of the Collocator.

Upon termination of the Virtual Collocation, the Collocator must remove the fiber entrance cable used for the Virtual Collocation. If the entrance cable is not scheduled for removal within seven (7) days, SWBT may arrange for the removal, and the Collocator will be responsible for any charges incurred to remove the cable. SWBT and the Collocator will cooperatively manage the removal process. The Collocator is only responsible for physically removing entrance cables housed in conduits or inner-ducts and will only be required to do so when SWBT instructs the Collocator that such removal can be accomplished without damaging or endangering other cables contained in a common duct or other equipment residing in the central office.

**11.0 REVISIONS**

Any revision to SWBT's Interconnector's Collocation Services Handbook for Virtual Collocation in Missouri, or its Technical Publication TP 76300MP, shall become effective and thereafter applicable under this tariff forty five (45) business days after such revision is released by SWBT except for those particular revisions to which the Collocator specifically objects within thirty (30) business days of receipt, providing an explanation for each objection. Upon each such objections, SWBT and the Collocator shall attempt to negotiate a resolution, either party may request resolution by the Missouri Public Service Commission. Any revision made to address potentially harmful situations shall become effective and applicable immediately, pending resolution of the objections by the Missouri Public Service Commission.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**12.0 DISPUTE RESOLUTION PROCESS FOR REVISIONS OR IMPLEMENTATION OF TECHNICAL PUBLICATIONS**

Disputes that cannot be resolved by the parties regarding revisions to or implementation of SWBT technical publications that apply to virtual collocation arrangements will be resolved by use of (1) mediation, (2) any dispute resolution process promulgated by the Commission, or (3) any other method mutually agreed to by the parties. Either party may use any of these options to obtain a resolution of the dispute.

**13.0 RATE REGULATIONS**

This section contains specific regulations governing the rates and charges that apply to Virtual Collocation for the purpose of interconnecting to SWBT and for Access to SWBT provided UNEs when the Collocator provides the equipment.

There are two types of rates and charges that apply to the various rate elements for Virtual Collocation for interconnecting to SWBT and for Access to SWBT provided UNEs. These are non-recurring charges and monthly recurring rates.

Rates and charges specific to Virtual Collocation for interconnection with SWBT for the transmission and routing of telephone exchange service and exchange access, and for access to SWBT provided UNEs in SWBT Central Offices are set forth in 13.3. Rates and charges specific to Virtual Collocation for access to SWBT provided UNEs in SWBT CEVs, Huts and Cabinets are set forth in 13.4.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 13.0 RATE REGULATIONS (Continued)

## 13.1 Rate Elements for SWBT Central Offices

Consistent with provisions in Section 1.1, the following provides a list of the specific rate elements for virtual collocation for interconnection with SWBT for the transmission and routing of telephone exchange service and exchange access, and for access to SWBT provided UNEs to be used in conjunction with virtual collocation in SWBT Central Offices. Charges applicable to virtual collocation other than those listed below are listed in Section 25 of the FCC 73 Access Service Tariff (Expanded Interconnection).

## (A) Planning

## (1) Planning Fee

The planning fee recovers SWBT costs incurred to estimate the quotation of charges, project management costs, engineering costs, and other related planning activities for the Collocator's request for a virtual collocation arrangement. The planning fee also provides for SWBT personnel to survey each requested location for availability of space for the placement of entrance cables as well as to determine floor space to physically place Collocator-designated equipment expressed as a non-recurring charge. The planning fee is applied on an initial and subsequent basis. The initial charge will apply to the Collocator's request for a virtual collocation arrangement or the addition of cable. The subsequent planning charge will apply to any additional interconnection or power arrangements, connected to existing virtual collocated equipment. Charges for this sub-element are specified in 13.3(A)(1).

## (B) Floor Space

This sub-element provides for the "occupancy" cost per bay framework associated with using the floor space in SWBT central offices expressed as a monthly rate. Charges for this sub-element are specified in 13.3(B). In those cases where an individual relay rack and its associated floor space are shared by SWBT and the Collocator or among Collocators, the floor space and relay rack associated will be apportioned on a quarter rack basis.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 13.0 RATE REGULATIONS (Continued)

## 13.1 Rate Elements for SWBT Central Offices (Continued)

## (C) Relay Rack (Optional)

This sub-element provides the cost per Standard Bay relay rack when provided by SWBT expressed as a monthly rate. SWBT's Standard Bay dimensions are 7'-0" high, and have a 23" interior width, 26" exterior width, and up to 15" deep. Charges for this sub-element are specified in 13.3(C). In those cases where an individual relay rack and associated floor space are shared by SWBT and the Collocator or among Collocators, the floor space and relay rack associated will be apportioned on a quarter rack basis. When the standard bay relay rack is provided by the Collocator this rate element will not apply.

## (D) Common Systems Materials

This sub-element provides the infrastructure installation and maintenance of ironwork, racking, and lighting above the equipment bays. Charges for this sub-element are specified in 13.3(D). The common systems sub-element is distinct for standard and non-standard frames. In those cases where common systems materials for an individual relay rack and associated floor space are shared with the Collocator or among Collocators, the common systems materials for the floor space and relay rack associated will be apportioned on a quarter rack basis.

## (E) Real Estate

These rate elements provide for SWBT to recover the costs associated with preparing the Eligible Structure for telecommunications equipment (Site Conditioning) and securing this space (Safety & Security). Charges for these sub-elements are specified in 13.3(E).

## (1) Site Conditioning

Permits SWBT to recover cost associated with preparing space within the Eligible Structure for telecommunications equipment. The nonrecurring charge for this sub-element is specified in 13.3(E)(1).

## (2) Safety &amp; Security

Permits SWBT to recover costs associated with securing the telecommunications area used for Virtual Collocation. The nonrecurring charge for this sub-element is specified in 13.3(E).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

13.0 RATE REGULATIONS (Continued)

13.1 Rate Elements for SWBT Central Offices (Continued)

(F) Entrance Fiber

This sub-element provides for SWBT pulling and splicing fiber cable between the manhole and cable vault, and the subsequent routing of fiber riser cable between the cable vault and FDF. (Note: Virtually Collocated Equipment may also be connected to dedicated transport facilities provided as Unbundled Network Elements in lieu the entrance fiber. When Virtually Collocated Equipment is connected to dedicated transport facilities in lieu of the entrance fiber, the terms, conditions and charges for such dedicated transport facilities are pursuant to the Collocator/SWBT Interconnection Agreement. No recurring or non-recurring charges for dedicated transport facilities provided as used are applicable pursuant to this Tariff). Charges for this rate element are in 13.3(F)(1).

(1) Entrance Conduit

This sub-element represents any reinforced passage or opening in, on, under, over or through the ground between the first manhole and the cable vault through which the fiber optic cable is placed. Charges for this sub-element are specified in 13.3(F)(2).

