

The Fallacy of Bill-and-Keep

the allocation of the *benefits* of a telephone call is to posit that “on average, the called party and the calling party share equally in the benefit of a call.”⁶⁷ While these points may at first appear to be somewhat esoteric, the assumptions of “equal responsibility” and “equal benefit” are in fact central to the entire rationale for the two papers’ bill-and-keep proposals.

The assumption here is that the LEC serving the *called* party can recover its costs of terminating the call via a charge imposed upon the call recipient. Presumably, if both the calling and called parties share equally in the benefits arising from the call, then both should be willing to share in its cost. Note that this theory, if valid, would require not only that the called party’s network look to its own customer, rather than to the calling party’s carrier, for compensation (i.e., bill-and-keep), it would *also* require that at the *retail level* the charge for receiving an incoming call be assessed on the called party *whether or not more than one carrier is involved in handling the end-to-end call*. Obviously, of course, if the benefits of telephone calls generally are not shared equally, then a compensation and retail pricing paradigm predicated thereon would simply create new inefficiencies not present under the existing sent-paid regime.⁶⁸ If, contrary to this “equal benefits” assumption, benefits typically *do* inure disproportionately to the calling party, then imposition of a charge for incoming calls will suppress demand, because calls will not be answered whenever the called party would perceive the cost of doing so to exceed the benefit that would be realized.⁶⁹

This “equal benefits” theory is critical to the authors’ conclusions. Significantly, however, the requirement that the “shared responsibility” be flowed through to the retail end user customer is distinctly not present in the *Intercarrier Compensation NPRM* proposed adoption of a bill-and-keep intercarrier compensation regime *except for the limited case of ISP-bound calls.*” As discussed in the preceding section of this paper, there is an intrinsic linkage between the form of intercarrier compensation adopted and end user pricing; thus, the allocation of cost responsibility between the originating and terminating carriers for

67. DeGraba, at paras. 53 and 55 (footnotes omitted).

68. In common with the authors, I am assuming that pricing does affect subscribers’ consumption decisions, because otherwise no efficiency gains could be realized by altering that pricing.

69. For those calls where benefits inure disproportionately to the called party, the existing rate structure permits a called party to elect toll-free (reverse-charge) 800-type service.

70. The *Intercarrier Compensation NPRM* proposes to adopt bill-and-keep for **ISP-bound** calls (para. 66), and the FCC is apparently willing to do so (in line with the decisions already made in the *ISP Remand Order* to transition to a presumed bill-and-keep system for ISP-bound traffic) even if it is not adopted for local voice traffic (see paras. 69-77).

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purposes of intercarrier compensation will be *extended to the retail pricing level* as well, and this fundamental departure from “sent-paid” pricing must apply for *all calls*, not just for those requiring an intercarrier hand-off for completion. Significantly, and as we discuss further below, the paradigm contemplated in the *Inter-carrier Compensation NPRM* falls far short of such a comprehensive pricing reform.

But the threshold question here is, are the “equal responsibility” and “equal benefit” assumptions underlying the OPP analyses reasonable? To begin with, neither paper offers any proof, empirical or otherwise, that supports these propositions. DeGraba himself acknowledges that prior economic analyses in this area have “tended to assume that the calling party was the sole cost-causer and sole beneficiary of the call.”⁷¹ There is, in fact, substantial reason to expect that, for sent-paid (i.e., for non-800-type) calls, the calling party derives considerably more benefit than the call recipient (and, conversely, for 800-type calls, the recipient derives more benefit than the caller). Consider the following characteristics of a typical telephone call:

- The calling party affirmatively selects the person to be called and the time at which the call will be placed;
- The calling **party** knows who is being called, the nature/subject/purpose of the call, and how much the call will cost;
- The called party does not choose the time for the call, prior to picking up the handset does not know who is calling, does not know the nature/subject/purpose of the call and, depending upon how terminating use is to be charged (e.g., possibly at a different rate for local vs. long distance, intrastate vs. interstate calls), does not know how much answering the call will cost;
- Not every originating call attempt is answered by the called party; where a busy or no-answer condition arises, the called party receives zero benefit (the calling party, on the other hand, receives information as to the fact that the called party is either not home or on the phone, and hence does receive some positive benefit from the call attempt);
- Customers can currently elect to voluntarily pay for incoming calls (800-type services) where the call recipient expects to derive sufficient value from the call as to justify the payment *and* where there is some likelihood that if required to be placed on a sent-paid basis, a significant percentage of the calls would not be made. Thus, even if *on average* benefits were to be divided equally across all

