

**Inmate Calling Services
Interstate Call Cost Study**

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A. PURPOSE

The purpose of this study is to provide the cost information¹ that the Commission requested in order to evaluate rates for interstate toll calls made from confinement facilities and to develop a rate structure and rate level that meets the definition of “fair compensation” as set forth in §276(b)(1)(A) of the 1996 Act.

The cost development process used in this study follows the methodology previously developed and adopted by the Commission for the calculation of payphone-related costs, and the implementation of this methodology is fully consistent with the Commission’s subsequent orders in which rates have been established based on costs developed pursuant to this methodology.²

Section B sets forth the objectives of the analysis. Section C presents the results. A full description of the methodology used and of each step of the cost development process is provided in Section D, and Section E addresses the issue of cost structures and cost causation. Section F provides a summary of the author’s qualifications, and Section G contains a list of the Inmate Calling Service Providers (“ICSPs”) who contributed data to the study.

¹ The results of the study are summarized in Section C.

² See *Third Report and Order and Order on Reconsideration of the Second Report and Order*, FCC 99-7, released February 4, 1999, and *Report and Order*, FCC 04-182, released August 12, 2004. In the 1999 Report and Order, the Commission established a methodology to be followed when calculating costs of public payphones that will serve as the basis for determining “fair compensation” for calls made from a payphone location. In the 2004 Report and Order, the Commission evaluated various parties’ implementation of that methodology and reached specific conclusions regarding what actions constitute an appropriate implementation that will yield sound cost results. For these reasons, this documentation will refer to the 1999 Report and Order as the *Methodology Order* and the 2004 Report and Order as the *Implementation Order*.

B. STUDY OBJECTIVES

The study is intended to support two primary objectives:

To provide the basis for rates that represent “fair compensation” as set forth in §276(b)(1)(A) of the 1996 Act.

In its prior orders, the Commission has carefully considered the definition of “fair compensation” in the context of rates associated with public payphones, and has consistently reached the same conclusions: “the costs of one service should not be cross-subsidized by another service,”³ and that in order to avoid such a subsidy, each type of call must “contribute a proportionate share of the common costs of payphone service.”⁴ According to the Commission, these objectives can be met if the per-call compensation amount is sufficient to ensure that “each call at a marginal payphone location recovers the marginal cost of that call plus a proportionate share of the joint and common costs of providing the payphone.”⁵

A study of the costs incurred by the providers of payphone services at confinement facilities must address the same fundamental economic question regarding cost recovery and “fair compensation.” For this reason, the Commission’s rationale for using the methodology that it adopted for public payphones applies equally in the more narrow context of payphones provided at confinement facilities. The only distinction is factual rather than conceptual: providing calling services at confinement facilities causes the service provider to incur additional costs that are unique to this environment. These additional costs are addressed in Section D.

Provide cost information necessary to develop cost-based rate levels and rate structures that will avoid cross subsidies; both among different call types and among customers with different calling characteristics.

³ *Methodology Order*, ¶156.

⁴ *Methodology Order*, ¶157.

⁵ *Methodology Order*, ¶159, *Implementation Order* ¶31. The definition and use of the Commission’s “marginal payphone location” methodology is described in detail in Section D. In short, a “marginal payphone location” is one in which “the payphone operator is able to just recoup its costs, including earning a normal rate of return on the asset, but is unable to make payments to the location owner” *Methodology Order*, ¶15, footnote 20).

After carefully considering the issue, the Commission concluded that a per-call rate structure that requires all call types to “contribute a proportionate share of the common costs of payphone service.”⁶ The Commission observed that “any other approach would unfairly require one segment of payphone users to disproportionately support the availability of payphones to the benefit of another segment of payphone users.”⁷

This kind of “disproportionate support” can arise in two ways. First, if the pricing of certain call types does not permit the recovery of a proportionate share of the fixed (common) costs, then customers who make certain types of calls may be subsidizing customers who make other kinds of calls. Second, if a rate structure is adopted that deviates significantly from the way costs are incurred (that is, the rate structure does not match the cost structure), then customers with certain calling patterns may be subsidizing customers with different calling patterns.