(G) Power Arrangement

This sub-element is the cable and cable rack including support and fabrication material necessary to support the virtually collocated equipment expressed as a monthly rate for either 2-20 AMP feeds or 2-50 AMP feeds. Fuse panels necessary for terminating power feeds are provided by the Collocator. In the event that a Collocator requires a power arrangement that exceeds 50 AMPS from a single source, SWBT will cooperatively work with the Collocator using comparable rate elements as the basis for such arrangements. Cable sizing is based on list 2 design loads. Charges for this sub-element are specified in 13.3(G)(1-2).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

13.0 RATE REGULATIONS (Continued)

13.1 Rate Elements for SWBT Central Offices (Continued)

(H) Power Consumption

(1) D.C. Power Per AMP

The DC power charge consists of use of the DC power system, with AC input and AC backup for redundant power expressed as a monthly rate. This rate element also includes the AC Power Usage to provide DC power to the virtually collocated equipment. DC Power Charge is on a per amp basis. Charges for this sub-element are specified in 13.3(H)(1).

(2) Heating, Ventilating, and Air Conditioning (HVAC)

This sub-element consists of the elements necessary to provide HVAC within the Eligible Structure to the collocation arrangement and is based on the heat dissipation required for each 10 amps of DC power. Charges for this sub-element are specified in 13.3(H)(2).

(3) Ground Cable Arrangement

The Ground Cable is the cabling arrangement designed to provide grounding for equipment per frame expressed as a monthly rate. Separate Ground Cable Arrangements are required for Integrated and Isolated Ground Planes. Charges for this sub-element are specified in 13.3(H)(3).

(I) Voice Grade Interconnection Arrangement

This sub-element provides for the cost associated with providing 100 voice grade pairs Non-shielded or Shielded between the SWBT Distributing Frame and the virtually collocated equipment expressed as a combination of a non-recurring charge and a monthly rate. Charges for this sub-element are specified in 13.3(I).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

13.0 RATE REGULATIONS (Continued)

13.1 Rate Elements for SWBT Central Offices (Continued)

(J) DS-1 Interconnection Arrangement to DCS

This sub-element provides for the cost associated with providing 28 DS-1 circuits between SWBT DCS functionality purchased from the Collocators interconnection agreement and the virtually collocated equipment expressed as a combination of a non-recurring charge and a monthly rate. Charges for this sub-element are specified in 13.3(J). This includes the DS1-Port connecting to the virtual collocation arrangement.

(K) DS-1 Interconnection Arrangement to DSX

This sub-element provides for the cost associated with providing 28 DS-1 circuits between SWBT's DSX functionality purchased from the Collocators interconnection agreement and the virtually collocated equipment expressed as a combination of a non-recurring charge and a monthly rate. Charges for this sub-element are specified in 13.3(K).

(L) DS-3 Interconnection Arrangement to DCS

This sub-element provides for the cost associated with providing one DS-3 circuit between SWBT's DCS functionality purchased from the Collocators interconnection agreement and the virtually collocated equipment expressed as a combination of a non-recurring charge and a monthly rate. Charges for this sub-element are specified in 13.3(L).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**13.0 RATE REGULATIONS (Continued)**

**13.1 Rate Elements for SWBT Central Offices (Continued)**

**(M) DS-3 Interconnection Arrangement to DSX**

This sub-element provides for the cost associated with providing one DS-3 circuit between SWBT's DSX functionality purchased from the Collocators interconnection agreement and the virtually collocated equipment expressed as a combination of a non-recurring charge and a monthly rate. Charges for this sub-element are specified in 13.3(M).

**(N) Fiber Interconnection Arrangement**

This sub-element provides for the cost associated with providing 12 fibers between SWBT's FDF and the virtually collocated equipment expressed as a combination of a non-recurring charge and a monthly rate. Charges for this sub-element are specified in 13.3(N).

**(O) Collocation to Collocation Connection**

This rate element includes virtual to virtual and virtual to physical connection options.

**(1) Fiber Cable (12 Fibers)**

This sub-element provides for direct cabling using fiber cable (12 fibers) between two collocation arrangements at an Eligible Structure. This sub-element is expressed as a combination of a non-recurring charge and a monthly rate and these charges are specified in 13.3(O)(1).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**13.0 RATE REGULATIONS (Continued)**

**13.1 Rate Elements for SWBT Central Offices (Continued)**

**(O) Collocation to Collocation Connection (continued)**

**(2) Copper Cable (28 DS1s)**

This sub-element provides for direct cabling using copper cable (28 DS1s) between two collocation arrangements at an Eligible Structure. This sub-element is expressed as a combination of a non-recurring charge and a monthly rate and these charges are specified in 13.3.(O)(2).

**(3) Coax Cable (1 DS3)**

This sub-element provides for direct cabling using coaxial cable (1 DS3) between two collocation arrangements at an Eligible Structure. This sub-element is expressed as a combination of a non-recurring charge and a monthly rate and these charges are specified in 13.3(O)(3).

**(4) Cable Racking and Hole**

This sub-element provides for cable rack space and hole for copper, coax and optical cabling between two virtual collocation arrangements at an Eligible Structure. This sub-element is expressed as a monthly rate and in 13.3(O)(4).

**(5) Route Design**

This sub-element provides the route design for collocation connections. This sub-element is expressed as a non-recurring charge and this charge is specific in 13.3(O)(5).

**(P) Timing Source Arrangement (Optional)**

An SWBT provided single signal from the SWBT timing source to provide synchronization between a Collocator's single network element and SWBT's equipment expressed as a recurring and non-recurring rate. Charges for this sub-element, if requested by the Collocator, are specified in 13.3(P).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

13.0 RATE REGULATIONS (Continued)

13.1 Rate Elements for SWBT Central Offices (Continued)

(Q) Training

SWBT is responsible for determining when training is necessary and how many SWBT employees require training to provide 24 hour a day, seven day a week coverage for the installation, maintenance and repair of Collocator's designated equipment not currently used in a wire center selected by the Collocator for virtual collocation. SWBT will be limited to request training for four (4) SWBT personnel per location, unless a different number is mutually agreed upon by SWBT and Collocator.

If the Collocator does not have SWBT coordinate the required training, the Collocator may assume the responsibility for providing the training. It is then the responsibility of the Collocator to:

- (1) arrange and pay to the supplier all costs for training sessions, including, the cost of the trainer(s), transportation and lodging of such trainer(s), and required course material, and
- (2) arrange and pay to each individual supplier all costs associated with lodging and other than local transportation, such as airfare, required for SWBT employee training.
- (3) arrange and pay all costs associated with SWBT's employee(s) attendance at the training, including, lodging and other than local transportation, such as airfare, and employee(s) labor rate for time away from the job, required for SWBT employee training.