71. DeGraba, at para. 50.

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calls, those for which the called party has elected to pay (i.e., where the called party derives disproportionate benefit) would have the effect of leaving in the universe of sent-paid calls those that disproportionately benefit the calling party;

- Where a customer does agree to pay for the 800-type call, the 800-service customer will, prior to answering a given call, nevertheless have a reasonable idea as to who is calling, the nature/subject/purpose of the call, and how much answering the call will cost.

Taken together, these factors strongly suggest that the benefits of a telephone call are *not* typically shared equally between the calling party and the called party, on average or otherwise.

A second fundamental error underlying the foundations of both the DeGraba and Atkinson/Barnekov models is that they broadly assume that efficient pricing requires that responsibility for payment for a call track the flow of benefits from the call⁷² - i.e., if the benefits are shared equally between calling and called parties, the total charge for the end-to-end call should similarly be shared on that same basis. The theory that responsibility for payment must track the allocation of benefits is also highly questionable and is likely to be incorrect in the context of interconnection policy. Even if benefits are shared (equally or in some other proportion) between the calling and called parties, there is no “efficiency” requirement in economic theory for spreading payment responsibility in the same proportion as relative benefits. It is theoretically correct that efficient pricing requires that externalities be internalized through pricing. However, the relative importance of such a policy depends critically upon whether the failure to do so materially affects consumption and whether the cost of implementation (transaction costs) would exceed the incremental efficiency gain in consumption.

In this case, the authors have failed to supply any evidence that the demand for call originations is being suppressed due to the requirement that the calling party pay for the entire call (except for the special case of 800-type calls, where the call recipient has affirmatively elected to pay the entire charge for the incoming call). Moreover, both papers ignore entirely all transaction costs associated with implementation of the authors’ proposals. Such transaction costs could be substantial and would likely overwhelm any incremental efficiency gains that might be generated by adopting either of these interconnection proposals.

72. For example, see DeGraba at paras. 57-62.

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Both papers inconsistently combine theoretical and pragmatic considerations to support their concrete proposals for interconnection pricing.

Both papers place a great deal of emphasis upon developing a theoretical rationale for splitting the costs of a call evenly between the networks serving the calling and the called parties. However, as we have noted, rules advanced in both papers make an exception when it comes to recovering the costs of call transport. The DeGraba paper explicitly proposes to extend this concept to interexchange traffic, as it would require the originator of a toll call to pay for originating switched access as well as for all of the interexchange transport.⁷³ If there is some theoretical basis for a 50/50 split of the cost of a call, then there is no basis for requiring that the originating customer (or carrier) pay for the entire cost of transport. The entire rationale **for** this inconsistency appears to be pragmatic, i.e., the authors recognize the extreme difficulty of splitting the cost of transport between originating and terminating parties or of resolving perverse incentives faced by the originating carrier with respect to its location and the location of the meet-point. For example, DeGraba observes (para. 68) that "... where two networks are interconnected at multiple points, the originating network has an incentive to drop the call off as soon as possible on the terminating network, and thus shift as much of the transport costs as possible onto the latter network." Unfortunately, by fashioning a cost recovery rule for transport that ostensibly addresses these pragmatic issues, DeGraba severely undercuts the theoretical justification for the bill-and-keep treatment that he proposes for call termination costs.

