

Operator Services - 1991

Jim Lande
Industry Analysis Division
Common Carrier Bureau
Federal Communications Commission

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1. Introduction

The purpose of this report is to provide an overview of operator services and to present current traffic and revenue data. The operator services marketplace is complex and significantly different from the marketplaces for other toll services. Moreover, new technologies and the introduction of competition have changed the provision of operator services dramatically. The Commission has considered operator services in several recent proceedings. In addition, Congress directed the Commission to review the operator services marketplace and determine whether consumers are being protected adequately by existing regulations.¹ This study was conducted as part of the Commission's overall review of operator services pursuant to the statutory mandate in TOCSIA.²

2. Operator Services

The public switched network is the system that allows customers to place calls from one telephone to other telephones throughout the country. Customer owned equipment is connected to this network via access lines. There are about 136 million switched access lines. Of these, about 94 million serve households, about 2 million are used for pay telephones, and about 40 million serve businesses.

Most access lines are used by the residence and business customers that lease them. This is not the case for access lines used for pay telephones and accommodation telephones. Pay telephones are located in public places such as in airports and on city streets, and also in business establishments. Accommodation telephones are located in hotels, motels, college and university dormitories, prisons and hospitals for use by visitors, customers, guests, students, inmates, and patients.

Almost three quarters of all calls originate and terminate in the same local area. About a quarter of all calls originate in one local calling area and terminate in another. This traffic is termed long distance or toll calling. Customers spent about \$70 billion for toll services in 1991.

Most toll calls are placed by people using access lines that they or their employers lease from local telephone companies (called local exchange carriers or LECs). The customer places most of these calls by dialing or keying the desired telephone number. Charges for

¹ Report to Congress, November 13, 1992.

² Section 226(h)(3)(B)(iii) of the Act, 47 USC §226(h)(3)(B)(iii).

such calls are billed to the subscriber who leases the access line. This is termed direct distance dialing (DDD). Prior to direct distance dialing, operators completed all long distance calls. Many people prefer the convenience of directly dialing calls, and began to make DDD calls as soon the network could accommodate them. In 1967, AT&T began offering discounts for late night DDD interstate toll calls. AT&T began offering DDD discounts for day and evening toll calls in 1970. These DDD discounts spurred additional customers to directly dial toll calls. Nonetheless, many people continue to use operators to dial their calls, to place person to person calls, to place calls to countries that do not support international direct dialing, and to make alternate payment arrangements, such as making a collect call or charging the call to a calling card.

Automatic call handling devices now provide many of the specialized services that operators used to provide. At one time a customer placing a toll call from a pay telephone or hotel room had to use an operator. A pay telephone customer or hotel guest can now place a toll call and have it charged to a calling card by dialing the card number once the caller has reached the desired long distance carrier. Although these types of calls no longer require an operator, such traffic is considered to be part of the operator services market.³ Carriers that provide these services are termed operator service providers (OSPs).

With the evolution of service features and technology, the operator services market includes all calls that are not directly dialed by customers from their own telephones or dialed to a non carrier 800 number. Logically, the operator services market could include all calls made to 800 numbers. 800 service was developed as a substitute for operator handled collect calls. 800 service is less expensive than accepting collect calls because the 800 customer automatically accepts all calls, obviating the need for an operator. Most 800 service is used by businesses who want to encourage calls from customers. Some residences and business customers also use 800 service to make calls back to the home or office while traveling, substituting for collect, third number, or credit card calls. However, 800 service

³ A guest at some hotels and motels can place long distance calls by dialing 1 plus the desired number. The PBX or other network related equipment allows the charge to be included automatically with the guest's room charge. This study includes these calls as operator service calls for the following reasons. Prior to the introduction of specialized equipment, these calls would have been handled by operators. These calls are close substitutes for other types of operator service calls. By including these calls, the operator service definition used in this report represents a market oriented definition. Although it was not possible to estimate these calls separately from other hotel and motel calls, the study found no evidence that separating these calls would significantly change the estimates and conclusions presented below.

generally is considered to be separate from operator services because it has unique service provision, customer usage, pricing and other characteristics.⁴

Some operator service calls are placed through an 800 number of an OSP. The customer dials the OSP 800 number to reach the OSP and then provides the number that the customer wishes to call. These calls are considered to be operator service calls. Calls placed to 800 numbers, such as those placed to telemarketers and to personal 800 numbers, have been excluded from the estimates presented below.