SWBT will work cooperatively with the Collocator to schedule SWBT personnel training time required for the installation, maintenance and repair of the Collocator's designated equipment. The Collocator will be assessed two hours of the technician additional labor charge for SWBT personnel time required to coordinate training activities with the Collocator. The Collocator will be responsible for reimbursement of applicable SWBT contractual compensation obligations for time spent as a result of the necessary training. All other charges, if applicable, specified in 13.3(Q)(Training) will be assessed to the Collocator.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

13.0 RATE REGULATIONS (Continued)

13.1 Rate Elements for SWBT Central Offices (Continued)

(R) Maintenance and Repair Labor Rates

(1) Maintenance of Equipment

This rate element is a labor rate charged by SWBT to the Collocator for ongoing maintenance of the Collocator's equipment. Any maintenance requirements will be initiated by the Collocator. Labor rates are based upon a ¼ hour basis and are dependent upon day of week and time of day. For purposes of this Tariff, normal week day is defined as 8:00 a.m. through 5:00 p.m., Monday through Friday, excluding holidays. Non-recurring charges for this sub-element are specified in 13.3(R).

(2) Repair of Equipment

This rate element is a labor rate charged by SWBT to the Collocator for repair of the Collocator's equipment. All repair will be at the direction of the Collocator.

Labor rates are based upon a charge for Network Operations Center (NOC) personnel to take the trouble report, create a trouble ticket, and dispatch a technician. Labor rates for actual repair of the trouble are based upon a 1/4 hour basis and are dependent upon day of week and time of day. For purposes of this Tariff, normal week-day is defined as 8:00 a.m. through 5:00 p.m., Monday through Friday excluding holidays. Non-recurring charges for this sub-element are specified in 13.3(R).

(S) Equipment Evaluation Cost

This rate element is a labor rate charged by SWBT to the Collocator for evaluating the Collocator's equipment when not meeting Level 1 Safety requirements as set forth in Bellcore Network Equipment - Building System (NEBS). Charges for this element is specified in 13.3(S).

(T) Test and Acceptance

This rate element is a labor rate charged by SWBT to the Collocator for cooperative assisting the Collocator's approved vendor in testing and accepting the installed virtually collocated equipment. Charges for this element are specified in 13.3(T).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**13.0 RATE REGULATIONS (Continued)**

**13.2 Rate Elements for SWBT CEVs, Huts and Cabinets**

The following provides a list of the specific rate elements for virtual collocation for access to SWBT provided UNEs in SWBT CEVs, Huts and Cabinets. Charges applicable to virtual collocation in these structures other than those specified below are listed in Section 25 of the FCC 73 Access Service Tariff.

**(A) Entrance Cable Fiber**

This sub-element provides for the engineering of a point of appearance cable termination, preparation of work order drawings, postings of the work order and cable data in the appropriate databases for inventory and provisioning purposes, excavation to expose existing subsurface facilities, pulling the Collocator-provided cable into the eligible structure, routing, securing and preparing the end for splicing or termination. Charges for this sub-element are expressed as a non-recurring charge and can be found in 13.4(A).

**(B) Entrance Conduit**

Any reinforced passage or opening placed for the Collocator provided facility in, on, under/over or through the ground between the SWBT CEV, Hut, or Cabinet and the Collocator structure. Rates and charges are as found in Paragraph 13.4(B) following.

**(C) Power Consumption**

This sub-element provides for the use of power in the Hut, CEV, or Cabinet based on the amount of mounting space that is used by the Collocator as measured in 2-inch increments. Charges for this sub-element are expressed as a recurring charge and can be found in 13.4(C).

**(D) 24-Foot CEV**

This sub-element provides the use of mounting space within a 24-Foot CEV. This element is expressed as a monthly rate. The charges for this sub-element is specified in 13.4(D).

**(E) 16-Foot CEV**

This sub-element provides the use of mounting space within a 16-Foot CEV. This element is expressed as a monthly rate. The charge for this sub-element is specified in 13.4(E).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**13.0 RATE REGULATIONS (Continued)**

**13.2 Rate Elements for SWBT CEVs, Huts and Cabinets (Continued)**

**(F) Maxi-Hut**

This sub-element provides the use of mounting space within a Maxi-Hut. This element is expressed as a monthly rate. The charge for this sub-element is specified in 13.4(F).

**(G) Mini-Hut**

This sub-element provides the use of mounting space within a Mini-Hut. This element is expressed as a monthly rate. The charge for this sub-element is specified in 13.4(G).

**(H) Large Cabinet**

This sub-element provides the use of mounting space within a Large Cabinet. This element is expressed as a monthly rate. The charge for this sub-element is specified in 13.4(H).

**(I) Medium Cabinet**

This sub-element provides the use of mounting space within a Medium Cabinet. This element is expressed as a monthly rate. The charge for this sub-element is specified in 13.4(I).

**(J) Small Cabinet**

This sub-element provides the use of mounting space within a Small Cabinet. This element is expressed as a monthly rate. The charge for this sub-element is specified in 13.4(J).

**(K) Project Coordination Fee**

The project coordination fee provides for SWBT personnel to survey each requested CEV, Hut and Cabinet for availability of space for placement of copper or fiber cables as well as to determine space for any Collocator-designated equipment. This sub-element is expressed as a non-recurring charge and is specified in 13.4(K).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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## LOCAL ACCESS SERVICE

## 1. VIRTUAL COLLOCATION (Continued)

## 13.0 RATE REGULATIONS (Continued)

## 13.3 Rates and Charges Central Offices

	<u>USOC</u>	<u>Rate Per</u> <u>Month</u>	<u>Nonrecurring</u> <u>Charge</u>
(A) Planning Fee			
(1) Planning Fee			
- Initial		0.00	\$5,555.76
- Subsequent (Interconnection Cabling)		0.00	2,224.49
- Subsequent (Power Cabling)		0.00	2,303.84
- Subsequent (Interconnection and Power Cabling)		0.00	2,882.61
(B) Floor Space (Per Bay Framework)		\$28.91	\$0.00
(C) Relay Rack (Per Rack)		\$22.19	\$0.00
(D) Common Systems Material (Per Standard Bay)		\$10.75	\$0.00
(Per Non-Standard Bay)		19.36	0.00
(E) Real Estate			
(1) Site Conditioning (Per Frame)		\$92.81	\$0.00
(2) Safety & Security (Per Frame)		195.57	0.00
(F) Entrance Fiber Placement			
(1) Entrance Fiber Cable Placement (Per Fiber Cable Sheath)		\$11.01	\$1,971.42
(2) Entrance Conduit		8.17	0.00
(G) Power Arrangement			
(1) 2-20 AMP Feeds (Per 2-20 Amp Power Feeds)		\$7.74	\$1,570.84
(2) 2-50 AMP Feeds (Per 2-50 Amp Power Feeds)		9.57	1,954.85

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 13.0 RATE REGULATIONS (Continued)