Atkinson/Barnekov take an entirely different approach to the treatment of transport costs but, like DeGraba, do not contemplate anything close to a 50/50 split. Where DeGraba would have the *originating* carrier provide and pay for transport to the terminating carrier's central office (which means that, for ILEC-originated/CLEC-terminated ISP-bound traffic, the *ZLEC* would be required to provide and pay for transport all the way to the CLEC's central office), Atkinson/Barnekov would force the CLEC to pay for transport between its physical premises and the local calling area from which the call was originated.⁷⁴

73. DeGraba, at para. 80.

74. DeGraba is unclear on the matter **of** transport beyond the ILEC's local calling area. Where the call involves an IXC in addition to the originating and terminating LEC, COBAK requires that the calling party's LEC be responsible for delivering the call to the IXC's POP, and that the IXC be responsible **for** delivering the call to the called party's central office. DeGraba does not discuss the case **of** an intraLATA "interexchange" call where the calling party **is** not located within the same local calling area as the CLEC serving the called party. If it is his intention that the calling party pay the originating LEC for the interexchange transport portion *as if it were being carried by an IXC*, then his proposal is essentially the same as the Atkinson/Barnekov construct. See DeGraba, at 10.

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Moreover, because the two papers ignore all transaction costs and transactional inefficiencies, they are selective and inconsistent in the manner in which they substitute pragmatism for economic theory. The same pragmatic rationales raised in the papers would also apply just as easily to proposals to (for example) charge the end user directly for traffic-sensitive originating and terminating switched access, because transaction costs would easily overwhelm whatever “efficiency gain” such pricing might engender.

The papers give undue deference to existing architectures and practices of ILECs, in effect requiring entrants to accept what amounts to a “take-it-or-leave-it” set of interconnection conditions, such as existing ILEC local calling area definitions and the premise that inward and outward traffic that is out-of-balance is to be discouraged.

Both the DeGraba and Atkinson/Barnekov interconnection/compensation models afford disproportionate deference to the ILEC networks, traffic patterns, and tariff structures as they presently exist, and in so doing would confront entrants with what amounts to a “take-it-or-leave-it” situation. Both the *Telecommunications Act*⁷⁵ and **FCC rules**⁷⁶ affirmatively permit CLECs to (a) specify the location of their points of interconnection with ILECs, and (b) interconnect with the ILEC at any technically feasible point within the ILEC’s network. Nowhere is there any requirement that an CLEC maintain more than a single point of interconnection in any one LATA.

Nevertheless, Atkinson/Barnekov would explicitly require the CLEC to pay for transport between its POI and *each* of the ILEC’s local calling areas or, in the alternative, to establish a POI in each such local calling area.⁷⁷ Although not stated in those terms, DeGraba’s construct essentially imposes the same requirement for CLECs’ outward calls to ILEC end users, by conferring responsibility for all transport up to the called party’s ILEC

75. Section 251(c)(2) of the *Act* obligates ILECs to interconnect with CLECs at any technically feasible point **on** the ILEC’s network “(A) for the transmission and routing of telephone exchange service and exchange access; (B) at any technically feasible point within the carrier’s network; (C) that **is** at least equal in quality to that provided by the local exchange carrier to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection; and (D) **on** rates, terms, and conditions that are just, reasonable, and nondiscriminatory ...”; there is no requirement for CLECs to connect at more than one point.

76. Rule 51.305(a)(2) states that a CLEC need establish only one (1) point of interconnection (“POI”) with an ILEC at any technically feasible point *anywhere* in each LATA. This **principle** was most recently restated in the *Inter-carrier Compensation NPRM*, at para. 72.

77. Atkinson/Barnekov, at paras. 70-71.

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central office upon the CLEC.⁷⁸ The “local calling area” is, in fact, an artifact of *ILEC* pricing strategies that has its roots in an era in which costs were highly sensitive to distance and long distance calls were expressly used as a source of subsidy support for the basic exchange access line. *There is no basis for subordinating interconnection policy or CLEC competitive opportunities to ILEC local calling area structures.*

A “local calling area” generally consists of one or more individual “exchanges” (sometimes referred to as “rate centers”) to which customers may place calls without a toll charge (“outward local calling area”) or from which customers may receive incoming calls without the calling party being subject to a toll charge for such calls (“inward local calling area”). An “exchange” or “rate center” is an administrative definition of a geographic area within which all customers receive identical rating and rate treatment with respect to both outgoing and incoming calls. In non-metropolitan areas, an exchange usually corresponds to the area served by a single “wire center” or central office switch (although in rural areas a single switch may serve more than one exchange). In metropolitan areas, an “exchange” may include an area served by more than one “wire center” or central office switch.