3. "At-Home" and "Away-From-Home" Calling.

Operator services comprises two broad categories of calls. "At-home" operator service calls include all toll calls made from the customer's home or business except for DDD calls and calls placed to 800 numbers. These calls include collect, credit card and third party billed⁵ calls. "Away-from-home" operator service calls include almost all toll calls made from pay telephones and from accommodation telephones. "Away-from-home" operator service calls include calls placed through 800 numbers maintained by OSPs, but exclude calls placed to 800 numbers. "Away-from-home" calls are collect, credit card, and third party calls as well as calls that are directly dialed from an accommodation telephone.

The definition of "away-from-home" calling used in this paper is broader than the definition of operator services used by the Commission in other contexts. For example, telephones that are exclusively used by prison inmates are not covered by the FCC's operator services rules.⁶ Similarly, the operator service rules do not cover pay telephone calls paid for by depositing coins or telephone calls placed by dialing a specialized access code.⁷ The definitions incorporated in the FCC's rules meet specific regulatory purposes.

⁴ See Policies and Rules Concerning Operator Service Access and Pay Telephone Compensation, CC Docket No. 91-35: Report and Order and Further Notice of Proposed Rulemaking, 6 FCC Rcd 4736, 4746 (1991).

⁵ Third party billed calls are charged to neither the calling nor the called line but instead are charged to a third (i.e. other) access line. Policies and Rules Concerning Local Exchange Carrier Validation and Billing Information for Joint Use Calling Cards, CC Docket No. 91-115, 7 FCC Rcd 3528, 3529, para. 7. (1992).

⁶ Policies and Rules Concerning Operator Service Providers, CC Docket No. 90-313, Report and Order, 6 FCC Rcd 2744, 2752, para. 15 (1991).

⁷ Section 64.708 (g) of the Commission's rules, 47 C.F.R. §64.708 (g).

The broad definition used herein reflects the marketplace and the types of data that are available.

"At-home" and "away-from-home" operator services differ in many important respects. The most important differences stem from the selection of the primary toll carrier. Many interexchange carriers compete to become the "At-home" customer's preselected toll carrier. In equal access areas, the customer preselects the interexchange carrier that will automatically carry toll traffic originating on the customer's line. Generally, the local exchange carrier handles toll calls within the local access transport area (LATA) and the preselected interexchange carrier handles calls between LATAs. The preselected carrier is variously referred to as the primary, presubscribed, default, or "1 Plus" carrier. Consumers can preselect any interexchange carrier that arranges the necessary interconnection with the local telephone company. (This type of interconnection is called "Feature Group D" access.) More than 300 long distance carriers purchase feature group D access in one or more states. However, AT&T, MCI, and Sprint collectively serve 95 percent of the nation's presubscribed lines.

"At-home" customers generally use their preselected carrier for most or all interLATA toll services. Customers can use a different carrier for a particular call, but they must take special actions. Specifically, they must "dial around" their preselected carrier by dialing a number that provides access to a different long distance carrier. Customers in equal access areas can dial around their preselected carrier by dialing "10XXX" where XXX is a code that identifies the desired interexchange carrier. Customers in all areas can dial around their preselected carrier by dialing a 950 or an 800 number associated with the desired interexchange carrier. Relatively few "At-home" customers dial around their preselected carrier. Most "At-home" calls that are dialed around the preselected carrier are directly dialed by the customer and are not considered to be operator service calls.