## 13.3 Rates and Charges Central Offices

	<u>USOC</u>	<u>Rate Per Month</u>	<u>Nonrecurring Charge</u>
(H) Power Consumption			
(1) DC Power Per AMP		\$10.61	\$0.00
(2) Heating Ventilating, and Air Conditioning (Per 10 Amps)		14.62	0.00
(3) Ground Cable Arrangement (Per Frame)		0.36	0.00
(I) Voice Grade Interconnection Arrangement (Non-Shielded or Shielded) (Per 100 Pairs)		\$4.94	\$1,481.37
(J) DS1 Interconnection Arrangements to DCS (Per 28 DS1s)		\$297.44	\$4,067.27
(K) DS1 Interconnection Arrangement to DSX (Per 28 DS1s)		\$9.79	\$1,800.69
(L) DS3 Interconnection  Arrangement to DCS (Per DS3)		\$115.59	\$2,635.79

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 13.0 RATE REGULATIONS (Continued)

## 13.3 Rates and Charges Central Offices (Continued)

	<u>USOC</u>	<u>Rate Per Month</u>	<u>Nonrecurring Charge</u>
(M) DS3 Inteconnection			
Arrangement to DSX (Per DS3)		\$7.14	\$1,058.10
(N) Fiber Interconnection			
Arrangement (12 Fibers)		\$6.55	\$1,996.19
(O) Collocation-to-Collocation Connection			
(1) Fiber Cable (12 Fibers)			
- SWBT Provides Cable and Installs		\$3.32	\$1,095.09
(2) Copper Cable (28 DS1s)			
- SWBT Provides Cable and Installs		\$3.34	\$930.53
(3) Coax Cable (1 DS3)			
- SWBT Provides Cable and Installs		\$3.26	\$706.77
(4) Cable Racking and Hole			
- For Optical (Per Cable)		\$0.90	\$0.00
- DS1 (Per Cable)		0.49	0.00
- DS3 (Per Cable)		0.35	0.00

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 13.0 RATE REGULATIONS (Continued)

## 13.3 Rates and Charges Central Offices (Continued)

	<u>USOC</u>	<u>Rate Per Month</u>	<u>Nonrecurring Charge</u>
(O) Virtual Collocation-to-Virtual Collocation Connection (Continued)			
(5) Route Design		0.00	463.36
(P) Timing Source Arrangement			
- Timing Lead (1 pair per circuit) (per linear foot per pair)		\$0.08	\$14.81
- Bits Timing (Per two circuits)		3.58	698.82
(Q) Training			
(1) Communications Technician, per ½ hour		\$0.00	\$39.21
(2) C.O. Manager, per ½ hour		0.00	39.45
(3) Power Engineer, per ½ hour		0.00	38.47
(4) Equipment Engineer, per ½ hour		0.00	38.47
(R) Maintenance and Repair Rates			
(1) Staffed CO During Attended Hours			
- Each ¼ hour		\$0.00	\$15.15
(2) Staffed CO During Unattended Hours			
- Initial 4 Hours		0.00	242.35
- Each Additional ¼ hour		0.00	15.15
(3) Not Staffed CO/RT During Normal Business Day			
- Each ¼ hour		0.00	15.15

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 13.0 RATE REGULATIONS (Continued)

## 13.3 Rates and Charges (Continued)

	<u>USOC</u>	<u>Rate Per</u> <u>Month</u>	<u>Nonrecurring</u> <u>Charge</u>
(R) Maintenance and Repair Rates (continued)			
(4) Not-Staffed CO/RT During Non-Normal Business			
Day			
- Initial 4 Hours		0.00	242.35
- Each Additional ¼ hour		0.00	15.15
(S) Equipment Evaluation Cost			
- Each ½ hour		0.00	38.47
(T) Test and Acceptance			
- Each ½ hour		0.00	39.21
13.4 Rates and Charges CEVs, Huts and Cabinets			
(A) Entrance Fiber Cable Placement			
Fiber (per cable)		\$0.00	\$53.58
(B) Entrance Conduit			
(Per Fiber Cable Sheath)		2.61	0.00
(C) Power Consumption			
(Per 2-inch mounting space)		1.27	0.00

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 13.0 RATE REGULATIONS (Continued)

## 13.4 Rates and Charges CEVs, Huts and Cabinets (continued)

(D) 24-Foot CEV (Per 2-inch mounting space)	1.64	0.00
(E) 16-Foot CEV (Per 2-inch mounting space)	1.77	0.00
(F) Maxi-Hut (Per 2-inch mounting space)	0.77	0.00
(G) Mini-Hut (Per 2-inch mounting space)	1.33	0.00
(H) Large Cabinet (Per 2-inch mounting space)	1.63	0.00
(I) Medium Cabinet (Per 2-inch mounting space)	2.19	0.00
(J) Small Cabinet (Per 2-inch mounting space)	3.29	0.00
(K) Project Coordination Fee (Per CLEC Application/Augment)	0.00	631.17

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**14.0 ALTERNATIVE VIRTUAL COLLOCATION ARRANGEMENT DESCRIPTION**

Virtual collocation wherein the Collocator maintains and repairs the virtually collocated equipment.

For purposes of virtually collocating equipment, SWBT shall determine which Eligible Structures require access to CEVs, Huts, or manholes containing concentrated cabling and other forms of equipment that requires drawings, schematics, or other engineering documents that aide in the prevention of accidental network outages. The drawings, schematics, or other engineering documents shall denote the location of the requesting Collocator's equipment and cabling without disclosing identity of equipment and cabling belonging to SWBT and other Collocators. Provided that SWBT is not required to make this determination prior to an executed agreement to virtually collocate in an Eligible Structure.

After Collocator has been provided with written notification by SWBT that access to CEVs, Huts, or manholes containing concentrated cabling and other forms of equipment requires drawings, schematics, or other engineering documents that aide in the prevention of accidental network outages, Collocators may not enter an Eligible Structures without obtaining undated copies of drawings, schematics, or other engineering documents. Upon request, SWBT shall immediately make available to Collocators those drawings, schematics, or other engineering documents that identify the location of the requesting Collocator's equipment and cabling. In the event the requested documents are not immediately available, SWBT shall not prevent the Collocator from entering the Eligible Structure. If SWBT does not immediately make the requested documents available to a Collocator and the Collocator enters the eligible structure, SWBT shall deliver the requested documents to Collocator immediately upon locating same.

SWBT will provide a security escort with the Collocator paying the expense for the escort. In areas defined in SWBT's local exchange tariff as rate groups C and D, SWBT will provide the security escort within one (1) hour of notification by the Collocator. In areas defined in SWBT's local exchange tariff as rate A and B, SWBT will provide the security escort as soon as reasonably possible, or within the time frame agreed to by the parties, at the time of notice. In the event the FCC determines that SWBT may not require a security escort paid for by the Collocator, then this virtual collocation maintenance alternative as described in this Paragraph 14.0 and in Paragraph 1.0(2) is null and void, and all virtual collocation will be maintained by SWBT as described in Paragraph 1.0(1).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**14.0 ALTERNATIVE VIRTUAL COLLOCATION ARRANGEMENT DESCRIPTION  
(continued)**

Prior to entering an Eligible Structure that requires drawings, schematics, or other engineering documents, Collocators must provide SWBT with reasonable notice of the entry. Notice will be provided to SWBT's Local Operations Center, which will be available to receive notice 24 hours a day, 7 days a week. Collocators providing notice to SWBT's Local Operations Center must specify the title and date of all drawings, schematics, or other engineering documents that will be used while in the Eligible Structure.

