

method of recovering training costs caused solely by the interconnector's selection of "nonstandard" IDE. SWBT's technicians have no need to be trained on that IDE absent that selection, and have no other use for that training other than the IDE. Use of a recurring charge to recover those costs would place SWBT and its customers at an inappropriate risk of bearing those costs should the interconnector terminate the virtual collocation arrangement with that "nonstandard" IDE.

**Paragraph 70(b): A number of LECs charge training expenses to interconnectors based directly on ticket stubs and other receipts. These LECs must comment on whether this direct "pass through" to interconnectors is reasonable and whether it is reasonable to permit interconnectors to pay third parties directly for airline and other training expenses.**

Response: SWBT does not "pass through" charges to interconnectors. However, SWBT's tariff does allow interconnectors, rather than SWBT, to coordinate training by allowing the interconnector to arrange and pay to suppliers all training costs for lodging, airfare, and training sessions with associated course material for SWBT personnel to be trained. This is a reasonable method that proves to the interconnector that it is only paying the actual out-of-pocket expense for necessary training. In fact, SWBT's rates have been proven to be reasonable in that, to date, interconnectors have had SWBT coordinate the training and have paid the SWBT's tariffed rates.

**Paragraph 70(c): The LECs should comment on whether it is reasonable to tariff rate structures that will avoid double recovery of training costs if a subsequent interconnector requests the same equipment, or if the LEC subsequently acquires the interconnector-designated equipment for use in its own network.**

Response: The interconnector that specified the initial installation should remain responsible for all training costs, regardless of whether a subsequent interconnector requests the same equipment in the same central office, or if SWBT acquires the same type of IDE for its own use in that office. The first interconnector caused those costs to be incurred with its IDE order, and will continue to get the benefit of that training. Use of that same training in other, future situations does not entitle the cost causer a return of its payment. Training requirements will be made for each location and equipment type specified by the interconnector. There is no opportunity for double recovery in that SWBT does not require unnecessary training if a subsequent interconnector requests identical IDE for that central office.

**Paragraph 70(d): The LECs must address whether it is reasonable to use the LECs' costs to train their technicians to service equipment used to provide the LECs' comparable DS1 and DS3 services as a guideline in developing interconnector training expenses.**

Response: It is not reasonable to compare SWBT's costs of training technicians on "nonstandard" IDE to the costs associated with training on "standard" equipment. The majority of training for technicians on SWBT "standard" equipment is conducted at a SWBT training center which allows SWBT to manage standard training costs. Those costs have no relationship to the costs incurred to train technicians on "nonstandard" equipment, which cannot be done at SWBT's training center due to an obvious lack of expertise. Given that the interconnector totally drives the

need for training by choosing when and where collocation is to be provided, what IDE will be required, and that the training costs for "nonstandard" equipment is different, SWBT's training costs for DS1 and DS3 services cannot be used as a guideline. Neither SWBT nor its customers should be forced to share the burden of training costs for "nonstandard" equipment caused by an interconnector. More appropriately, charges for such training could be recovered by the interconnector through its charges to its customers.

**Paragraph 70(e): Any LEC that filed an averaged rate to recover airline expenses associated with training must describe in detail its method of computing the averaged rate.**

Response: SWBT did not file an averaged rate to recover airline expenses. Due to the inability to use an ICB to recover the unique airfare and other costs incurred on behalf of an interconnector, Southwestern Bell filed the airfare to fly from the two cities with the largest virtual collocation arrangement demand at the time of SWBT's filing to the training location of the IDE vendor/manufacturer from which potential interconnectors forecasted they would request IDE.

### **C. Clarification of Training Provisions**

**Paragraph 74(a): All LECs must identify any provisions in their virtual collocation tariffs describing types of equipment to which training charges do not apply because the LECs use such equipment in their own networks. Any LEC that does not currently have such provision or a procedure for identifying such equipment must explain why its approach is reasonable.**

Response: The equipment used in SWBT's wire centers is not uniform from wire center to wire center. Instead of attempting

to list every wire center and then the types of equipment that are standard in each (and attempting to keep the tariff updated), SWBT's tariff instead references<sup>13</sup> the "Technical Publication For Expanded Interconnection With Southwestern Bell Telephone Company, Virtual Collocation & SBI." This document, now Issue 2, August 1995, at Sections 3.C.13, 3.C.14 and Section 3.D.5 number 31 (copies of the specific pages and form are included as Attachment D), discusses the training requirements between SWBT and the interconnector. This document is provided to each interconnector interested in virtual collocation with SWBT and, as updated versions are issued, are provided to each interconnector by managers dedicated to coordinating interconnector requests and correspondence.

**Paragraph 74(b): All LECs must specify the minimum number of technicians that must be trained to maintain and repair interconnector-designated equipment in each central office, and explain why it is reasonable to train this number of technicians.**

Response: The number of technicians that must be trained to maintain and repair IDE is not an absolute number. Instead, the number is based upon the following criteria in order to ensure 7-day a week, 24-hour a day coverage comparable to SWBT's maintenance/repair criteria:

- Location of central office (i.e., metro or rural), and
- The number of technicians presently assigned to the office for 7-day, 24-hour coverage.

---

<sup>13</sup> SWBT Tariff F.C.C. No. 73, Section 25.2.

The training requirements are developed based upon specific central office location and IDE type specified by the interconnector. Based upon virtual collocation arrangements to date that required training, SWBT's average number of technicians is 5.6 per central office. That number is not excessive and clearly reasonable.