The situation is different for calls placed at pay telephones and accommodation telephones. The provider of the telephone preselects the OSP. Since a large percentage of customers use the preselected carrier chosen by the provider of the telephone, the provider of pay telephones and accommodation telephones are said to "aggregate" traffic for the preselected OSP. Thus, the owners of pay telephones and accommodation telephones are referred to as aggregators.⁸ Some OSPs are willing to pay large commissions to aggregators in exchange for being the aggregator's preselected carrier. Some aggregators may be more

⁸ Section (a)(2) of TOCSIA, 47 USC §226(a)(2) and Section 64.708(b) of the Commission's rules define an aggregator as "any person that, in the ordinary course of its operations, makes telephones available to the public or to transient users of its premises, for interstate telephone calls using a provider of operator services". 47 C.F.R. §64.708(b).

concerned with collecting commissions than they are with securing reasonable rates for the customer. Thus, high commissions are sometimes associated with higher rates charged to customers. Many customers now routinely dial around the OSP preselected by an aggregator in order to ensure that they are charged relatively low rates.

Table 1 summarizes the differences between operator service calls placed "At-home" and calls placed "away-from-home."

Table 1
**Differences between "At-Home" and "Away-From-Home"
 Operator Service Calling**

"At-Home"	"Away-From-Home"
<ul style="list-style-type: none"> - The customer selects the primary interexchange carrier based on rates, features and quality of service. - The customer knows which carrier is providing service. - Customers that place many toll calls become familiar with the rates. - Customers almost never dial around their preselected interexchange carrier. - Most charges are included on the monthly telephone bill. 	<ul style="list-style-type: none"> - The aggregator selects the primary interexchange carrier, often based on factors other than the rates that will be charged to the customer. - The customer encounters different carriers at different telephones, and may not be familiar with these carriers. - Customers that place many toll calls learn that some OSPs charge high rates. - A growing number of customers dial around the aggregator's preselected interexchange carrier. - Customers use a variety of payment methods, such as depositing coins, using credit cards, having the called party accept the charges, having the call charged to the customer's monthly telephone bill, and including the charge on the room bill at a hotel or motel.

4. Historic data on Pay Telephone Revenues

The Statistics of Communications Common Carriers (SOCC) is an annual summary of financial and operating data filed by common carriers with the FCC. The SOCC contains local service pay telephone revenues for LECs. The reported figures include revenues for "public" pay telephones (LEC owned pay telephones located in public places such as on streets and in airports), and for "semi-public" pay telephones (LEC owned pay telephones located on business premises). Carriers reported \$314 million in local service pay telephone revenues for 1972. The amount grew to \$1.9 billion for 1991. Some of the increase resulted from increases in pay telephone rates, which rose from around 10 cents per call in 1972 to around 25 cents per call today. Much of the increase was due to growth in calling.

Once annual revenue figures are deflated using the Producer Price Index for coin telephone service⁹, the resulting pay telephone revenue series shows steady 6% annual growth through 1983, and no growth thereafter. This change in the growth rate coincides with the introduction of pay telephone competition and suggests rapid growth in the market share of private pay telephone providers.

Data contained in administrative reports (MR-4) filed with the FCC detail AT&T's toll revenues from pay telephones for 1980 through 1987, the last year AT&T filed the reports. The pay telephone data includes revenues for collect calls, calls billed to third numbers, credit card calls, and calls paid for by depositing coins. The MR-4 data is presented in Table 2. AT&T's interstate pay telephone revenue grew from \$871 million in 1980 to \$1,191 million in 1987. Intrastate pay telephone revenue grew from \$618 million in 1980 to \$848 million in 1983. The Regional Bell Operating Companies (RBOCs) were formed at divestiture, and received the intraLATA part of AT&T's toll business. With the loss of the intraLATA operator service traffic, AT&T's intrastate pay telephone revenues fell to \$391 in 1984.

In the 1980's, changes in pay telephone toll revenues were similar to the changes in pay telephone local revenues. AT&T's pay telephone toll revenues grew by about 5% per year before divestiture, and the level of these revenues were fairly constant thereafter. Again, the change in growth coincides with growth in competition -- from other OSPs in this instance.