The Collocator shall conduct background checks of the technicians who have access to the collocation space. Collocator technicians will be security qualified by the Collocator and will be required to be knowledgeable of SWBT security standards. Disciplinary procedures shall be established in accordance with Section 15.3 to ensure the safety and integrity of the Eligible Structure, including, e.g., procedures that require the responsible employee to be terminated for certain specified actions that damage or place the equipment of SWBT or other Collocators in jeopardy.

SWBT may use security devices, e.g., identification swipe cards, keyed access, and/or logs, as appropriate for the Eligible Structure where collocation will take place.

The Commission will permit SWBT to recover the cost of such security devices from the Collocators in a reasonable manner. The Collocator shall provide indemnification and insurance to cover any damages caused by the Collocator's technicians at a level commensurate with the indemnification and insurance provided by SWBT equipment suppliers with equivalent access.

Provisioning of equipment required for virtual collocation, e.g., power arrangements and interconnection arrangements will be provided in accordance with this tariff and interconnection agreements.

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Issued: September 12, 2001

Effective: October 12, 2001

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## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 15.0 OBLIGATIONS OF THE COLLOCATOR

## 15.1 Indemnification of SWBT

Except as otherwise provided and to the extent not contradicted herein, the indemnity provisions of the Interconnection Agreement between SWBT and the Collocator shall apply and are incorporated herein by this reference. However, in no event will the provisions in this section supersede or override the indemnification provisions contained in the interconnection agreement between SWBT and Collocator. Additionally, in the event of a conflict between indemnification provisions in the interconnection agreement and the Tariff, the provisions in the interconnection agreement will control.

Collocators shall indemnify and hold harmless SWBT the agents, employees, officers, directors and shareholders of any of them ("Indemnities"), from and against any and all liabilities, obligations, claims, causes of action, fines, penalties, losses, costs, expenses (including court costs and reasonable attorney's fees), damages, injuries, of any kind, (individually and collectively "Liabilities"), including but not limited to, Liabilities as a result of (a) injury to or death of any person; (b) damage to or loss or destruction of any property; or (c) Liabilities related in any manner to employee benefits, workers compensation, payroll tax, and any other employer obligations which may be asserted against SWBT where such liabilities arise in connection with Collocator's use of persons that it classifies as an independent contractor or subcontractor to perform obligations under this Tariff; (d) attachments, liens or claims of material persons or laborers arising out of or resulting from or in connection with this Tariff or the performance of or failure to perform and directly or indirectly caused, in whole or part, by acts of omissions, negligent or otherwise, of Collocator or a contractor or a representative of Collocator or an employee of any one of them, except to the extent such Liabilities arise from the negligence or willful or intentional misconduct of SWBT or its employees. The provisions in this section are reciprocal and applicable also to SWBT.

SWBT shall make best efforts to promptly notify Collocator of any suit or other legal proceeding asserting a claim for Liabilities. Upon request, Collocator shall, at no cost or expense to the Indemnatee, defend any such suit or legal proceeding asserting a claim for Liabilities, and Collocator shall pay any costs and attorneys' fees that may be incurred by any Indemnatee in connection with any such claim, proceeding or suit. Collocator shall also (a) keep SWBT and any other Indemnatee subject to any such claim fully informed as to the progress of such defense, and (b) afford SWBT and such Indemnatee, each at its own expense, an opportunity to participate on an equal basis with Collocator in the defense or settlement of any such claim.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

15.0 OBLIGATIONS OF THE COLLOCATOR (Continued)

15.2 Insurance

The Collocator agrees to maintain, at all times, the following minimum insurance coverages and limits and any additional insurance and/or bonds required by law:

- (A) Workers' Compensation insurance with benefits afforded under the laws of the State of Missouri and Employers Liability insurance with minimum limits of \$100,000 for Bodily Injury-each accident, \$500,000 for Bodily Injury by disease-policy limits and \$100,000 for Bodily Injury by disease-each employee.
- (B) Commercial General Liability insurance with minimum limits of: \$2,000,000 General Aggregate limit; \$1,000,000 each occurrence sub-limit for all bodily injury or property damage incurred in any one occurrence; \$1,000,000 each occurrence sub-limit for Personal Injury and Advertising; \$2,000,000 Products/Completed Operations Aggregate limit, with a \$1,000,000 each occurrence sub-limit for Products/Completed Operations. Fire Legal Liability sub-limits of \$300,000 are required for lease agreements. SWBT will be named as an Additional Insured on the Commercial General Liability policy.
- (C) If use of an automobile is required, Automobile Liability insurance with minimum limits of \$1,000,000 combined single limits per occurrence for bodily injury and property damage, which coverage shall extend to all owned, hired and non-owned vehicles.

SWBT requires that companies affording insurance coverage have a B+ VII or better rating, as rated in the A.M. Best Key rating Guide for Property and Casualty Insurance Companies.

A certificate of insurance stating the types of insurance and policy limits provided the Collocator must be received prior to commencement of any work. The insurance provisions and requirements are reciprocal to SWBT as well. If a certificate is not received, SWBT will notify the Collocator and the Collocator will have 5 business days to cure the deficiency. If the Collocator does not cure the deficiency within 5 business days, Collocator hereby authorizes SWBT, and SWBT may, but is not required to, obtain insurance on behalf of the Collocator as specified herein. SWBT will invoice Collocator for the costs incurred to so acquire insurance.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

15.0 OBLIGATIONS OF THE COLLOCATOR (Continued)

15.2 Insurance (Continued)

The cancellation clause on the certificate of insurance will be amended to read as follows:

"SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED OR MATERIALLY CHANGED, THE ISSUING COMPANY WILL MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER."

The Collocator shall also require all contractors who may enter the Eligible Structure to maintain the same insurance requirements listed above.

Self-insurance in lieu of the insurance requirements listed preceding shall be permitted if the Collocator 1) has a tangible net worth of Fifty (50) Million dollars or greater, and 2) files a financial statement annually with the Securities and Exchange Commission and/or having a financial strength rating of 4A or 5A assigned by Dun & Bradstreet. The ability to self-insure shall continue so long as the Collocator meets all of the requirements of this Paragraph. If the Collocator subsequently no longer satisfies this Paragraph, the coverage requirements described above shall immediately apply.