In order to provide a basis for these objectives to be met, the study was organized and conducted based on the following. First, the methodology previously developed by the Commission was used, without modification, to calculate costs.⁸ Second, input data was collected, and calculations were performed, in a manner that the Commission has previously considered and accepted. In short, both the cost methodology and its implementation are consistent with that found to be appropriate in previous orders.

⁶ It is important to note that in this context, the phrase “common cost” has been used to mean the costs that are fixed and unaffected by the volume of usage at a given location (*Methodology Order*, ¶56). This category of cost includes, but is not limited to, the kinds of SG&A or “overhead” costs that are sometimes referred to as “common costs.”

⁷ *Methodology Order*, ¶57.

⁸ While the methodology adopted in a public payphone context is directly applicable when considering rates for payphones located in confinement facilities, it is important to note that providing payphones in confinement facilities, service providers incur additional costs that should be reflected. While the economic question to be addressed is the same (and therefore the use of the same methodology is appropriate), some differences in input values are necessary to reflect the unique challenges of providing payphone service in a confinement facility.

C. RESULTS

C.1 Marginal Location Results

The following results are based on an analysis of the costs incurred by inmate calling service providers to provide interstate toll calls:

**Table C-1:
Inmate Calling Services
Cost of Interstate Toll Calls
(Twenty-five Marginal
Locations)⁹**

Debit Calls

Fixed Per-Call Cost	\$1.56
Time Sensitive Transmission Costs	\$0.06

Collect Calls

Fixed Per-Call Cost	\$2.49
Time Sensitive Transmission Costs	\$0.07

These costs are based on information provided by seven different ICSPs regarding twenty-five different locations. The locations ranged from small county jails to large prison facilities.

As will be addressed in further detail in Section D.2.2, in the *Implementation Order* the Commission proposed to modify the approach adopted in the *Methodology Order* to include in the definition of “marginal” locations those in which the service provider is just able to recover its costs and locations in which the provider is unable to recover its costs. The following results reflect the

⁹ These results are limited to those locations that meet the Commission’s definition of a “marginal” location as set forth in the *Methodology Order*. As described below, in the *Implementation Order* the Commission expanded the definition of “marginal” to include additional locations.

inclusion of three additional locations whose traffic characteristics cause them to represent locations at which cost recovery is unlikely:

Table C-2:
Inmate Calling Services
Cost of Interstate Toll Calls
(Twenty-Eight Marginal
Locations)¹⁰

Debit Calls

Fixed Per-Call Cost	\$2.09
Time Sensitive Transmission Costs	\$0.06

Collect Calls

Fixed Per-Call Cost	\$3.19
Time Sensitive Transmission Costs	\$0.07

C.2 Analysis of Cost Causation

An analysis of cost causation reveals that the costs incurred by ICSPs to provide interstate toll calls fall into three categories. First, many of the costs incurred to provide service at a given location (e.g., capital equipment costs, maintenance and repair, telephone company monthly line charges, and overhead costs) are volume insensitive; that is, they do not vary with the number or duration of calls. Consistent with the Commission’s methodology, these costs have been assigned to all call types based on a location’s total call volume, so that all types of calls “contribute a proportionate share” to the recovery of these costs. Interstate calls receive a proportionate share based on the ratio of

¹⁰ These results are based on those locations that meet the Commission’s original definition of “marginal” and an additional three locations whose traffic characteristics cause service providers to be unable to recover their costs of serving that location.

interstate toll calls to total calls for a given location. Second, some costs (e.g., call validation costs, billing and collection costs) vary directly with the number of calls (in other words, the origination of a call causes a cost of a given magnitude to be incurred, regardless of the duration of the call). Consistent with the Commission's methodology, each of these first two categories of cost are reported on a per-call basis. The third category of costs (the costs incurred when a carrier terminates an interstate toll call for an ICSP) vary based on call duration. Again consistent with previous treatment, these costs have been reported on a per minute of use ("MOU") basis.

The proper interpretation of the costs reported in Table C-1 is as follows: In order to recover the costs incurred when a customer uses a debit account to make an interstate toll call, an ICSP needs to recover \$1.56 per call (regardless of call duration) and an additional \$0.06 per MOU for the duration of the call. When a customer makes a collect interstate call (using the credit of the called party), an ICSP needs to recover \$2.49 per call (regardless of call duration) and an additional \$0.07 per MOU for the duration of the call. If the rates and rate structure in effect do not permit the recovery of these amounts, then customers making other kinds of calls from confinement facilities (local or intrastate toll calls) would need to pay a higher rate than would otherwise be necessary, creating a scenario which would "unfairly require one segment of payphone users to disproportionately support the availability of payphones to the benefit of another segment of payphone users" (in this example, those who make interstate toll calls). As the Commission has consistently made clear, this principle of proportionate support "is an essential element" of a determination of "fair compensation."¹¹

¹¹ *Methodology Order*, ¶57.