**Paragraph 74(c): All LECs must describe their policies regarding training of LEC personnel to maintain and repair interconnector-designated equipment. LECs must discuss the initial training to maintain and repair interconnector-designated equipment, and any subsequent training that is required.**

Response: When equipment not previously deployed at the interconnector-designated wire center is specified, technicians must be trained to maintain and repair the IDE. The training will be provided either at the SWBT training center, if equipped and available, or by the IDE vendor. In either case, the amount and type of training depends upon a determination of the specific training needs for those technicians in the central office who will be responsible for repairing and maintaining the IDE. Due to the varied backgrounds and experiences of SWBT technicians, the training required to meet proficiency standards varies from technician to technician.

In the event that future subsequent training is required due to personnel turnover, SWBT will be responsible for those costs.

**Paragraph 74(d): SWB states in its tariff that "where the Telephone Company does not have sufficient experience in maintaining and repairing such equipment in that central office, the Telephone Company reserves the right to either train its existing personnel on such equipment or to contract with a certified third party vendor for maintenance and repair." SWB must**

clarify whether this provision would require an interconnector to incur costs for training in a situation where SWB has recently acquired the same type of designated equipment for its own network. If so, SWB must address whether it would be reasonable for an interconnector to train LEC personnel to service equipment that will serve customers of the LECs' other services.

Response: If SWBT has previously acquired the same type of IDE configuration for its own network in the interconnector-designated office, the interconnector would incur no training charges. In essence, the interconnector gets the benefit of SWBT's knowledge and expertise without having to pay for it. If SWBT acquires the same equipment for its own use at a later date, the interconnector remains responsible for the initial training costs (i.e., there will be no refund). This symmetrical approach is reasonable and fair.

D. U S WEST's and Ameritech's Rate Structures for Cabling

**Paragraph 77: The Bureau requires US West and Ameritech to explain in detail their cabling rate structures for virtual collocation service.**

Response: This question does not apply to SWBT.

IV. ARE THE TERMS AND CONDITIONS IN THE VIRTUAL COLLOCATION TARIFFS UNREASONABLE?

A. SWB's Obligation to Accept Interconnector-Designated Equipment

**Paragraph 81(a): The Bureau requires SWB to provide the following information in its direct case concerning this tariff provision: (a) SWB must explain the criteria it uses to assess whether interconnector-designated equipment is necessary to "provide the interconnector's requested functionality or necessary technical compatibility with the interconnector's equipment."**

Response: See Reply Comments at pp. 45-46. SWBT examines each interconnector's request to determine if, from a technical standpoint, its specific pieces of IDE is necessary in order for the interconnector to obtain the particular functionalities it desires, and whether such IDE is necessary for there to be complete technical (i.e., operational) compatibility between the interconnector's network and SWBT's network. If IDE requested is technically not necessary to meet either of these objectives, SWBT reserves the right to substitute a different brand or type of IDE that it prefers but that will nonetheless still furnish the interconnector with (a) the particular functionalities it desires, and (b) full operational compatibility with SWBT's network.

**Paragraph 81(b): SWB must explain how its tariff provision is consistent with the Commission's mandate that LECs may prohibit only interconnector-designated equipment that represents a technical threat to the LEC network.**

Response: See Reply Comments at pp. 45-46. This tariff provision is consistent with the Virtual Collocation Order because it only requires that LECs furnish IDE "reasonably specified by the interconnector."<sup>14</sup> As pointed out in that Order, the main reasons for giving interconnectors the right to "reasonably specify" IDE were to ensure functional compatibility,<sup>15</sup> and to ensure that interconnectors would be able to obtain all desired functionalities from the virtual

---

<sup>14</sup> Virtual Collocation Order, at para. 44 (emphasis added).

<sup>15</sup> Id. at para. 49.

collocation arrangement.<sup>16</sup> Thus, where an interconnector requests IDE that the LEC does not wish to install and/or maintain, and that is not necessary for technical interoperability or to provide the desired functionalities, such IDE has not been "reasonably specified" and the LEC need not supply it under the Virtual Collocation Order.

**B. Use of Outside Contractors for Installation, Maintenance and Repair of Interconnector-Designated Equipment**

**Paragraph 88(a): All LECs must specify the circumstances under which they use outside contractors for installation, maintenance, or repair. In addition, LECs must describe the particular functions performed by these outside contractors.**

Response: See Reply Comments at pp. 47-48. Depending upon the cost, complexity, and the availability of either SWBT personnel or manufacturer/vendor personnel, Southwestern Bell sometimes uses outside contractors for central office equipment installation. There are also cases where SWBT technicians are used to install equipment when the technicians are properly trained and the cost associated with the use of SWBT personnel is lower than estimates from outside contractors.

SWBT typically performs all maintenance and repair functions on its equipment. However, when the IDE is placed in a SWBT central office where SWBT does not have sufficient experience in maintaining and repairing that IDE, SWBT either trains its existing personnel or contracts with a certified vendor. Such a determination will be made for each location and equipment type

---

<sup>16</sup> Id. at para. 57.

specified by the interconnector based upon the particular level and type of expertise of SWBT's personnel in a particular central office. All certified contractors must be capable of performing all maintenance and repair of the equipment and to otherwise abide by the terms and conditions and specifications in the standard SWBT contract.

**Paragraph 88(b): All LECs must discuss whether they permit interconnectors to choose from a list of certified contractors available to install, maintain, or repair the interconnector-designated equipment. All LECs must specify how they notify interconnectors of these contractors. Any LEC that does not permit the interconnector to choose from a list of certified contractors must explain the reason for its policy.**

Response: Southwestern Bell opposes allowing, and it is not necessary for, interconnectors to choose from a list of approved installation contractors. Southwestern Bell is responsible for providing the virtual collocation arrangement in accordance with the tariff and within the published interval (or an agreed to expedited interval). The choice of contractor is part of the overall project management function associated with meeting this requirement. Many factors (cost being only one) enter into this choice. Loss of this flexibility could jeopardize the quality and timeliness of the project. SWBT's choice of an installation contractor is transparent to the interconnector.