15.3 Conduct While in SWBT Eligible Structures

Collocators and SWBT will each establish disciplinary procedures up to and including dismissal or denial of access to the Eligible Structure and other SWBT property for certain specified actions that damage, or place the equipment, facilities, or the network or the personnel of the Collocators or SWBT in jeopardy. The following are actions that could damage or place the Eligible Structure, or the network or the personnel of the Collocators or SWBT in jeopardy and may justify disciplinary action up to and including dismissal or the denial of access to the Eligible Structure and other SWBT property:

- (a) Theft or destruction of SWBT's or Collocator's property;
- (b) Use/sale or attempted use/sale of alcohol or illegal drugs on SWBT property;
- (c) Threats or violent acts against other persons on SWBT property;
- (d) Knowing violations of any local, state or federal law on SWBT property;

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

### VIRTUAL COLLOCATION (Continued)

#### 15.0 OBLIGATIONS OF THE COLLOCATOR (Continued)

##### 15.3 Conduct While in SWBT Eligible Structures (Continued)

- (e) Permitting unauthorized persons access to SWBT or Collocator's equipment on SWBT property; and

Carrying a weapon on SWBT property.

In addition, Collocator and SWBT will take appropriate disciplinary steps as determined by each party to address any violations reported by SWBT or the Collocator of SWBT's policies and practices on security, safety, network reliability, and business conduct as defined in SWBT's Interconnector's Collocation Services Handbook for Virtual Collocation in Missouri, provided the Handbook and any and all updates to it are timely provided to Collocator at no charge.

#### 16.0 COOPERATIVE RESPONSIBILITIES

##### 16.1 Qualification of Collocators

Collocator technicians will be security qualified by the Collocator and will be required to be knowledgeable of SWBT security standards. Collocator personnel and technicians will undergo the same level of security training, or its equivalent that SWBT's own employees and authorized contractors must undergo. SWBT will not, however, require Collocators to receive security training from SWBT, but will provide information to Collocators on the specific type of training required. Collocators can then provide their employees with their own security training. Qualification program and security training details shall be included in SWBT's Interconnector's Collocation Services Handbook for Virtual Collocation in Missouri.

#### 17.0 RATE REGULATIONS

The rate regulations, rate element descriptions and rates and charges included in 13.0 preceding apply to this virtual collocation alternative wherein the Collocator maintains and repairs the virtually collocated equipment. Additional rate elements and rates apply to this alternative as provided for below.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**17.0 RATE REGULATIONS (Continued)**

**17.1 Rate Elements for SWBT Offices**

- (A) This security escort charge consists of the charges for SWBT-provided security escorts for Collocator Vendor's access to their virtual collocation space in Staffed and Unstaffed Central Offices. Any escort requirements will be initiated by the Collocator. Labor rates are based upon a ¼ hour basis and are dependent upon day of week and time of day. For purposes of this tariff, normal week day is defined as 8:00 a.m. through 5:00 p.m., Monday through Friday, excluding holidays. The billing period will start at the time the technician is contacted. This will allow for travel time to reach the agreed meet point. Access requests outside of normal business hours or for unstaffed Central Offices which are cancelled will be subject to the minimum four (4) hour call out charge. Non-recurring charges for this sub-element are specified in 17.3(A) following.

**17.2 Rate Elements for SWBT CEVs, Huts and Cabinets**

**(A) Security Escorts**

The security escort charge consists of the charges for SWBT-provided security escorts for Collocator Vendor's access to their virtual collocation space in CEVs, Huts and Cabinets. Any escort requirements will be initiated by the Collocator. Labor rates are based upon a ¼ hour basis. The billing period will start at the time the technician is contacted. This will allow for travel time to reach the agreed meet point. Access requests which are cancelled will be subject to the minimum four (4) hour call out charge. Rates and charges are as found in 17.4(A).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 17.0 RATE REGULATIONS (Continued)

## 17.3 Rates and Charges Central Offices

	<u>USOC</u>	<u>Rate Per</u> <u>Month</u>	<u>Nonrecurring</u> <u>Charge</u>
(A) Security Escorts Per visit			
(1) Staffed Building			
- Access during normal business hours			
- Each ¼ hour		\$0.00	\$15.15
- Each additional ¼ hour		0.00	15.15
- Access outside normal business hours			
- 4 hour minimum		0.00	242.35
- Each additional ¼ hour		0.00	15.15
(2) Unstaffed Building			
- Access during normal business hours			
- Each ¼ hour		0.00	15.15
- Each additional ¼ hour		0.00	15.15
- Access outside normal business hours			
- 4 hour minimum		0.00	242.35
- Each additional ¼ hour		0.00	15.15

## 17.4 Rates and Charges

## CEVs, Huts and Cabinets

(A) Security Escorts, per visit		
4 hours minimum	00.00	242.35
Each additional ¼ hour	00.00	15.15

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities**

When the Collocator selects the option to provide, install, and terminate their interconnection and power cabling with an SWBT Approved Vendor, the following paragraphs will apply. However, the terms and conditions within CDOW are not comprehensive. There are terms and conditions from the preceding sections of this same tariff that still apply for CDOW for rate elements that are not specifically addressed within Sections 18 and 19 following.

- 18.1 The Collocator has the option to provide, install and terminate its interconnection cabling between the Collocator's Dedicated Space and the SWBT Main Distribution Frame or its equivalent by an SWBT Approved Vendor. This option is only available if Collocator does all three (3) activities associated with interconnection cabling: provide, install and terminate. The Collocator may not elect to do some but not all the activities. Collocator must indicate on its virtual collocation application that it has selected this option to apply to all interconnection cabling requested on the application. If Collocator selects this option, the Collocator must also select the option to provide, install and terminate its power cable leads described in Section 18.2. If Collocator selects this option, SWBT will install and stencil termination blocks or panels at SWBT Main Distribution Frame or its equivalent for the handoff of the Actual Point of Termination (APOT) Connection(s) to the Collocator's SWBT Approved Vendor. Intervals and provisioning for this offering is found in Section 18.3.1 through 18.3.5. The Collocator's SWBT Approved Vendor must obtain an approved Method Procedures (MOP) from SWBT and follow SWBT's Technical Publication TP 76300MP for installation of equipment and facilities;
- 18.2 The Collocator has the option to provide, install and terminate its power cable leads between the Collocator's Dedicated Space and SWBT's Battery Distribution Fuse Bay (BDFB) by an SWBT Approved Power Installation Vendor. When the SWBT designated power termination point is at the Power Plant Primary Distribution, the Collocator's SWBT Approved Power Installation Vendor will provide and install the power cable leads, but not terminate. The Collocator must contact the SWBT Project manager five (5) business days prior to scheduling a request for the termination of the Collocator's power cable leads to the SWBT Power Plant Primary Distribution, which will be performed by SWBT. This option is only available if the Collocator does all three (3) activities associated with the power cable lead unless described otherwise within this Section. The Collocator may not elect to do some but not all the activities unless otherwise permitted in this section. If Collocator selects this option, the Collocator must also select the option to provide, install and terminate its interconnection cabling described in Section 18.1. Intervals and provisioning for this offering is found in Section 18.3.1 through 18.3.5. The Collocator's SWBT Approved Power Installation Vendor must obtain an approved Method of Procedures (MOP) from SWBT and follow SWBT's Technical Publication TP 76300MP for installation of equipment and facilities.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities (cont'd)**