D. METHODOLOGY

D.1 *Bottom-Up Analysis of Multiple Locations*

In the *Methodology Order*, the Commission concluded that its definition of “fair compensation” requires that a bottom-up analysis (*i.e.*, one that uses location-specific costs to build up an average cost per call) be utilized. The Commission also found that while the analysis should be forward-looking, it should also be fully-distributed; that is, the fixed costs of a location should be distributed, on a proportionate basis, to all call types: “we find that a fully distributed cost coverage approach that determines cost by working from the bottom up will comport with statutory directives,” because “fully distributed cost coverage allows the payphone owner an opportunity to recover the fixed costs associated with the payphone.”¹² In the *Implementation Order*, the Commission affirmed the use of this methodology and adopted costs developed in this manner.¹³

This study is based on the bottom-up analysis described in the Commission’s orders. Location-specific costs are identified, fixed costs are assigned to all call types on a proportionate basis, and a weighted average of these per-call results is then calculated.¹⁴

D.2 *Marginal Location Analysis*

D.2.1 Definition of Marginal Locations

In the *Methodology Order*, the Commission adopted a marginal location analysis to be used to calculate per-call costs associated with providing payphone services. A marginal location is defined as “a location where the payphone operator is able to just recoup its costs, including a normal rate of return on the asset, but is unable to make payments to the location owner.”¹⁵ In other words, a “marginal” location represents a break-even location. If costs and call characteristics associated with a such marginal, or break-even, location are used to establish rates, service providers will be able to recover their costs at these locations. This can be accomplished if a rate level and rate structure is adopted that ensures that “each call at a marginal payphone location recovers

¹² *Methodology Order*, ¶¶72-73.

¹³ *Implementation Order*, ¶¶27-31.

¹⁴ Fixed costs have been weighted based on the percentage of lines represented by each location, and per-MOU transmission costs have been weighted based on the number of minutes of use represented by each location.

¹⁵ *Methodology Order*, ¶15.

the marginal cost of that call plus a proportionate share of the joint and common [fixed] costs of providing the payphone.”¹⁶

D.2.2 Identification of Marginal Locations

A list of potential “marginal” locations can be compiled by first identifying locations where the ICSP makes no payment to the location owner. One practical concession has been made in this study that may cause the reported results to understate the actual costs. While there are very few locations with a zero payment,¹⁷ there is a larger group of locations where such a payment is relatively small. Locations with such a payment are likely to have either lower equipment/operating costs or a higher call volume (each of which would cause the per-call cost to be lower) than a true marginal location. As a result, the inclusion of these additional locations is likely to cause the reported costs to be understated. For this and other reasons (described below in Section D.4), the results of the study should be treated as a conservatively low estimate of inmate calling service provider costs.

It is then possible to consider two adjustments to this list of potential marginal locations. First, a location may exist whose cost characteristics are sufficiently low to make it possible, all else equal, for an ICSP to make a payment to the location owner, even if no monetary payment is actually being made. Such a location does not represent a location where the payphone operator is able “to just recoup its costs, including a normal rate of return on the asset, but is *unable* to make payments to the location owner.” As a result, such a location is properly removed from the list of “marginal” locations.

Second, the absence of such a payment may indicate a location in which the ICSP is “able to just recoup its costs,” but a payment would also be absent from a location in which the service provider is unable to recoup its costs. Such a location could also be excluded from a list of “marginal” locations, even though the Commission has found it reasonable to include these low-volume, high-cost locations in the average of “marginal” location costs.¹⁸

¹⁶ *Methodology Order*, ¶59.

¹⁷ As noted previously, there are some important distinctions between the costs incurred by ICSPs and the costs incurred by the providers of public payphones. One critical distinction is described in more detail in Section D.2.3 below.