With regard to maintenance and repair of IDE, SWBT is fully obligated to maintain the interconnector's equipment, and will select the certified contractor to perform those functions as necessary. Southwestern Bell's procurement organization will notify all potential maintenance and repair contractors that

request SWBT's qualifications and certification for maintaining the IDE. That organization is also responsible for all contract negotiations with any potential maintenance contractor. Any SWBT contractor must meet SWBT certification and insurance requirements established by SWBT's Procurement organization. Inasmuch as SWBT is ultimately responsible for the equipment's maintenance and repair, SWBT should select the maintenance contractor. Indeed, often it is SWBT's services that connect the end-user to the interconnector. SWBT obviously is concerned that the entire end-to-end transmission path is operational, and cannot take risks with the maintenance and repair functions of IDE.

**Paragraph 88(c): All LECs must state whether they will honor an interconnector's request that the LEC add to its list a contractor that meets the LEC's certification requirements. Any LEC that will not honor such requests must explain the reason for its policy. The LECs should reference the applicable provisions of their virtual collocation tariffs.**

Response: Subject to that vendor meeting SWBT's certification requirements and the use of SWBT's standard contract, SWBT will honor such requests. See SWBT F.C.C. No. 73, Section 25.2.5(C).

### **C. Installation, Maintenance and Repair Intervals**

**Paragraph 91(a): The LECs must explain how their installation intervals for interconnector-designated equipment comply with the Commission's requirement that, at a minimum, the LECs install interconnector-designated equipment under the same time intervals that apply to installation of comparable LEC equipment.**

Response: The procedures used to establish intervals for IDE are identical to those in place for the installation of the

same equipment by Southwestern Bell. These intervals are based on information provided by each vendor. When an interconnector requests a shorter interval, SWBT negotiates improved intervals on a case-by-case basis with the vendor, as it would to provide its own services.

**Paragraph 91(b): The LECs must discuss whether it would be reasonable to notify interconnectors of the LECs' specific maintenance and repair intervals by including appropriate language in their tariffs. In particular, LECs must comment on whether it would benefit interconnectors, without being unduly burdensome to LECs, to state in their tariffs: (1) The frequency with which they will perform maintenance and repair of interconnector-designated equipment; (2) The maximum response time to intermittent service outages; and (3) The restoration priorities if a LEC's wire center is inoperative.**

Response: There are no existing requirements for tariffing repair intervals for access services, and there is no need to develop tariff wording for specific maintenance and repair intervals relating specifically to IDE. SWBT does not specify intervals for its services and has found no reason to do so because SWBT repair intervals are under constant review and revision. To include repair intervals in the tariff for IDE or otherwise would only slow the ongoing interval improvement process, which would not benefit the interconnector.

Further, SWBT is not aware of any interconnector complaints concerning SWBT response time to trouble reports. Until a demonstrated problem arises, it is unreasonable to require LECs to expend the time and resources required to provide mandated virtual collocation tariffed maintenance and repair intervals.

Additionally, since divestiture, the LECs have been required to provide ARMIS reports to the Commission that provide data concerning provisioning and trouble intervals for LEC provided services as well as intervals for IDE. These reports do not distinguish between IDE repair response and the repair response for equipment used by SWBT to provision its services to its customers. SWBT provides services to end-user customers that connect to IDE in the SWBT wire centers and will continue to provide high level service to these customers as well as interconnectors. There is no benefit to SWBT to maintain and repair IDE in less than a reasonable and equitable time frame. Accordingly, SWBT has acted and will continue to act diligently in complying with the requirement that IDE be maintained and repaired under the same time intervals and with the same failure rates that apply to the performances of similar functions for other comparable SWBT equipment.

To that end, SWBT uses alarm collection systems on all network elements in its central offices. The alarm collection device ("ACD") allows SWBT to analyze and distinguish between high level alarms and alarms that may be generated by the interconnector while performing provisioning activities. Regardless of whether or not the interconnector calls SWBT to report trouble, SWBT responds to certain alarms that are generated by the IDE. Under the circumstances, there is no need to require maximum response times and no benefit to doing so.

With regard to central office restoration, SWBT's guidelines make no distinction between virtual collocation arrangements and equipment being used to provide SWBT services. No benefit would accrue to the interconnector by stating SWBT's restoration guidelines (especially given how infrequently central offices are inoperative), and LECs would be burdened with the need to update any such tariff whenever their restoration guidelines change.

**Paragraph 91(c): The LECs must address whether they offer interconnectors the same range of service options that the LECs offer to their comparable services customers. LECs must reference the applicable sections of their tariffs.**

Response: SWBT does not offer a range of service intervals or options for its DS1 and DS3 services and, similarly, does not do so with virtual collocation arrangements.

#### D. U S WEST's Insurance Requirement

**Paragraph 96(a): U S West must explain why it is reasonable to require interconnectors and their subcontractors to name US West as an insured party on their general liability policies.**

**(b) U S West must define the following terms as used in its expanded interconnection tariff: "occurring or arising out of interconnection," "contractual liability," "stop-gap liability," "premises-operations," and "products/completed operations."**

**(c) U S West must clarify whether its insurance provision is intended to require interconnectors and their subcontractors to insure US West against the negligence of US West's employees. If it is US West's position that the negligent acts of US West's employees are to be covered by the interconnector's and their subcontractor's general liability policies, US West must address the reasonableness of its position.**

**(d) US West must list all insurance requirements, including policy terms, policy limits, and requirements for proof of coverage, it imposes on customers of its DS1 and DS3 services or on any third-party contractors that perform work on US West's premises. In addition, US West must list all bonding requirements it imposes on third-party contractors that perform work on US**

**West's premises. If these insurance or bonding requirements differ from the requirements US West imposes on interconnectors and their subcontractors, US West must justify any differences.**

Response: Paragraph 96 in its entirety is not applicable to Southwestern Bell.