⁹ The Bureau of Labor Statistics publishes the Producer Price Indexes. The coin index covers coin traffic, as well as monthly recurring charges and revenue guarantees from semi-public telephones. See Telephone Rates Update, February 27, 1992.

TABLE 2
AT&T MR4 data: Pay Telephone Toll Revenue *
(\$ MILLIONS)

	1980	1981	1982	1983	1984	1885	1986	1987
Interstate Service								
Coin calls	\$103	\$108	\$109	\$121	\$120	\$122	\$131	\$125
Other toll calls	767	953	1,076	1,154	1,251	1,155	1,161	1,066
Total	871	1,061	1,185	1,276	1,371	1,277	1,292	1,191
Intrastate Service								
Coin calls	110	117	127	147	42	43	44	42
Other toll calls	508	595	674	701	349	361	390	402
Total	618	712	801	848	391	403	434	444
Interstate & Intrastate Service								
Coin calls	213	225	236	268	162	165	175	167
Other toll calls	1,276	1,549	1,750	1,855	1,600	1,516	1,551	1,468
Total	1,489	1,773	1,986	2,124	1,762	1,681	1,726	1,635
Coin as a percent of total Pay telephone toll revenue	14.3%	12.7%	11.9%	12.6%	9.2%	9.8%	10.1%	10.2%

* Pay telephone toll revenues were reported to Account 510 in accordance with the Uniform System of Accounts, Part 31 of the Commission's Rules, which was in effect during this time period. AT&T used the following sub accounts for pay telephone revenues.

Interstate coin - Subaccount 311

Intrastate coin - Subaccount 315

Interstate other - Subaccount 411

Intrastate other - Subaccount 415

The coin subaccounts include sent-paid and collected service at public and semipublic telephones. Other, or non-sent-paid, service includes traffic that originates at public, semipublic and inmate stations for services such as third number billed, credit card and collect messages.

NOTE: figures may not add to totals due to rounding differences.

The data in Table 2 also show that calls paid by using coins represented about 13% of pay telephone toll revenues before divestiture and about 10% of pay telephone toll revenues after divestiture. The figures for 1984 through 1987 do not include intraLATA calls. The drop in the percentage of revenues paid by coin suggests that intraLATA calls are more likely to be paid for by using coins. Most pay telephone calls are billed to a credit card, to a third number, or are placed collect.

5. Recent Data

Obtaining reliable information on the operator services market is difficult because carriers do not routinely file separate information for their operator services. Two sources provide operator service data for 1991. On April 22, 1991 the Chief of the Common Carrier Bureau issued an Order requiring all OSPs to file monitoring reports which include rate information, sample charges for a selection of calls that represent the most common OSP calls, details on complaints, revenue data, and cost information.¹⁰ Responses to this Order are referred to below as "report data." On June 5, 1992 the Chief of the Common Carrier Bureau issued an Order requiring nine of the largest OSPs to provide detailed information on messages, minutes and revenues for various segments of the operator services market.¹¹ Responses to this Order are referred to below as the "supplemental data."

Comparing revenue and traffic data for different carriers is complicated because the carriers use different accounting procedures and reporting assumptions. For example, some carriers do not include billed amounts for uncollectible calls as revenue. Some carriers do not separate interstate revenues from intrastate revenues. Some carriers do not classify all credit card calls as operator service calls. Furthermore, many carriers cannot easily break out data for important segments of the operator services market.

Follow-up interviews were conducted with personnel of the nine sampled OSPs in order to clarify the report and supplemental data. Where internal data systems could not furnish specific breakouts, the carriers were asked to provide their best estimates based on

¹⁰ Order, DA 91-523, released April 22, 1991 in CC Docket No. 90-313, Phase II.