¹⁸ In the *Implementation Order* (at ¶ 47), the Commission noted the existence of these high-cost locations, and concluded that “it is reasonable to modify the *Third Report and Order* methodology to include in the definition of “marginal payphones” all payphones that currently do not pay commissions to premises owners or receive payments from premises owners, even if some of those payphones may not currently recoup all their costs.”

In this study, three low volume, high cost locations have been identified. Costs were then calculated both with and without these locations. If these locations are not included, the results shown in Table C-1 are calculated. It is important to note that taking this more conservative approach makes it likely that costs have been understated. If these additional locations are included (as the *Implementation Order* states that they should be), the results are those shown in Table C-2.

D.2.3 Notes on Distinctions Between ICSP Costs and Public Payphone Provider Costs

While the fundamental economic question of how to calculate “fair compensation” is the same (and the appropriate methodology for calculating per-call costs is therefore the same), ICSPs do operate in conditions that are fundamentally different from other providers of payphone services and do incur costs that providers of public payphones do not incur. For example, an amount paid by an ICSP to a confinement facility (or to the agency that operates the facility) is sometimes erroneously equated to a “commission” payment made to a location owner by a public payphone provider.¹⁹ In reality, payments to a confinement facility by an ICSP may include the equivalent of a “commission” payment if the characteristics of the location cause the per-call costs to be low enough, but at most locations such payments represent a means of recovery of the costs incurred by the confinement facility to operate and administer telecommunications facilities for inmates. These facility administration fees represent a pass-through of costs from the confinement facility to the inmate, in the form of an increase in the rates charged for calling services. As a result, it is necessary to distinguish between facility administration fees (that represent a direct cost to the ICSP assessed by the confinement facility) and “commission” payments that could be made if the costs associated with providing service to the facility are low enough.

Because the Commission did not permit the recovery of “commission” payments made to location owners when calculating rates for calling services made from public payphones, no payments from ICSPs to location owners have been included in this analysis. Such an approach is likely to understate the actual costs incurred by ICSPs, and potentially significantly so. A complete and accurate calculation of ICSP costs should include an analysis of the amount of any payment to a confinement facility that represents a facility administration fee (*i.e.*, a pass through of costs from the confinement facility to the inmates in the form of an increased charge for calling services provided by an ICSP) rather than

¹⁹ In the *Methodology Order* (¶¶154-156), the Commission referred to these payments as “location rents.”

a payment analogous to a “commission” payment made to a location owner by a public payphone provider. Such a facility administrative fee represents a direct cost to an ICSP and is therefore properly included in a study of the costs incurred by an ICSP to provide calling services.²⁰ If these additional direct costs are not included – as they are not included in this analysis – the results set forth in Section C should be treated as conservatively low.

D.3 Formula for Calculating Per-Call Costs

Two types of interstate toll calls have been considered in the study. Debit calls are paid for by debiting an inmate’s prepaid account. Interstate toll calls are also made as collect calls; in this scenario the call is being provided on credit to the called party. The credit aspect of collect calls introduces additional risks and costs to the ICSP: because the call is not paid for up front, the potential exists for a given call to be unbillable, to be subject to post-billing adjustments made by the local telephone company (acting as a billing agent), or to be billed but not collected. Even if billed and collected, providing the call on credit requires the service provider to incur additional costs for call validation and for billing and collection. Because of the existence of the additional costs, results are being provided separately for debit and collect calls.

Debit Calls: The formula for calculating the cost of an interstate toll call paid for via a debit arrangement is as follows:

For n locations,

Fixed Per-Call Cost for Marginal Locations =
 $\sum_{1-n} ((\text{location}_1 \text{ fixed per-call cost} * \text{location}_1 \text{ percentage of lines}), (\text{location}_2 \text{ fixed per-call cost} * \text{location}_2 \text{ percentage of lines}), \dots (\text{location}_n \text{ fixed per-call cost} * \text{location}_n \text{ percentage of lines})) + \text{other per-call costs}$

Where,

Location fixed per-call cost = capital costs per month per line/average number of total calls per line at location;

²⁰ The inclusion of these costs is fully consistent with the Commission’s reasoning when adopting the marginal location analysis methodology. Because they represent direct costs to the ICSP that may be incurred regardless of whether a location is profitable or unprofitable, facility administration fees should be included as a cost in a marginal location analysis. These fees should be distinguished from any “commission” payment that may be made at a location of sufficiently low cost.