“Outward local calling areas” and “inward local calling areas” are not always the same. A customer in exchange “A” may be able to call customers in exchanges “B,” “C,” “D” and “E” on a local call basis (i.e., without a toll charge) but the outward local calling area for exchange “D,” for example, might not necessarily include exchange “A.” In that circumstance, a customer in “A” could call a customer in “D” without paying a toll charge, but a customer in “D” calling a customer in “A” would be subject to a toll charge for the call. Thus, in this example, the outward local calling area for exchange “A” would be more extensive than its inward local calling area.

Traditionally, local calling areas have consisted of the subscriber’s “home” exchange, adjacent (contiguous) exchanges and, in some cases, nearby exchanges that are not contiguous with the calling party’s exchange. However, that situation is currently undergoing substantial changes. For example, wireless carriers typically offer a larger local calling area than their wireline counterparts and, in some instances, include the entire United States within the wireless subscriber’s local calling area, and CLECs may compete directly with the ILEC and with each other by offering customers local calling areas that differ from that being offered by the ILEC. In fact, the extent of the local calling area is itself becoming something that some CLECs see as an opportunity to differentiate their products from those being offered by the ILEC. A CLEC might, for example, offer its customers a larger local calling area than that being offered by the ILEC as a means for attracting customers or, alternatively, might choose to offer a *smaller* local calling area than the ILEC’s service provides, at a correspondingly lower price. ILECs themselves are also

78. DeGraba, at para. 25.

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changing the definition of “local calling area” by introducing optional calling plans that provide for extended area local calling including, in some cases, all exchanges within the subscriber’s **LATA**.

It is entirely appropriate for competing carriers to adopt local calling area definitions that differ from those of the ILEC. One of the primary public policy goals of introducing competition into the local telecommunications market has been specifically to encourage and stimulate innovation in the nature of the services that are being offered. CLECs should not be limited to competing solely with respect to *price*, nor should they be expected to become mere “clones” of the ILEC with respect to the services they offer. For example, a CLEC might offer a local service “package” that includes one or more vertical service features, such as call waiting, three-way calling, and/or caller ID, features that ILECs typically offer separately from the dial tone access line, at often substantial additional charge. Newer wireless (PCS) carriers, competing against the incumbent 800 MHz cellular service providers, began to offer such feature bundles almost from the outset of their operations, frequently forcing the incumbent cellular carriers to mimic their service offerings with similar “packages” of their own.⁷⁹ Prior to the entry of PCS competition, cellular carriers offered very limited local calling areas (often replicating precisely the local calling area defined by the ILEC for the exchange in which a particular cell phone was rated), and also imposed high “roaming” charges for outward calls that were originated outside of the customers “home” service territory (even where the call was originated from another service territory controlled by the same cellular carrier). As PCS carriers came into the market, they began to offer extended, sometimes *nationwide*, local calling, and have also introduced calling plans that eliminate most or all roaming charges. ***There is every reason to expect that as competition develops in the wireline local service market similar types of local calling area expansions will be offered***, and the fact that incumbent LECs do not presently bundle vertical features and expanded local calling into their basic local service is itself evidence of the absence of effective competition in the local service market as it exists today.

Unfortunately, CLECs that attempt to define local calling areas that differ from those established by the ILEC will often encounter a variety of roadblocks — particularly with respect to their *inward* local calling area. Proposals in the OPP papers that would further subordinate CLEC local calling areas to those as defined by ILECs serves only to undermine the CLECs’ opportunities to develop and introducing innovating services and pricing plans. Mechanically, with respect to *outward* calls (i.e., calls originated by the CLEC's own customers over a CLEC dial tone access line), the CLEC can include any

79. AT&T Wireless Services and Sprint PCS, for example, typically include Call Waiting, Three-way Calling, Call Forwarding, Caller ID, and Voice Mail as integral parts of their wireless service offerings, at no additional charge.