¹¹ Order, DA 92-722, released June 5, 1992, in CC Docket No. 90-313, Phase II. The Order directed the following carriers to file data: Americall Systems of Louisville; American Network Exchange, Inc.; AT&T Communications, Inc.; Com Systems, Inc.; International Telecharge, Inc.; MCI Telecommunications Corporation; Telecom*USA; Sprint Communications Company; and, United Telephone Long Distance Companies. Carriers accompanied their traffic, revenue and cost information with requests for confidential treatment.

marketing information and judgment. This process helped develop the consistent data set used to derive industry averages.

Table 3 summarizes the study's revenue estimates for the toll market. Consumers spent about \$9.0 billion for operator services in 1991. This represented about 13% of all toll calling revenue.

Table 3

The Toll Telephone Service Market

Toll Telephone Service \$69.4 billion			
Private line, WATS, 800 service, and DDD calls from the customer's own telephone \$60.4 billion	Operator Services: All other message toll calls \$9.0 billion		
	"At-Home" Operator Service Calls \$2.9 billion	"Away-From-Home" Calls \$6.1 billion	
		Calls handled by the OSP preselected by the aggregator \$4.1 billion	Calls dialed around the OSP pre- selected by the aggregator \$1.9 billion

The study found that approximately \$6.1 billion worth of "away-from-home" calls were placed in 1991. Of this amount, \$4.1 billion of calls were carried by the OSP preselected by the aggregator. Many "away-from-home" customers prefer to choose an OSP, rather than rely on the choice made by the aggregator who owns the telephone. Consumers usually make the choice by "dialing around" the preselected OSP. Consumers dial around the preselected OSP by dialing a telephone number associated with the desired carrier. The alternate access arrangements include dialing a special 1-800 number, a special 950 number, or using a 10XXX access code. Consumers can sometimes dial 0 and then request that the operator transfer the call to a different OSP. Once the customer reaches the desired OSP the customer generally uses a calling card to arrange payment.

About \$1.9 billion of calls placed at pay telephones and accommodation telephones were dialed around the OSP preselected by the aggregator. Dial around traffic is increasing rapidly. The supplemental OSP data shows almost \$1.5 billion in dial around revenue for the first half of 1992. At this rate, by the end of 1992 nearly one half of "away-from-home" revenues will represent dialed around traffic. The rapid growth of dial around traffic demonstrates that consumers are learning how to save money on operator services. High rates charged by some OSPs probably spurred many consumers to seek alternatives. FCC rules adopted pursuant to the Telephone Operator Consumer Services Improvement Act of 1990 give the customer better information when making "away-from-home" calls, and increase the likelihood that the consumer can dial around the default carrier.

Table 4 presents operator service data for four groups of OSPs. The first column contains data for the three largest OSPs -- AT&T, MCI and U.S. Sprint. These companies collect about 68% of overall toll revenues -- covering both interLATA and intraLATA services -- and share a very large portion of the operator services market, as well.

The second column in Table 4 represents operator services provided by the Regional Bell Operating Companies (RBOCs). The RBOCs provide small amounts of interstate operator services. About 99% of their operator services revenue derive from intrastate traffic. Three assumptions were used to estimate 1991 OSP revenues for RBOCs: 1) The RBOC percentage of "At-home" operator service is the same as the RBOC percentage of overall toll traffic -- about 14.5%; 2) RBOCs had \$400 million in pay telephone revenue -- roughly what they had after divestiture; and, 3) There is no firm number to determine whether the RBOCs received significant amounts of OSP traffic from accommodation telephones, and therefore we did not include numbers for accommodation telephones.

The third column in Table 4 represents totals for the six smaller OSPs that provided supplemental data. This group is labeled "Sample OSPs." These six together handle about 40 percent of the traffic handled by all smaller OSPs. The six include the OSP operations of one independent LEC, as well as carriers that are pure OSPs.

Table 4 also contains estimates for OSPs that were not directed to provide supplemental OSP data. The report data, which contains revenues for all carriers, were used to estimate that "Other OSP" revenues equaled about 1.5 times the "Sample OSP" totals.