Capital costs per month per line = monthly amount needed to recover the total equipment investment per line, assuming an annual rate of return of 11.25%, combined federal, state, and local taxes of 39.25%,²¹ and a depreciable life specific to the type of equipment

Total equipment investment per line = (location-specific equipment investment/number of lines at location) + (common equipment investment/number of lines served by common equipment)

Other per-call costs = Maintenance and repair per line per month + local telco line charges per line per month + operations and SG&A costs per line per month

Time Sensitive Transmission Costs/MOU = incremental costs associated with the termination of interstate toll calls per month/average number of interstate toll calls per month

Collect Calls: The formula for calculating the cost of a collect interstate toll call is as follows:

For n locations,

Fixed Per-Call Cost for Marginal Locations =
(\sum_{1-n} ((location₁ fixed per-call cost * location₁ percentage of lines), (location₂ fixed per-call cost * location₂ percentage of lines), ... (location_n fixed per-call cost * location_n percentage of lines)) + other per-call costs)*credit collections factor,

Where,

Location fixed per-call cost = capital costs per month per line/average number of total calls per line at location;

Capital costs per month per line = monthly amount needed to recover the total equipment investment per line, assuming a rate of return of 11.25%,

²¹ In the *Methodology Order* (¶169), the Commission adopted a rate of return of 11.25% and a combined tax rate of 39.25% for use in payphone cost studies, and subsequently utilized capital costs based on these assumptions in the *Implementation Order* (¶¶51-58, 80). While it is likely that the risks incurred by inmate calling service providers supports the use of a higher rate of return than the 11.25% previously relied upon by the Commission, this study takes a conservative approach and utilizes the Commission's assumptions.

combined federal, state, and local taxes of 39.25%, and a depreciable life specific to the type of equipment

Total equipment investment per line = (location-specific equipment investment/number of lines at location) + (common equipment investment/number of lines served by common equipment)

Other per-call costs = (Maintenance and repair per line per month + local telco line charges per line per month + operations and SG&A costs per line per month)/average number of total calls at location + call validation costs per call + billing and collection costs per call

Credit collections factor = $1/(1-\text{uncollected percentage})$

Uncollected percentage = $\text{monthly unbillable revenue}/\text{total monthly revenue} + \text{monthly revenue subject to post billing adjustments}/\text{total monthly revenue} + \text{monthly billed but uncollectible revenue}/\text{total monthly revenue}$

Time Sensitive Transmission Costs/MOU = $(\text{incremental costs associated with the termination of interstate toll calls per month}/\text{average number of interstate toll calls per month}) * \text{credit collections factor}$

These calculations are consistent with those performed by the Commission in the *Methodology Order* (§191) and the *Implementation Order* (§80).

D.3.1 Calculation of a Proportionate Share of Fixed Costs

As noted in Section C.2 above, the Commission has previously concluded that most costs associated with the provisioning of payphone calls are “fixed – that is, they do not vary with the volume of calls” and that “fair compensation requires that the rate for each call at a marginal payphone location be sufficient to permit the recovery of the incremental per-call costs “plus a proportionate share of the joint and common costs of providing the service.”²² In this context, the Commission treats a cost as “joint and common” if “the amount of the cost does not vary with respect to the mixture of calls at the payphone.”²³

²² *Methodology Order* §§47, 56-57, 59, 69, 74, 75, 81, 190; *Implementation Order* §§27, 29, 31.

²³ *Methodology Order*, §75.

As with other types of payphones, when providing inmate calling services the primary fixed costs are associated with the equipment needed to provide the services. Depending on the service provider and the size of the location being served, this equipment may be physically located at the confinement location or a mixture of on-site and centralized equipment may be used. Typically, this centralized equipment is used to provide service to more than one location.

Each ICSP participating in the study reported the amount of equipment investment at each location (this investment was limited to equipment directly used to provide calling services to the location) and the number of lines (or line equivalents) provided at that location.²⁴ If centralized equipment is also used to provide service at a given location, the investment in that centralized equipment, and the total number of lines served by that equipment, were reported. This information allows all equipment investment to be expressed on a per-line basis.