E. Liability of LECs

**Paragraph 100(a): The LECs must explain the policies articulated in their tariffs concerning an interconnector's right of action against the LEC for negligence, gross negligence, willful misconduct, or intentional harm. The LECs must explain why these provisions are reasonable.**

Response: SWBT does not have any limitation of liability provision specific to interconnectors or virtual collocation. Instead, SWBT references its general tariff provisions that are applicable to customers of SWBT and consistently applies those limitations to interconnectors as well. These long-standing provisions should not be in question now when applied to interconnectors. Those provisions are reasonable, have been permitted by the Commission in every other context, and are at least as appropriate in their application to interconnectors. SWBT's rates are set with reference to the limited liability that SWBT assumes in the particular arrangement, and an absence of those limitations would require a rate adjustment. Otherwise, SWBT or its customers would have to bear any liability not covered by the virtual collocation rates. In sum, there is simply no reasonable basis for giving interconnectors special treatment by exempting them from SWBT's general limitation of liability.

Paragraphs 100(b): BellSouth's liability provision states, inter alia, that the interconnector must indemnify BellSouth against any losses that "may arise out of or be caused by the installation, repair, use or removal" of interconnector provided leased equipment or facilities, or by "any act or omission of BellSouth, its employees, agents, former or striking employees, or contractors ...." BellSouth must explain why it is reasonable to require another party to indemnify BellSouth for BellSouth's own negligence.

Response: This does not require a response from SWBT.

Paragraph 100(c): BellSouth's tariff also states that the interconnector "represents, warrants and covenants that it shall not cause or permit any other party to cause any environmental conditions ... which violate any federal, state or local law or ordinance, rule or regulation. The collocater shall indemnify ... BellSouth from and against any and all liability ... arising out of any breach of the foregoing sentence." BellSouth must define the term "environmental conditions," as used in this provision. In addition, BellSouth must explain how an interconnector can reasonably warrant that it will not "permit" another party to cause such an environmental condition.

Response: This does not require a response from SWBT.

#### F. Ordering and Billing Virtual Collocation Services

Paragraph 102(a): The LECs must explain why it is reasonable to restrict other parties, such as interexchange carriers, from ordering and being billed for virtual collocation services up to the demarcation point with the interconnector. In particular, the LECs must address whether it is reasonable to treat the ordering and billing of virtual collocation services differently than the ordering and billing of other access services.

Response: SWBT's tariff does not prohibit interexchange carriers ("IXCs") or end-users from ordering, and being billed for, expanded interconnection cross-connects to either the mandated physical or virtual collocation arrangements of interconnectors. As with SWBT's access services, SWBT can process and bill regardless of which entity orders the cross-connect. Neither SWBT's tariff nor its technical publication

contain any wording that suggests that IXCs/end-users are prohibited from ordering an expanded interconnection cross-connect. Interconnectors continue to provide the required address information to IXCs/end-users and SWBT continues to process expanded interconnection cross-connects and to bill IXC/end-user customers for the cross-connects they order to collocation arrangements.

**Paragraph 102(b):** The LECs must discuss their procedures for accepting letters of agency for their other DS1 and DS3 comparable services, and reference applicable sections in their special access and switched transport tariffs. In addition, the LECs must address whether a prohibition against the use of letters of agency for virtual collocation services is reasonable in situations where an interexchange carrier requests a letter of agency to order cross-connection service directly from the LEC.

Response: Southwestern Bell uses letters of agency ("LOAs") in several situations. For example, SWBT uses LOAs in instances where a customer transports switched access service on behalf of another switched access customer. The customer carrying the switched access usage must provide a LOA stating the Feature Group D customer has agreed to allow his traffic to be so transported. SWBT has no prohibition against the use of letters of agency regarding its special access and switched transport services, nor its virtual collocation expanded interconnection cross-connects in either its tariff or technical publication. SWBT does not discriminate between virtual collocation expanded interconnection cross-connects and SWBT's "DS1 and DS3 comparable services." See SWBT Tariff F.C.C. No. 73, Sections 6 and 13.

**V. CONCLUSION**

For the foregoing reasons, SWBT respectfully requests that the Bureau end the investigation in this docket, remove the RAF imposed upon SWBT's rates, and re-establish the rates originally filed by SWBT in its Transmittal Nos. 2410 and 2429.

Respectfully submitted,

SOUTHWESTERN BELL TELEPHONE COMPANY

By: *Darryl W. Howard*

Robert M. Lynch  
Durward D. Dupre  
Darryl W. Howard

Attorneys for  
Southwestern Bell Telephone Company

One Bell Center, Suite 3524  
St. Louis, Missouri 63101  
(314) 235-2513

October 19, 1995

***Appendix to SWBT Response to Paragraph 55:***

The Company cost of money is 10.63%.

Attached is a copy of the information previously provided in Phase I of this investigation which addressed SWBTs annual cost factors and the components making-up those factors. Also attached are the state specific digital circuit data used to develop weighted Company depreciation data.

SOUTHWESTERN BELL TELEPHONE COMPANY

ANNUAL COST FACTORS

PREPARED IN RESPONSE  
TO FCC DESIGNATION ORDER DIRECT CASE

DOCKET NO. 94-97

BOOK 15 of 16

# **SOUTHWESTERN BELL TELEPHONE COMPANY**

## **ANNUAL COST FACTORS**

Attached are data sheets which identify the following:

- **Company Specific Annual Cost Factors Applied in the Virtual Collocation Cost Studies**
- **State Specific Annual Cost Factors Applied in the DS1 and DS3 Comparable Services Cost Studies**

## **COMPANY SPECIFIC ANNUAL COST FACTORS**

### **Factor Derivation**

SWBT develops annual cost factors on a state specific basis. Since virtual collocation cost studies were conducted on a company specific basis, company specific annual cost factors were calculated from the state specific data.