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given rate center for local call treatment merely by designating all of the **NPA-NXX** codes associated with that rate center within the appropriate routing and billing reference tables (databases). So even if the ILEC's local calling area for exchange "A" is limited to include only exchanges "A," "B" and "C," the CLEC could add "D" and "E" to *its customers'* outward local calling areas simply by inserting the **NPA-NXX** codes assigned to "D" and "E" as "local calls" in its rating tables. In the case of incoming calls, the local calling area applicable to the *calling party* (who we can assume is most likely to be an ILEC customer) will necessarily govern the rate treatment for the call. Whereas the CLEC may choose to include rate centers "D" and "E" within the *outward* local calling area for "A," the *ILEC* may not include "A" within the outward local calling areas for "D" or "E," thus making calls by its customers in those two exchanges to customers in rate center "A" — whether served by the ILEC or by a CLEC — subject to toll rate treatment.

These existing difficulties would be exacerbated if the ILEC local calling area definitions are used to establish responsibility for transport costs in the case of ILEC/CLEC interconnections. The significant decrease in the cost of telephone usage, coupled with the elimination of distance as a cost driver, makes the "local calling area" and the resulting local/toll distinctions largely obsolete. The persistence of small local calling area in today's and tomorrow's telecommunications market is thus an *anachronism*, a holdover from the distant past that is neither required nor appropriate in the modern telecommunications market environment.

In addition to the papers' acceptance of *ILEC-defined* local calling areas as a given, they also appear to be predisposed to the notion that there is something inherently valid about "balanced" traffic flows and something inherently wrong with imbalanced originating and terminating traffic. The present system of explicit reciprocal compensation payments fully addresses and deals with the potential for traffic imbalance: If one carrier receives more traffic to the other than it delivers in return, it will be compensated for its work in completing the imbalanced traffic. If the reciprocal compensation rate is properly set at the ILEC's cost of terminating local calls on its own network, then the ILEC should be entirely indifferent as to whether it or another carrier completes any given call to any given end-user ("ordinary person" or "ISP"). CLECs will accept such reciprocal compensation payments for out-of-balance traffic only to the extent that they are able to furnish the service at a lower cost than the ILEC; a CLEC that operates less efficiently (i.e., at higher cost) than the ILEC *would be unwilling to terminate ILEC-delivered calls at a reciprocal compensation rate based upon the ILEC's costs*. Under the sent-paid pricing arrangement that applies for virtually all local calls, the originating caller will have paid for the entire end-to-end call in any event, and is entitled to have the call carried to its intended destination without the recipient being required to pay any bounty to receive the incoming call.

Neither of the OPP papers provides any compelling basis for abandoning the existing sent-paid/reciprocal compensation paradigm in favor of any of the interconnection

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mechanisms that they propose. More seriously, neither paper considers the various consequences of their proposals on CLEC incentives and responses thereto.

Our overall conclusion is that neither the DeGraba paper nor the Atkinson/Barnekov analysis afford a sound economic or policy basis for regulators to impose “bill-and-keep” arrangements as the preferred solution for intercarrier compensation on ISP-bound calls and other locally-rated traffic.

4 | OTHER INTERCARRIER COMPENSATION ARRANGEMENTS

In this section, we examine two other proposals for modifying the reciprocal compensation practice that have been put forth as methods of limiting the ILECs' financial exposure where they have lost call termination business to CLECs.