In order to calculate capital costs per month, service providers also provided the depreciable life for each type of equipment (this life may be different for on-site equipment and centralized equipment). The monthly amount needed to recover this investment over the useful life of the asset, assuming a rate of return of 11.25% and a combined tax rate of 39.25%, was then calculated using the formula adopted in the *Methodology Order* and relied upon in the *Implementation Order*.

Monthly capital costs per line for each location were then divided by the average number of total calls per line for that location²⁵ to calculate a per-call amount.

D.3.3 Calculation of Other Per-Call Costs

Each ICSP participating in the study provided the amount of maintenance and repair, local telco, and operations/SG&A costs directly associated with the provisioning of inmate calling services. The total number of lines associated with

²⁴ Depending on the location, an ICSP may use individual voice grade lines provided by the local telephone company, or it may use a high volume facility capable of providing the equivalent to multiple voice grade lines. Where these high volume facilities were used, the study assumes that they are being used to provide the maximum theoretical number of line equivalents (a DS-1 is assumed to provide 24 line equivalents, for example), even if the demand at the location could be met with fewer actual lines. This conservative assumption causes per-line costs to be understated in the study results.

²⁵ Average monthly call volumes were calculated for each location based on actual January – March 2008 traffic studies. One of the locations included in the study was not yet in operation during the first quarter of 2008, and its average monthly call volume was calculated based on the months the location was actually in service.

each of these categories of costs was also produced, so that a per-line amount for each category of cost could be calculated.

These additional categories of per-line costs were explicitly found to be appropriate in both the *Methodology Order* (¶¶170-179) and *Implementation Order* (¶¶59-63).

D.3.4 Calculation of Per-MOU Costs

Time-sensitive transmission costs (per-MOU usage costs) are those costs that are caused on a per-MOU, rather than per call, basis; that is, the costs that vary based on the length of the call. While different ICSPs operate differently, these costs primarily consist of the amounts paid to carriers to complete toll calls. Participating service providers produced both the dollar value of costs directly associated with (incremental to) the completion of interstate toll calls and the number of associated interstate toll calls and minutes of use. From this information, a cost per MOU was calculated.

D.3.5 Adjustments for Unbillable and Uncollectible Calls

When collect calls are made, the ICSP effectively offers a service on credit to the called party. The extension of this credit creates risk in four ways: a collect call may be initiated but not accepted by the called party, a call may be completed but later prove to be unbillable, a call may initially be billed but subject to a post-billing adjustment by the local telco acting as a billing agent, and a call may be billed but never paid.

Participating service providers provided the amount of each of these forms of bad debt and the relationship of each form of bad debt to total revenue.²⁶ A credit collections factor was calculated based ($1/(1-\text{bad debt percentage})$). When service costs are multiplied by this credit collections factor, the resulting value provides a response to the question “what rate must be applied to a collect call so that, after unbillable calls, post-billing adjustments, and uncollectibles are considered, the service provider will ultimately receive revenue sufficient to permit the recovery of the relevant costs?”

²⁶ Some providers do not keep separate records for unbillable and uncollectible calls, and the various categories of bad debt may have been reported on an aggregated basis. Ultimately, it is the total amount of bad debt, as a percentage of revenue, that is important (the categories of bad debt are summed when developing the applicable credit collections factor). As a result, treating the categories of bad debt on a combined basis has no impact on the results of the study.

The process used in this study is mathematically equivalent to the method used approved and relied upon by the Commission.²⁷

D.4 The Development of Conservative Cost Results

The results shown in Tables C-1 C-2 should be treated as conservatively low for the following reasons:

1. While data for several small jail locations are utilized in the study, the use of line weightings means that this kind of low volume, high cost location is likely to be statistically underrepresented in the study. Any adjustment to make the results more reflective of the number of inmate calling lines that are located at small confinement facilities would cause the reported cost to increase.
2. Even though the risk characteristics of ICSPs might support a higher risk premium and therefore a higher cost of capital, the Commission's value of 11.25% is used in the study.
3. Facility administration fees represent direct costs incurred by ICSPs that are conceptually equivalent to other costs and are appropriately included in a study based on the Commission's methodology. The costs reported in Section C of this study do not contain any payments made by ICSPs to confinement facilities.
4. Debit calling costs have been understated in two ways. First, some call validation costs are incurred for these calls, though no validation costs have been included in the study for debit calls. Second, for existing debit accounts vendors impose a concession fee for fund transfers. As a result, the ICSP actually receives less than the total billed amount for an inmate's debit calls.
5. For those locations where a high-volume facility rather than individual voice grade lines has been used, the capacity of the high-volume facility, rather than the actual number of voice-grade equivalents required, is used in the study to calculate per-line amounts. This approach causes the number of line equivalents to be overstated, and as a result costs per line for that location are understated. In addition, because line weightings have been used to develop a weighted average of per-call costs, these understated costs are overrepresented in the final per-call results.