The attached spreadsheet labeled "COLOAD.XLS" summarizes the company specific annual cost factors utilized in the virtual collocation cost studies. These factors were developed from state specific data which has been weighted by the total investment on the company books as of end-of-year data.

## DEPRECIATION DATA

STATE: ARKANSAS

ISSUE NO. 16

ISSUE DATE: 8/16/93

ACCOUNT NUMBER	CLASS OR SUBCLASS OF PLANT	PROJECTION LIFE/AYFR	C	G	S	FUTURE	FUTURE	FUTURE
						GROSS SALVAGE	COST OF REMOVAL	NET SALVAGE
						\$	\$	\$
2112	MOTOR VEHICLES	8.8	1.3200000	-0.051487003899	0.019480566508	10.00	1.00	9.00
2115	GARAGE WORK EQPT	16.0	1.0353042	-0.589778066000	0.011497241400	1.00	0.00	1.00
2116	OTHER WORK EQPT	16.0	1.0353042	-0.589778066000	0.011497241400	1.00	0.00	1.00
2121	BUILDINGS							
	DIAL & ADMIN	50.0	1.1842873	-0.101449700000	0.015576545000	9.00	5.00	4.00
	OTHER	33.0	1.1333974	-0.217455120000	0.023968840000	9.00	5.00	4.00
2122	FURN-OFFICE/SUPPORT	21.0	0.9700000	-3.896234040000	-0.115248308000	1.00	0.00	1.00
2123	OFFIC. COMM. EQPT							
	OFFICE SUPPORT	13.0	1.0700000	-0.602926124764	0.040366674441	2.00	0.00	2.00
	OFFIC. COMM. EQPT	7.0	1.2555395	-0.231544182000	0.053296253100	2.00	0.00	2.00
2124	GNL. PURP. COMPUTERS	7.2	1.2300000	-0.182593740000	0.039528913000	8.00	0.00	8.00
2210	CENTRAL OFC. SWITCH							
	ANALOG	(1997.5) 4.5	1.1300000	-0.023930620000	-0.000950706100	5.00	2.00	3.00
	DIGITAL	16.0	1.1024940	-0.334100410000	0.024011879000	4.00	6.00	-2.00
	STEP-BY-STEP	0.0	0.0000000	0.000000000000	0.000000000000	2.00	6.00	-4.00
	CROSSBAR	0.0	0.0000000	0.000000000000	0.000000000000	2.00	4.00	-2.00
2220	OPERATOR SYSTEMS	8.8	1.1024940	-0.334100410000	0.024011879000	1.00	3.00	-2.00
2230	CENTRAL OFFICE TRANS							
	RADIO	17.5	1.1300000	-0.042056359400	-0.000925545348	15.00	10.00	5.00
	DIGITAL CIRCUIT	11.5	1.0400000	-0.853986468945	0.027824874881	3.00	6.00	-3.00
	DDS CIRCUIT	7.0	1.2900000	-0.068309203815	-0.026675900474	3.00	6.00	-3.00
	ANALOG CIRCUIT	10.5	1.0500000	-2.297313414446	0.110371229819	2.00	6.00	-4.00
2311	STATION APPARATUS							
	TELETYPE	5.1	1.1843292	-0.231544182000	0.039621461200	2.00	0.00	2.00
	TELEPHONE & MISC	4.0	1.0201029	-8.974394800000	0.163161080000	0.00	2.00	-2.00
2341	LPBX	7.0	1.0201029	-8.974394800000	0.163161080000	1.00	3.00	-2.00
2351	PUBLIC TELEPHONE	9.0	1.1921875	-0.110391997000	0.013251217100	0.00	0.00	0.00
2362	OTHER TERMINAL EQPT	7.0	1.0201029	-8.974394800000	0.163161080000	1.00	3.00	-2.00
2411	POLES	30.0	1.1600000	-3.053568000000	-0.006015815391	16.00	100.00	-84.00
2421	AERIAL CABLE							
	EXCHANGE	27.0	1.1000000	-0.007252144144	-0.002769478716	17.00	66.00	-49.00
	TOLL	5.0	0.9600000	-3.443501300000	-0.142204510000	2.00	27.00	-25.00
2422	UNDERGROUND CABLE							
	EXCH METALLIC	25.0	1.0400000	-0.087983789000	0.002381734600	9.00	49.00	-40.00
	TOLL METALLIC	10.2	1.0400000	-0.562758800000	0.000196729750	9.00	31.00	-22.00
	EXCH FIBER	30.0	1.0400000	-0.087983789000	0.002381734600	0.00	10.00	-10.00
	TOLL FIBER	30.0	1.0400000	-0.562758800000	0.000196729750	0.00	10.00	-10.00
2423	BURIED CABLE							
	EXCH METALLIC	25.0	1.1200000	-0.008465602496	0.000178301077	12.00	18.00	-6.00
	TOLL METALLIC	17.0	0.9800000	-6.774073500000	-0.139616400000	1.00	4.00	-3.00
	EXCH FIBER	30.0	1.1200000	-0.008465602500	0.000178301080	0.00	10.00	-10.00
	TOLL FIBER	30.0	0.9800000	-6.774073500000	-0.139616400000	0.00	10.00	-10.00
2424	SUBMARINE CABLE	25.0	0.9200000	-0.342871960000	-0.028084170000	0.00	5.00	-5.00
2426	INTRABLDG NTWK CA	20.0	0.9100000	-0.137487530000	-0.013259850000	7.00	43.00	-36.00
2431	AERIAL WIRE							
	EXCH PAIRED	9.0	1.0300000	-6.804479120000	0.165135726000	0.00	43.00	-43.00
	EXCH SINGLE	16.0	1.0100000	-6.804479120000	0.092874638700	0.00	43.00	-43.00
2441	CONDUIT SYSTEMS	58.0	1.1000000	-0.001146227700	0.000065816181	2.00	8.00	-6.00