Traffic Imbalance Thresholds and Related Payments Limitations

Some states have adopted so-called “traffic imbalance adjustments” under which reciprocal compensation payments may be reduced for traffic exceeding a pre-defined ratio of terminating to originating hand-offs. In a proceeding last year that established permanent rates to apply for intercarrier compensation between Southwestern Bell Telephone Company (SWBT) and about twenty CLECs, the Texas Public Utility Commission determined that a “tandem blended rate” (i.e., an average of end office switching rates and generally higher tandem-related rates) should apply to traffic terminated by a LEC that does not have two-tier or hierarchical switches; however, if the ratio of terminating to originating traffic exceeds 3:1, then only the (lower) end office rate is applied irrespective of the CLEC's switching architecture, unless the CLEC can prove that it is providing tandem functionality.” The New York PSC has adopted a similar rebuttable presumption that traffic in excess of a 3:1 ratio is “convergent” (including, but not limited to, ISP-bound traffic) and thus should qualify only for compensation at the lower end office termination rate.⁸¹ Following the states' lead, the FCC's *ISP Remand Order* establishes a rebuttable presumption that terminating traffic that exceeds a 3:1 ratio vis-a-vis originating traffic is

80. Texas PUC Docket No. 21982, *Re: Proceeding to Examine Reciprocal Compensation Pursuant to Section 252 of the Federal Telecommunications Act of 1996*, Arbitration Award, July 12, 2000, at page 37.

81. New York PSC Case No. 99-C-0529, Opinion No. 99-10, August 26, 1999, at pages 59-60.

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ISP-bound, and would deny the terminating carrier reciprocal compensation for completing such calls.⁸²

While a device of this sort will certainly work to limit the potential extent of ILEC reciprocal compensation payments to CLECs, it is entirely devoid of any sound economic justification. As we have explained, under an explicit reciprocal compensation regime, the appropriate compensation for calls terminated by one of two interconnected carriers is entirely independent from and unrelated to the volume of **traffic** and associated compensation flowing in the reverse direction. Such “traffic imbalance adjustments” are *per se* discriminatory against those carriers that have elected to specialize in serving customers with high inbound calling requirements, and as such are neither necessary nor appropriate, and should not be adopted by regulators.

In addition to presupposing an entirely undeserved validity to the notion that traffic imbalances are somehow to be discouraged, compensation arrangements such as these work to create perverse incentives for the CLECs that are affected by them. Consider the following example. Suppose that a particular CLEC terminates 100-million minutes per year and originates only 5-million minutes, resulting in a 20:1 termination:origination ratio. Under the 3:1 threshold adopted in the *ISP Remand Order*, roughly 85-million terminating minutes would go effectively uncompensated. However, the CLEC could remedy this situation by increasing the number of minutes that it originates and sends to the ILEC. The CLEC could avoid altogether the penalty reciprocal compensation rate by increasing its **outgoing** traffic from 5-million minutes to 33.3-million. From the CLEC’s perspective, the price it would in effect be required to “pay” to the ILEC for these terminations would actually be **negative**, because by adding 28.8-million additional outgoing minutes it would be paid the full reciprocal compensation rate for an additional 85-million minutes that it **terminates**. The CLEC would thus be in a position to offer virtually free outgoing service to its customers, because by so doing it will be able to increase its **incoming** call revenues.

Compensation arrangements that have this effect are on their face inefficient and uneconomic. Indeed, bill-and-keep generally will confront CLECs with a similar set of incentives: Whereas the CLECs today are said to have an incentive to seek out and serve customers with high inward calling volumes, under bill-and-keep these same carriers would acquire instead an incentive to seek out and serve customers with high outward calling volumes, because these calls will then be terminated by the ILEC at no charge to the CLEC. The only way to truly “get it right” is to adopt a cost-based reciprocal compensation rate structure that makes ILECs indifferent as to whether they or competing carriers complete ILEC-originated calls, and that rewards CLECs only and to the extent that they are more efficient at providing call termination services than are the ILECs.

82. *ISP Remand Order*, at para. 79,

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The “Access Charge” Model

Several ILEC-sponsored economists and other ILEC witnesses have proposed that ISP-bound traffic is sufficiently different in nature from other forms of locally-rated traffic that it should be subject to entirely different compensation arrangements. In particular, they contend that ISPs function in a manner that is closely analogous to interexchange carriers, and that their service is “like” interstate long distance service — so that the carrier-to-carrier compensation arrangements should be fashioned after traditional switched access treatment.