²⁷ Implementation Order, ¶¶68-75).

The results shown in Table C-1 should be treated as conservatively low for the following additional reason:

6. If the 25 location results are used (a result based on the Commission's initial more narrow definition of "marginal" location), costs will be understated when compared the results produced when the Commission's modified definition (as adopted in the *Implementation Order*) is used.

E. NOTES ON THE RELATIONSHIP BETWEEN COST STRUCTURE AND RATE STRUCTURE

When conducting this analysis of ICSP costs, cost causation has been carefully considered so that the costs are reported in a way that accurately reflects how the costs are actually incurred. Some costs are incurred each time that a call is made (regardless of duration), while other costs vary with the length of a call. Because of this fundamental difference in the way that costs are incurred, the results have been reported separately for per-call costs and per-MOU costs.

From an economic standpoint, rate structures should reflect the underlying cost structure to the extent possible. In other words, a customer should pay for a service in the same way that the provider incurs the cost of providing the service. A close matching of cost structure and rate structure has two fundamental advantages.

First, a close matching of cost structure and rate structure helps to ensure that whatever the customer's service usage characteristics, the service provider will be fairly compensated and the customer will be fairly charged.

If a two-part rate structure consisting of separate per-call and per-MOU elements is created, then the service provider will be fairly compensated (that is, it will receive neither too much nor too little), and the customer will fairly pay (it will pay neither too much nor too little), regardless of the length of a customer's call (or calls). In contrast, the adoption of either a flat per-call rate with no per-MOU usage element, or the adoption of a rate structure consisting solely of a per-MOU rate with no per-call charge, would distort the relationship between costs and

rates, resulting in the over- or under-payment to the service provider by the customer.

For example, assume a per-call cost of \$2.50 and a per-MOU cost of \$0.10. If rate elements reflecting this cost structure are adopted, a customer will pay the correct amount (and the service provider will receive the correct amount) regardless of the length of the customer's call. In contrast, if the rate structure is distorted and consists of only a per-call charge, the payment made may not match the cost incurred. If a 20 minute average call duration is assumed in order to develop a per-call rate (such a rate would then be $\$2.50 + (20 * \$0.10) = \$4.50$), only a customer making a call of exactly 20 minutes will pay the correct amount. A customer making a 5 minute call would *cause* a cost of \$3.00 ($\$2.50 + (5 * \$0.10) = \3.00), but would pay \$4.50 in order to do so – an overpayment of \$1.50. Conversely, a customer making a 30 minute call would cause a cost of \$5.50 ($\$2.50 + (30 * \$0.10) = \5.50), but the customer would only pay \$4.50, resulting in a \$1.00 shortfall for the ICSP.

A similar problem is created if a rate structure consisting of only a per-MOU charge is adopted. Assuming the same costs of \$2.50 per call and \$0.10 per MOU, a per-MOU rate based on a 20 minute average call duration would be \$0.225 ($\$2.50/20 + \$0.10 = \0.225). In this scenario, a customer making a 5 minute call would still *cause* a cost of \$3.00, but would pay only \$1.13. Conversely, a customer making a 30 minute call would continue to cause a cost of \$5.50, but would pay \$6.75 for the call.

Clearly, if a rate structure that distorts the underlying cost structure is to be developed, the assumption regarding the average number of minutes per call is an important one. If the assumed call duration is inaccurate, if the average duration changes over time, or – equally importantly – if the average call duration varies significantly depending on the type and size of confinement facility, then any attempt to arbitrarily compress a two part cost structure (one that consist of costs caused on a per-call and per-MOU basis) into a single rate (either per-call or per-MOU) is guaranteed to cause customers – both individually and in the aggregate – to overpay or underpay (and cause service providers – for both individual calls and all calls considered collectively – to be either under- or over-compensated for providing the service).