DEPRECIATION DATA

STATE: KANSAS

ISSUE NO. 17

ISSUE DATE: 8/16/93

ACCOUNT NUMBER	CLASS OR SUBCLASS OF PLANT	PROJECTION LIFE/AYFR	C	G	S	FUTURE GROSS SALVAGE	FUTURE COST OF REMOVAL	FUTURE NET SALVAGE
						\$	\$	\$
2112	MOTOR VEHICLES	8.4	1.2500000	-0.097350094066	0.026508519159	12.00	0.00	12.00
2115	GARAGE WORK EQPT	15.0	1.0482126	-0.589778066000	0.015603398900	3.00	0.00	3.00
2116	OTHER WORK EQPT	16.0	1.0482126	-0.589778066000	0.015603398900	3.00	0.00	3.00
2121	BUILDINGS							
	DIAL & ADMIN	45.0	1.1842873	-0.101449700000	0.015576545000	13.00	7.00	6.00
	OTHER	31.0	1.1333974	-0.217455120000	0.023968840000	13.00	7.00	6.00
2122	FURN-OFFICE/SUPPORT	28.0	0.9400000	-0.490254194000	-0.029524687700	6.00	0.00	6.00
2123	OFFIC. COMM. EQPT							
	OFFICE SUPPORT	12.5	0.9100000	-0.920826992915	-0.085802113551	1.00	0.00	1.00
	OFFIC. COMM. EQPT	8.0	1.2780957	-0.231544182000	0.057466432500	1.00	0.00	1.00
2124	GNL. PURP. COMPUTERS	8.1	1.2300000	-0.182593740000	0.039528913000	6.00	0.00	6.00
2210	CENTRAL OFC. SWITCH							
	ANALOG	(1997.5) 4.5	0.0000000	0.000000000000	0.000000000000	3.00	6.00	-3.00
	DIGITAL	16.0	1.1024940	-0.334100410000	0.024011879000	8.00	3.00	5.00
	STEP-BY-STEP	0.0	0.0000000	0.000000000000	0.000000000000	2.00	7.00	-5.00
	CROSSBAR	0.0	0.0000000	0.000000000000	0.000000000000	2.00	5.00	-3.00
2220	OPERATOR SYSTEMS	9.8	1.1024940	-0.334100410000	0.024011879000	1.00	3.00	-2.00
2230	CENTRAL OFFICE TRANS							
	RADIO	12.0	1.0500000	-0.593426883000	0.023686688400	10.00	5.00	5.00
	DIGITAL CIRCUIT	12.5	1.0800000	-0.313060664798	0.022201450307	3.00	6.00	-3.00
	DDS CIRCUIT	7.0	1.2100000	-0.060435338911	-0.008939901581	3.00	6.00	-3.00
	ANALOG CIRCUIT	12.5	0.9800000	-9.914234814690	-0.200777986197	2.00	6.00	-4.00
2311	STATION APPARATUS							
	TELETYPE	10.4	1.0201029	-8.974394800000	0.163161080000	0.00	2.00	-2.00
	TELEPHONE & MISC	10.0	1.0201029	-8.974394800000	0.163161080000	0.00	2.00	-2.00
2341	LPBX	7.0	1.0201029	-8.974394800000	0.163161080000	0.00	2.00	-2.00
2351	PUBLIC TELEPHONE	10.4	1.1601677	-0.110391997000	0.011198945300	3.00	0.00	3.00
2362	OTHER TERMINAL EQPT	7.0	1.0201029	-8.974394800000	0.163161080000	0.00	2.00	-2.00
2411	POLES	16.0	1.1400000	-0.000051178449	-0.013119229955	8.00	90.00	-82.00
2421	AERIAL CABLE							
	EXCHANGE	22.0	0.9800000	-2.170423483869	-0.047294913896	20.00	42.00	-22.00
	TOLL	5.0	0.9600000	-3.443501300000	-0.142204510000	7.00	14.00	-7.00
2422	UNDERGROUND CABLE							
	EXCH METALLIC	25.0	1.0400000	-0.087983789000	0.002381734600	4.00	29.00	25.00
	TOLL METALLIC	11.0	1.0400000	-0.562758800000	0.000196729750	2.00	21.00	-19.00
	EXCH FIBER	30.0	1.0400000	-0.087983789000	0.002381734600	0.00	10.00	-10.00
	TOLL FIBER	30.0	1.0400000	-0.562758800000	0.000196729750	0.00	10.00	-10.00
2423	BURIED CABLE							
	EXCH METALLIC	24.0	1.0600000	-0.114530898274	0.006796783027	10.00	15.00	-5.00
	TOLL METALLIC	14.0	0.9800000	-6.774073500000	-0.139616400000	1.00	2.00	-1.00
	EXCH FIBER	30.0	1.0600000	-0.114530900000	0.006796783000	0.00	10.00	-10.00
	TOLL FIBER	30.0	0.9800000	-6.774073500000	-0.139616400000	0.00	10.00	-10.00
2424	SUBMARINE CABLE	22.0	0.9200000	-0.342871960000	-0.028084170000	0.00	0.00	0.00
2426	INTRABLDG NTWK CA	20.0	0.9100000	-0.137487530000	-0.013259850000	3.00	20.00	-17.00
2431	AERIAL WIRE							
	EXCH PAIRED	8.0	1.0900000	-0.589778066000	0.027301889000	0.00	59.00	-59.00
	EXCH SINGLE	11.0	1.0599999	-0.589778066000	0.019857239000	0.00	59.00	-59.00
2441	CONDUIT SYSTEMS	65.0	1.0900000	-0.001146227700	0.000058728285	2.00	8.00	-6.00