The three largest carriers and the RBOCs have significant amounts of both "At-home" and "away-from-home" operator services calls. Smaller OSPs, by contrast, receive virtually all of their operator service revenues by being an aggregator's preselected carrier.

Graph #1 shows shares based on revenues for "away-from-home" calling in 1991. AT&T, MCI and Sprint had about 74.8% of "away-from-home" calling revenues. This figure would be somewhat higher if Telecom*USA, which is owned by MCI, had been included with these carriers. The RBOCs had about a 6.6% share of "away-from-home" calling. Smaller OSPs received about 18.7% of "away-from-home" calling revenues. Smaller OSPs typically charge significantly higher rates than do AT&T, MCI and Sprint. Accordingly, their shares based on minutes were significantly lower than their shares based on revenues. Graph #2 shows that the smaller OSPs carried about 13% of "away-from-home" minutes, compared with 18% of revenues.¹²

The report data includes some cost breakdowns for OSPs. As with revenue data, differing accounting procedures and reporting assumptions make it difficult to compare the costs of different carriers. This is especially true for the largest three OSPs, which provide many other toll services and have significant joint and common costs for facilities used to provide both operator services and other toll services.

The interview process described above was also used to create a consistent set of cost data. About 3% of operator service revenues are uncollectible for the three largest carriers. These carriers paid about 3.8% of revenues as commissions, on average. The smaller OSPs had significantly higher uncollectible amounts and commissions. Uncollectibles represented about 7% of revenues. In addition, about 3% of calls were not billable. The smaller OSPs paid about 21% of billed revenues as commissions. Graph #3 shows a typical expense breakout for smaller OSPs.

AT&T, MCI and Sprint have lower uncollectibles because they have higher percentages of "At-home" and dial around traffic. These carriers typically have an ongoing relationship with their customers. By contrast, many OSPs are unknown to many of the customers that they bill, and more frequently have trouble collecting.

In some cases, the largest three carriers pay commissions to aggregators that are comparable to the commissions paid by pure OSPs. These carriers, however, pay low commissions to some aggregators and no commissions to others. In addition, these carriers

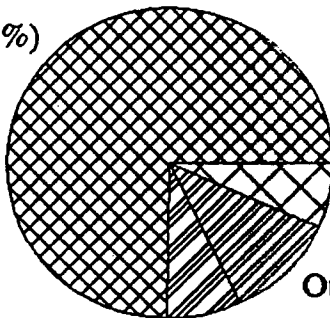
¹² "Away-from-home" minutes were estimated using the assumption that the average revenue per minute was the same for "at-home" and "away-from-home" calls. This may underestimate the share of AT&T, MCI, and Sprint since these carriers charge lower rates for some calling card calls, and since the calling cards tend to be used "away-from-home."

have substantial dial around and "At-home" traffic which do not result in commission payments. Thus, commissions represent a much lower percentage of billed revenues for these carriers, compared with the smaller OSPs.

Graph #1

Away From Home Calling Share of Total Revenue

AT&T, MCI & Sprint (74.8%)



RBOCs (6.6%)

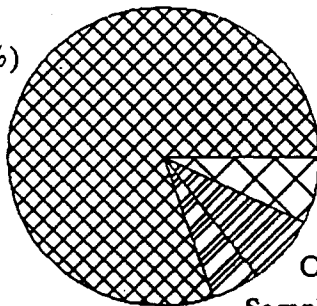
Other OSPs (11.2%)

Sample OSPs (7.5%)

Graph #2

Away From Home Calling Share of Total Minutes

AT&T, MCI & Sprint (80.2%)



RBOCs (7.1%)

Other OSPs (7.6%)

Sample OSPs (5.1%)