**18.3 Intervals and Provisioning**

**18.3.1 Implementation Intervals (Collocator Installs Interconnection and Power Cabling)**

SWBT will provide Virtual Collocation arrangements in Eligible Structures on a "first-come, first-served" basis. The determination whether there is sufficient space to accommodate Virtual Collocation at a particular Eligible Structure will be made initially by SWBT. SWBT will notify Collocator as to whether its request for space has been granted or denied due to a lack of space within ten (10) calendar days from receipt of a Collocator's accurate and complete Virtual Collocation Application. If SWBT determines that Collocator's Virtual Collocation Application is unacceptable, SWBT shall advise Collocator of any deficiencies within this ten (10) calendar day period. SWBT shall provide Collocator with sufficient detail so that Collocator has a reasonable opportunity to cure each deficiency. To retain its place in the queue to obtain the Virtual Collocation arrangement, Collocator must cure any deficiencies in its Application and resubmit such Application within ten (10) calendar days after being advised of the deficiencies. Any changes to the amount or type of floor space, interconnection terminations, and power requested from the originally submitted Virtual Collocation Application will not be considered a deficiency, but rather as a new Virtual Collocation Application with a new ten (10) calendar day space notification and a new delivery interval. The delivery intervals set forth in this Section 18.3 is for new and augment Virtual Collocation Applications and apply only when the Collocator installs interconnection and power cabling.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities (cont'd)****18.3 Intervals and Provisioning (cont'd)**

- 18.3.1 The delivery interval relates to the period in which SWBT shall construct and turnover to the Collocator's SWBT Approved Vendor the requested Virtual Collocation Space. The delivery interval begins on the date SWBT receives a complete and accurate Virtual Collocation Application from the Collocator. The Collocator must provide the SWBT, within seven (7) calendar days from the date of notification granting the application request, a confirmatory response in writing to continue construction along with the fifty percent (50%) payment of non-recurring charges (unless payment was received with application) or the delivery interval provided in table below will not commence until such time as SWBT has received such response and payment. If the Collocator has not provided SWBT such response and payment by the twelfth (12th) calendar day after the date SWBT notified Collocator its request has been granted, the application will be canceled. Dedicated space is not reserved until SWBT's receipt of the confirmatory response in writing from the Collocator with applicable fees. The delivery interval from the Collocator with applicable fees. The delivery interval for Virtual Collocation is determined by SWBT taking into consideration the various factors set forth in Table (1) below including, without limitation, the number of all Virtual Collocation Applications submitted by Collocator and the need for additional preparation of the space such as overhead racking, additional power or HVAC. The delivery interval assigned will be provided to the Collocator by SWBT with the ten (10) calendar day space notification. Each complete and accurate Virtual Collocation Application received by SWBT from the Collocator will be processed in the order received unless the Collocator provides a priority list, whichever is applicable.

**Table (1)**

Number of All Applications submitted by One Collocator per state or metering region	Overhead Iron/Racking Exists for Virtual Collocation Space Use	Overhead Iron/Racking Does Not Exist for Virtual Collocation Space Use	Additional Power or HVAC is Required for Virtual Collocation Space Use
1 - 10	60 calendar days	80 calendar days	180 calendar days
11-20	65 calendar days	85 calendar days	185 calendar days

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities (cont'd)**

**18.3 Intervals and Provisioning (cont'd)**

**18.3.1 (Continued)**

Should the Collocator submit twenty-one (21) or more applications within ten (10) business days, the above delivery intervals will be increased by five (5) days for every five (5) additional applications or fraction thereof. Any material revision to an application will be treated as a new application and the delivery intervals set forth in Table (1) above will be re-started. All Virtual Collocation Applications received by SWBT from a Collocator within a ten (10) business day period shall be treated as submitted at the same time for purposes of administering the above staggering intervals. The Virtual Collocation delivery interval ends when roughed in and the assigned space has been distinctly marked by SWBT.

For example, but not by way of limitation, if a Collocator submits twelve (12) complete and accurate Virtual Collocation Applications in a state, the delivery intervals assigned by SWBT will depend on which variables apply within each Eligible Structure Virtual Collocation is requested:

If Applications (1-4) are for Virtual Collocation Space where overhead racking exists, the delivery intervals assigned will be sixty (60) days. If Applications (5-11) are for Virtual Collocation Space where overhead racking does not exist, the delivery intervals assigned to Applications (5-10) will be eighty (80) calendar days and Application (11) will be assigned eighty five (85) calendar days. The Virtual Collocation Application (12) was requested in an Eligible Structure that needs additional HVAC added and would be assigned one hundred and eight five (185) calendar days.

- 18.3.2 The second fifty percent (50%) payment must be received by SWBT prior to the space being turned over to the Collocator's SWBT\_Approved Vendor. At space turnover, the Actual Point of Termination (APOT) Connection(s) will be provided to the Collocator's SWBT Approved Vendor by SWBT.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
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St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities (cont'd)****18.3 Intervals and Provisioning (cont'd)**

18.3.3 For the following interconnection cabling Augments, the Collocator must submit a complete and accurate Virtual Collocation Application:

- 168 DS1 connections and/or
- 48 DS3 connections and/or
- 400 Copper (shielded or nonshielded) cable pair connections and/or
- 12 fiber pair connections

This application must include an up-front payment of the Application Fee and fifty percent (50%) of all applicable non-recurring charges.

The cabling Augment interval is determined by SWBT taking into consideration the various factors set forth in Table (2) below including, without limitation, the number of all Virtual Collocation Applications for the above Augments submitted by Collocator, the type of infrastructure available for collocation, and the need for additional preparation of the infrastructure such as overhead racking and additional power. The cabling Augment interval assigned will be provided to the Collocator by SWBT with the ten (10) calendar day Augment notification. Each complete and accurate Virtual Collocation Application received by SWBT from the Collocator will be processed in the order received unless the Collocator provides a priority list, whichever is applicable.

**Table (2)**

Number of All Applications submitted by One Collocator per state or metering region	Necessary Elements such as Iron/Racking and Power exist for Virtual Collocation Use	Necessary Elements such as Iron/Racking and Power does not exist for Virtual Collocation Use
1 – 10	30 calendar days	60 calendar days
11-20	35calendar days	65 calendar days

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities (cont'd)**

**18.3 Intervals and Provisioning (cont'd)**

18.3.3 Should the Collocator submit twenty-one (21) or more Virtual Collocation Applications for cabling Augments within ten (10) business days, the above cabling Augment intervals will be increased by five (5) days for every five (5) additional application or fraction thereof. Any material revision to a Virtual Collocation Application for cabling Augments will be treated as a new application and the cabling Augment delivery intervals set forth in Table (2) above. All cabling Augment applications received by SWBT from a Collocator within a ten (10) business day period shall be treated as submitted at the same time for purposes of administering the above staggering intervals.