DEPRECIATION DATA

STATE: MISSOURI

ISSUE NO. 17

ISSUE DATE: 8/16/93

ACCOUNT NUMBER	CLASS OR SUBCLASS OF PLANT	PROJECTION LIFE/AYFR	C	G	S	FUTURE	FUTURE	FUTURE
						GROSS COST OF SALVAGE	REMOVAL	NET SALVAGE
						%	%	%
2112	MOTOR VEHICLES	8.5	1.7200000	-0.002240387696	0.000767150711	11.00	0.00	11.00
2115	GARAGE WORK EQPT	14.0	1.0482126	-0.589778066000	0.015603398900	5.00	0.00	5.00
2116	OTHER WORK EQPT	15.0	1.0482126	-0.589778066000	0.015603398900	5.00	0.00	5.00
2121	BUILDINGS							
	BELL CENTER	75.0	2.5011869	-0.000025496400	0.000012396400	10.00	6.00	4.00
	DIAL & ADMIN	47.0	1.7125302	-0.231544180000	0.125994070000	10.00	6.00	4.00
	OTHER	32.0	1.1100000	-0.127515100000	0.008083176000	10.00	6.00	4.00
2122	FURN-OFFICE/SUPPORT	23.0	1.0482126	-0.589778060000	0.015603339000	10.00	3.00	7.00
2123	OFFIC. COMM. EQPT							
	OFFICE SUPPORT	15.0	0.9900000	-39.836870075000	-0.401399136311	0.00	0.00	0.00
	OFFIC. COMM. EQPT	9.0	1.7125303	-0.231544182000	0.125994071000	18.00	0.00	18.00
2124	GNL. PURP. COMPUTERS	6.8	1.2300000	-0.182593740000	0.039528913000	8.00	0.00	8.00
2210	CENTRAL OFC. SWITCH							
	ANALOG	(1999.8) 6.8	0.0000000	0.000000000000	0.000000000000	3.00	6.00	-3.00
	DIGITAL	16.0	1.1024940	-0.334100410000	0.024011879000	12.00	2.00	10.00
	STEP-BY-STEP	0.0	0.0000000	0.000000000000	0.000000000000	1.00	11.00	-10.00
	CROSSBAR	0.0	0.0000000	0.000000000000	0.000000000000	2.00	12.00	-10.00
2220	OPERATOR SYSTEMS	13.0	1.1024940	-0.334100410000	0.024011879000	1.00	3.00	-2.00
2230	CENTRAL OFFICE TRANS							
	RADIO	14.5	1.0100000	-5.900899890000	0.051417887200	20.00	5.00	15.00
	DIGITAL CIRCUIT	12.5	0.9600000	-3.697500914368	-0.150200717858	3.00	5.00	-2.00
	DDS CIRCUIT	7.0	0.8200000	-0.936707929288	-0.182605627453	3.00	5.00	-2.00
	ANALOG CIRCUIT	11.5	0.9700000	-6.598658561707	-0.200218260288	2.00	5.00	-3.00
2311	STATION APPARATUS							
	TELETYPE	3.3	1.1743532	-0.231544182000	0.037640363000	2.00	0.00	2.00
	TELEPHONE & MISC	6.9	1.0201029	-8.974394800000	0.163161080000	0.00	2.00	-2.00
2341	LPMX	7.0	1.0201029	-8.974394800000	0.163161080000	13.00	3.00	10.00
2351	PUBLIC TELEPHONE	12.0	1.2018971	-0.110391997000	0.013862662000	10.00	0.00	10.00
2362	OTHER TERMINAL EQPT	7.0	1.0201029	-8.974394800000	0.163161080000	2.00	1.00	1.00
2411	POLES	28.0	1.0400000	-0.017065373594	-0.003979185902	14.00	124.00	-110.00
2421	AERIAL CABLE							
	EXCHANGE	24.0	1.0600000	-0.022554054361	-0.004931422867	32.00	62.00	-30.00
	TOLL	8.0	0.9600000	-3.443501300000	-0.142204510000	2.00	11.00	-9.00
2422	UNDERGROUND CABLE							
	EXCH METALLIC	27.0	1.0400000	-0.087983789000	0.002381734600	23.00	48.00	-25.00
	TOLL METALLIC	11.5	1.0400000	-0.562758800000	0.000196729750	34.00	28.00	6.00
	EXCH FIBER	30.0	1.0400000	-0.087983789000	0.002381734600	0.00	8.00	-8.00
	TOLL FIBER	30.0	1.0400000	-0.562758800000	0.000196729750	0.00	8.00	-8.00
2423	BURIED CABLE							
	EXCH METALLIC	24.0	1.1200000	-0.005100448045	-0.000341599163	20.00	35.00	-15.00
	TOLL METALLIC	11.5	0.9800000	-6.774073500000	-0.139616400000	2.00	3.00	-1.00
	EXCH FIBER	30.0	1.1200000	-0.005100448000	-0.000341599160	0.00	5.00	-5.00
	TOLL FIBER	30.0	0.9800000	-6.774073500000	-0.139616400000	0.00	5.00	-5.00
2424	SUBMARINE CABLE	22.0	0.9200000	-0.342871960000	-0.028084170000	2.00	1.00	1.00
2426	INTRABLDG NTWK CA	30.0	0.9100000	-0.137487530000	-0.013259850000	6.00	30.00	-24.00
2431	AERIAL WIRE							
	EXCH PAIRED	12.0	1.0200000	-2.834645990000	0.049963258200	0.00	139.00	-139.00
	EXCH SINGLE	16.0	1.0200000	-2.834645990000	0.037474464600	0.00	139.00	-139.00
2441	CONDUIT SYSTEMS	65.0	1.0900000	-0.001146227700	0.000058728285	2.00	8.00	-6.00