Second, a close matching of cost structure and rate structure helps to ensure that whatever a customer's service usage characteristics, that a customer will not be forced to subsidize other customers.

If a two-part rate structure consisting of separate per-call and per-MOU elements is created, then a customer will fairly pay (pay neither too much nor too little), regardless of the length of the calls made. Using the same cost assumptions as in the previous example, the creation of an arbitrary “per-call only” rate structure would cause a customer making a 5 minute call to pay too much, and a customer making a 30 minute call to pay too little. Even if the service provider is somehow able to recover its costs in the aggregate,²⁸ this deviation between cost structure and rate structure will still cause customers who make shorter than average calls to subsidize customers who make longer than average calls. Similarly, if an arbitrary “per-MOU only” rate structure is created, customers who make longer than average calls would be required to subsidize customers who make shorter than average calls.

The public policy implications of adopting a rate structure that does not reflect the underlying cost structure are further revealed if it is assumed that inmates at different kinds of confinement facilities make calls of different average lengths (limits on call duration may be different at a large prison and a small jail, for example). Assume, for example, that calls from large prisons have a longer average duration than calls made from county jails. The adoption of a “per-call only” rate structure would mean that people incarcerated at county jails would be subsidizing calls made by those at large prisons. The adoption of a “per-MOU only” rate structure would mean that persons confined at a large prisons would be forced to subsidize calls made by a those confined at county jails.

Of course, if different providers have focused on either large or small confinement facilities, then a distortion in rate structure would put the viability of ICSPs (and the availability of payphones) at risk. A “per-call only” rate structure would limit the ability of ICSPs serving large facilities to recover their costs and could impact the availability of inmate calling services at those locations. A “per MOU only” rate structure would limit the ability of ICSPs serving small confinement facilities to recover their costs, and could directly threaten the availability of payphones at small confinement locations.

In summary, any deviation of rate structure from the underlying cost structure has significant implications and should be considered carefully. In this study, cost causation has been carefully considered so that costs are reported in

²⁸ It is important to note that if the assumed call duration exceeds the actual call duration, or if the average duration decreases over time, it will be impossible for an ICSP to recover its costs in the aggregate. If the average call duration varies significantly depending on the type and size of confinement facility; or if average call duration at a large prison facilities exceeds the average call duration at small county jails, for example, then it will be impossible for ICSPs serving these smaller facilities to recover their costs in the aggregate. This is true even if the assumed call duration across all types of confinement facilities is known, and true if that known call duration remains constant over time.

the manner in which they are incurred. The resulting cost structure provides the basis for a rational rate structure.

F. QUALIFICATIONS OF COST ANALYST

Don J. Wood is a principal in the firm of Wood & Wood. He provides economic, financial, and regulatory analysis services in telecommunications and related convergence industries, specializing in economic policy related to the development of competitive markets, inter-carrier compensation, and cost of service issues. Prior to his work as a consultant, Mr. Wood was employed in a management capacity at a major Local Exchange Company and an Interexchange Carrier.

In the area of administrative law, Mr. Wood has presented testimony before the regulatory bodies of forty-two states, the District of Columbia, and Puerto Rico, and has prepared comments and testimony for filing with the Commission. The subject matter of his testimony has ranged from broad policy issues to detailed cost and rate analysis. Mr. Wood has also presented testimony in state, federal, and overseas courts regarding business plans and strategies, competition policy, inter-carrier compensation, and cost of service issues. He has presented studies of the damages incurred by plaintiffs and has provided rebuttal testimony to damage calculations performed by others. Mr. Wood has also testified in alternative dispute resolution proceedings conducted pursuant to both AAA and CPR rules.

Mr. Wood performed the analysis of payphone service costs filed with the Commission by the American Public Communications Council ("APCC") in Docket No. WC Docket No. 03-225. The APCC study is addressed in the *Implementation Order*, and essential elements of that study were accepted as the basis for the rates adopted in that proceeding.

G. INMATE CALLING SERVICE PROVIDERS CONTRIBUTING DATA TO THE STUDY

ATN, Inc.
Custom Teleconnect, Inc.
Embarq
NCIC Inmate Telephone & Operator Services
Pay Tel Communications, Inc.
Public Communications Services, Inc.
Securus Technologies, Inc.