For example, but not by way of limitation, if a Collocator submits twelve (12) Virtual Collocation Applications for cabling Augments in a state, the delivery intervals assigned will depend on which variables apply within each Eligible Structure requested:

If Applications (1-4) are for Virtual Collocation cabling Augments where necessary elements such as overhead racking and power exists, the delivery interval assigned will be thirty (30) calendar days. If Applications (5-12) are for Physical Collocation where necessary elements such as overhead racking and power does not exist, the delivery interval assigned to Applications (5-10) will be sixty (60) calendar days and for Applications (11-12) sixty five (65) calendar days.

18.3.4 For all Augments other than provided above, SWBT will work cooperatively with Collocator to negotiate a mutually agreeable delivery intervals.

18.3.5 Within twenty (20) calendar days or mutually agreed upon time, from SWBT's receipt of the confirmatory response in writing to continue construction on the Virtual Collocation job requested along with the 50% payment of non-recurring charges (unless payment was received with application), Network Support and/or appropriate departments will schedule a walk through visit with the CLEC and/or vendor to provide floor plans of space and the preliminary route design for the interconnection and power cabling.

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities (cont'd)**

**18.4 Rates Elements for SWBT Central Offices**

**A. Power Arrangement**

When the Collocator selects the option to install the power cable by an SWBT Approved Power Installation vendor, only the rack occupancy and on-going maintenance of the rack charge will apply. This is expressed as a monthly rate as specified in 19.1 (A).

**B. Voice Grade Interconnection**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the Voice Grade Terminal blocks at the MDF, rack occupancy, and on-going maintenance charges will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (B).

**C. DS-1 Interconnection Arrangement to DCS**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the DS-1 Port, rack occupancy, and on-going maintenance charges will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (C).

**D. DS-1 Interconnection Arrangement to DSX**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the DSX at the MDF, rack occupancy, and on-going maintenance charges will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (D).

**E. DS-3 Interconnection Arrangement to DCS**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the DS-3 Port, rack occupancy, and on-going maintenance charges will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (E).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities (cont'd)**

18.4 Rates Elements for SWBT Central Offices (cont'd)

**F. DS-3 Interconnection Arrangement to DSX**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the DSX at the MDF, rack occupancy, and on-going maintenance charges will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (F).

**G. Fiber Interconnection Arrangement**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the Fiber terminating panel at the FDF-1 Port, rack occupancy, and on-going maintenance charges will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (G).

**H. Collocation to Collocation Connection**

This rate element include virtual to virtual and virtual to physical connection options.

**1. Fiber Cable**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the charge for on-going maintenance of the rack will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (H) (1).

**2. Copper Cable**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the charge for on-going maintenance of the rack will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (H) (2).

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

LOCAL ACCESS SERVICE

VIRTUAL COLLOCATION (Continued)

**18.0 CDOW (CLECs Doing Own Work) - Collocator Responsibilities (cont'd)**

**18.4 Rates Elements for SWBT Central Offices (cont'd)**

**3. Coax Cable**

When the Collocator selects the option to provide and install the interconnection cabling by an SWBT approved vendor, the charge for on-going maintenance will apply. This is expressed as a combination of a non-recurring charge and a monthly rate as specified in 19.1 (H) (3).

**4. Cable Racking and Hole**

This sub-element provides for cable rack space and hole for copper, coax and optical cabling between two collocation arrangements and the required terminations at each virtual collocation arrangement(s) at an Eligible Structure. This sub-element is expressed as a monthly rate specified in 19.1 (H)(4).

**5. Route Design**

This sub-element provides the route design for collocation-to-collocation connections. This sub-element is expressed as a non-recurring charge and this charge is specific in 19.1 (H) (5)

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Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 19.0 Rates and Charges for CDOW

## 19.1 Rates and Charges for CLECs Doing own Work

The rate elements below represent the charges associated with CLEC's providing, installing, and terminating their interconnection and power cabling. However, the rates and charges within CDOW are not comprehensive. There are rates and charges from the preceding sections of this same tariff that still apply for CDOW for rate elements that are not specifically addressed within Section 19 following.

	<u>USOC</u>	<u>Rate Per Month</u>	<u>Nonrecurring Charge</u>
A. Power Arrangements (Collocator provides and installs Power Cables 2-20 AMP Feeds (Per 2-20 AMP power Feeds) 2-50 AMP Feeds (Per 2-50 AMP power Feeds)		\$0.52 \$0.52	\$0.00 \$0.00
B. Voice Grade Interconnection (Collocator provides and installs Power Cabling)  Arrangement (Non-Shielded and Shielded) (Per 100 Pairs)		\$3.86	\$225.02
C. DS1 Interconnection (Collocator provides and installs cabling)  Arrangement to DCS (Per 28 DS1s)		\$295.42	\$3,496.22
D. DS1 Interconnection (Collocator provides and installs cabling)  Arrangement to DSX (Per 28 DS1s)		\$6.07	\$651.13

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 19.0 Rates and Charges for CDOW (cont'd)

## 19.1 Rates and Charges (cont'd)

	<u>USOC</u>	<u>Rate Per</u> <u>Month</u>	<u>Nonrecurring</u> <u>Charge</u>
E. DS3 Interconnection (Collocator provides and installs cabling)			
Arrangement to DCS (Per DS3)		\$115.30	\$2,186.12
F. DS3 Interconnection (Collocator provides and installs cabling)			
Arrangement to DSX (Per DS3)		\$5.69	\$204.42
G. Fiber Interconnection (Collocator provides and installs cabling)			
Arrangement (12 Fibers)		\$10.47	\$152.71

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri

## LOCAL ACCESS SERVICE

## VIRTUAL COLLOCATION (Continued)

## 19.0 Rates and Charges for CDOW (cont'd)

## 19.1 Rates and Charges (cont'd)

	<u>USOC</u>	<u>Rate Per Month</u>	<u>Nonrecurring Charge</u>
H. Collocation to Collocation Connection			
1. Fiber Cable (12 Fibers) Collocator Provides Cable and Installs		\$0.81	\$0.00
2. Copper Cable (28 DS1s) Collocator Provides Cable and Installs		\$0.41	\$0.00
3. Coax Cable (1 DS3) Collocator Provides Cable and Installs		\$0.27	\$0.00
4. Cable Racking and Hole			
- For Optical, per cable		\$0.90	\$0.00
- DS1, per cable		\$0.49	\$0.00
- DS3, per cable		\$0.35	\$0.00
5. Route Design		\$0.00	\$463.36

Issued: September 12, 2001

Effective: October 12, 2001

By JAN NEWTON, President-Missouri  
Southwestern Bell Telephone Company  
St. Louis, Missouri