DEPRECIATION DATA

STATE: OKLAHOMA

ISSUE NO. 16

ISSUE DATE: 8/16/93

ACCOUNT NUMBER	CLASS OR SUBCLASS OF PLANT	PROJECTION LIFE/AYFR	C			G			S			FUTURE GROSS SALVAGE	FUTURE COST OF REMOVAL	FUTURE NET SALVAGE
2112	MOTOR VEHICLES	8.4	1.4200000	-0.025373391805	0.016405388103	13.00	0.00	13.00						
2115	GARAGE WORK EQPT	14.0	1.0395387	-0.589778066000	0.012849858000	0.00	0.00	0.00						
2116	OTHER WORK EQPT	16.0	1.0395388	-0.589778066000	0.012849858000	0.00	0.00	0.00						
2121	BUILDINGS													
	DIAL & ADMIN	46.0	1.1842873	-0.101449700000	0.015576545000	8.00	5.00	3.00						
	OTHER	27.0	1.1333974	-0.217455120000	0.023968840000	8.00	5.00	3.00						
2122	FURN-OFFICE/SUPPORT	28.0	0.8899999	-0.161476299000	-0.020211033500	7.00	0.00	7.00						
2123	OFFIC. COMM. EQPT													
	OFFICE SUPPORT	12.5	1.1900000	-0.076071994795	0.013529890398	0.00	0.00	0.00						
	OFFIC. COMM. EQPT	7.0	1.2699617	-0.231544182000	0.055971175400	2.00	0.00	2.00						
2124	GNL. PURP. COMPUTERS	6.9	1.2300000	-0.182593740000	0.039528913000	11.00	0.00	11.00						
2210	CENTRAL OFC. SWITCH													
	ANALOG	(2001.1) 8.1	0.0000000	0.000000000000	0.000000000000	2.00	5.00	-3.00						
	DIGITAL	16.0	1.1024940	-0.334100410000	0.024011879000	8.00	3.00	5.00						
	STEP-BY-STEP	(1998.1) 5.1	0.3100000	-0.002350424118	-0.002440191388	5.00	13.00	-8.00						
	CROSSBAR	(1997.1) 4.1	0.8600000	-0.014876350175	-0.003474101020	2.00	4.00	-2.00						
2220	OPERATOR SYSTEMS	9.0	1.1024940	-0.334100410000	0.024011879000	1.00	3.00	-2.00						
2230	CENTRAL OFFICE TRANS													
	RADIO	17.5	0.9800000	-5.175588020000	-0.104060628000	12.00	7.00	5.00						
	DIGITAL CIRCUIT	15.0	1.1700000	-0.038695609606	0.003084883916	3.00	6.00	-3.00						
	DDS CIRCUIT	7.0	0.9900000	-29.207078981330	-0.300316723575	3.00	6.00	-3.00						
	ANALOG CIRCUIT	12.5	1.0300000	-3.980717536876	0.118162856939	2.00	6.00	-4.00						
2311	STATION APPARATUS													
	TELETYPE	4.2	1.1817298	-0.231544182000	0.039106886800	2.00	0.00	2.00						
	TELEPHONE & MISC	10.7	1.0201029	-8.974394800000	0.163161080000	0.00	2.00	-2.00						
2341	LPBX	7.0	1.0201029	-8.974394800000	0.163161080000	0.00	2.00	-2.00						
2351	PUBLIC TELEPHONE	11.6	1.1509947	-0.110391997000	0.014827072600	1.00	0.00	1.00						
2362	OTHER TERMINAL EQPT	7.0	1.0201029	-8.974394800000	0.163161080000	1.00	3.00	-2.00						
2411	POLES	29.0	1.1600000	-5.145568000000	-0.006329706450	5.00	147.00	-142.00						
2421	AERIAL CABLE													
	EXCHANGE	26.0	1.0400000	-0.179067940689	0.003573252478	10.00	57.00	-47.00						
	TOLL	8.0	0.9600000	-3.443501300000	-0.014220451000	0.00	48.00	-48.00						
2422	UNDERGROUND CABLE													
	EXCH METALLIC	26.0	1.0400000	-0.087983789000	0.002381734600	11.00	37.00	-26.00						
	TOLL METALLIC	13.5	1.0400000	-0.562758800000	0.000196729750	0.00	18.00	-18.00						
	EXCH FIBER	30.0	1.0400000	-0.087983789000	0.002381734600	0.00	10.00	-10.00						
	TOLL FIBER	30.0	1.0400000	-0.562758800000	0.000196729750	0.00	10.00	-10.00						
2423	BURIED CABLE													
	EXCH METALLIC	24.0	1.0100000	-4.685590441636	0.047536307028	13.00	19.00	-6.00						
	TOLL METALLIC	16.0	0.9800000	-6.774073500000	-0.139616400000	1.00	2.00	-1.00						
	EXCH FIBER	30.0	1.0100000	-4.685590400000	0.047536307000	0.00	10.00	-10.00						
	TOLL FIBER	30.0	0.9800000	-6.774073500000	-0.139616400000	0.00	10.00	-10.00						
2424	SUBMARINE CABLE	21.0	0.9200000	-0.342871960000	-0.028084170000	0.00	30.00	-30.00						
2426	INTRABLDG NTKW CA	21.0	0.9100000	-0.137487530000	0.013259850000	9.00	47.00	-38.00						
2431	AERIAL WIRE													
	EXCH PAIRED	10.0	1.0300000	-4.506684300000	0.101292439000	0.00	150.00	-150.00						
	EXCH SINGLE	16.0	1.0100000	-4.506684300000	0.063311867400	0.00	150.00	-150.00						
2441	CONDUIT SYSTEMS	65.0	1.0900000	-0.001146227700	0.000058728285	2.00	8.00	-6.00						