Graph #3

Expense Breakout for Smaller OSPs

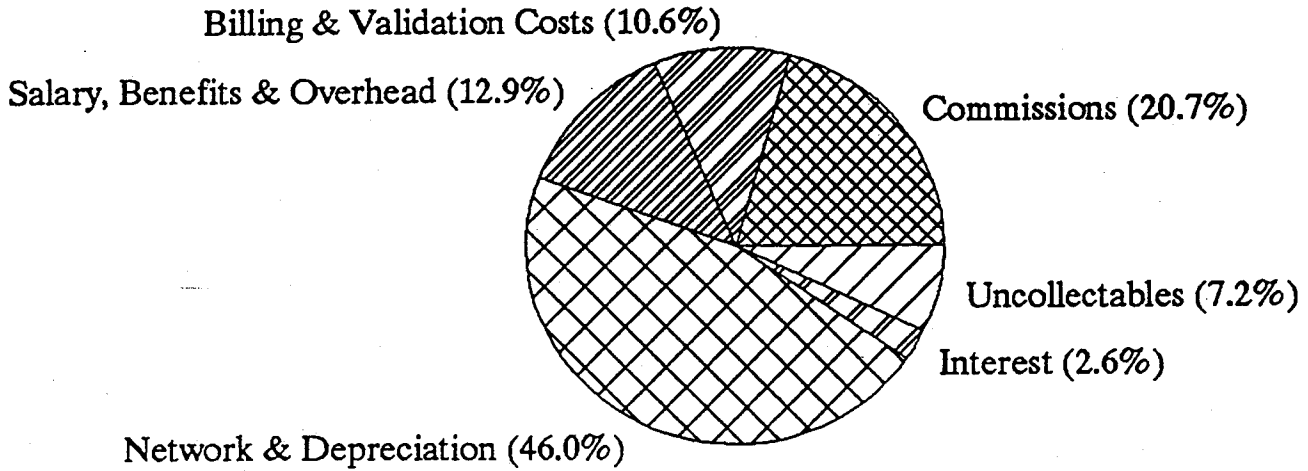


Table 4
Operator Services Market – 1991
(volumes and revenues shown in billions)

	AT&T, MCI & Sprint	RBOCs	Sample OSPs	Other OSPs	Total
Operator Service Market					
Calls	2.8	*	0.1	*	*
Minutes	20.9	2.5	0.9	1.3	25.5
Billed Revenue	\$7.0	\$0.8	\$0.5	0.7	\$9.0
Percent Interstate	73.0 %	1.0 %	52.5 %	52.5 %	63.7 %
Percent Intrastate	27.0	99.0	47.5	47.5	36.3
Revenue per minute	\$0.34	*	\$0.53	*	*
Revenue per call	2.51	*	3.72	*	*
Operator Service Revenues					
By location of caller					
Pay telephone	\$2.7	\$0.4	\$0.3	\$0.4	\$3.8
Accommodation telephone	1.8	0.0	0.2	0.2	2.2
Total "Away-from-home"	4.5	0.4	0.5	0.7	6.1
Total "At-home"	2.5	0.4	0.0 **	0.0 **	2.9
Market Share					
By location of caller					
Pay telephone	70.6 %	10.5 %	7.6 %	11.4 %	100 %
Accommodation telephone	81.9	0.0	7.2	10.9	100
Total "Away-from-home"	74.8	6.6	7.5	11.2	100
Total "At-home"	85.0	14.7	0.1	0.2	100
"Away-from-home" Calling					
By Source of Traffic					
Aggregator Traffic	\$2.6	\$0.4	\$0.4	\$0.7	\$4.1
Dial Around	1.9	0.0	0.0 **	0.0 **	1.9
"Away-from-home" Calling Share					
By Source of Traffic					
Aggregator Traffic	63.9 %	9.7 %	10.6 %	15.9 %	100 %
Dial Around	98.1	0.0	0.8	1.2	100
Total Commissions & Surcharges	\$0.3	\$0.0	\$0.1	\$0.1	\$0.5
as a percentage of billed operator services revenue	3.8 %	0.0 %	20.7 %	20.7 %	5.5 %

* Could not be estimated using available data.

** Amounts greater than 0 but less than 50,000,000.

Note: figures may not add to totals due to rounding differences.