For example, Dr. William E. Taylor has testified on behalf of Qwest (which now controls the former US West local operating companies) that:

based on the cost causation principle, the economically most efficient compensation mechanism for Internet-bound traffic is payment by an ISP (whose customer is the LEC subscriber that seeks Internet access) of usage-based charges, analogous to carrier switched access charges, to all the LECs involved in carrying the Internet-bound call through the circuit-switched network.”⁸³

Similarly, Professor Robert G. Harris has presented testimony on behalf of several SBC operating companies (Southwestern Bell Telephone (SWBT) and Pacific Bell) that purports to show, on the basis of analyses of cost-causation and contract relationships, that:

The ISP should compensate Pacific Bell (and the CLEC) for the use of their services just as the ISP compensates Internet backbone service providers such as UUNet, BBN, or PSINet for the use of their services. The IXC arrangement is closely analogous and serves as a **guide**.⁸⁴

Before turning to consider the pros and cons of the economic arguments advanced in support of the “access charge” model, one must recognize at the outset that there has been a compelling policy argument for applying explicit reciprocal compensation to ISP-bound **calls**. From **1983** to the present day, the FCC has expressly *exempted* such calling from interstate switched access charges, requiring that calls to ISPs be treated and rated as local

83. Utah PSC Docket No. 00-999-05, Direct Testimony of Dr. William E. Taylor on behalf of Qwest Corporation, February 2, 2001, at page 4, lines **36-40**.

84. California PUC Docket No. 1.00-02-005, Testimony of Robert G. Harris on Behalf of Pacific Bell, July 14, 2000 (hereafter, “Harris (Pacific Bell) Testimony”), at page 20, lines 7-10. See also Texas PUC Docket No. 21982, Direct Testimony of Dr. Robert G. Harris, March 17, 2000, at pages 6-7.

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calls and that access line services furnished to ISPs be provided as local business exchange service lines out of the local exchange tariff, and this so-called “ESP” exemption has been reconsidered and reaffirmed by the FCC on several occasions over the intervening years.⁸⁵ This circumstance means that, regardless of the jurisdictional status of ISP-bound traffic or the potential economic ramifications of such treatment, as a matter of pricing policy the FCC has chosen the sent-paid, local exchange service model for locally-rated ISP-bound calls. As a consequence, from a policy standpoint, for state regulators the only rational choice is to adhere to that same model. Any other compensation alternative would create an untenable mismatch between the sent-paid form of compensation applied to the end user-carrier financial relationship, and the financial relationships between carriers. And because the sent-paid model requires that the originating carrier must pay the terminating carrier compensation for the latter’s work in terminating the sent-paid call, reciprocal compensation arrangements must continue to be applied to all locally-rated ISP-bound calls that are terminated by CLECs.

Notwithstanding that basic objection, the economic arguments that have been advanced to support an application of the “access charge model” to ISP-bound traffic are fatally flawed in their own right.

Prof. Harris’ theory⁸⁶ starts from the premise that there is an explicit or implied contract (in economic terms) between an ISP and its customers, and thereby concludes that the ISP is responsible in an economic sense for all of the costs that its customers generate when they use their telephone to connect to the ISP. As expressed by Prof. Harris, “it is the fulfillment of the ISP’s contract with its Internet subscriber that is the immediate cause of additional costs for both Pacific Bell and the CLEC connected to the ISP.”⁸⁷ Prof. Harris accepts the notion that the person who places a local call in order to reach an ISP is the cost-causer relative to that telephone call,⁸⁸ but nevertheless concludes that it is not economically efficient for the costs of that call to be recovered directly by the ILEC serving

85. See *MTS and WATS Market Structure*, Memorandum Opinion and Order, Docket No. 78-72, 97 FCC 2d 682, 711-22 (1983) (Access Charge Reconsideration Order); *Amendments of Part 69 of the Commission’s Rules Relating to Enhanced Services Providers*, CC Docket No. 87-215, Order, 3 FCC Rcd 2631 (1988) (ESP Exemption Order); *Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Transport Rate Structure and Pricing, and End User Common Line Charges*, CC Docket No. 96-262, 94-1 et al, First Report and Order, 12 FCC Rcd 15982 (1997) at paras. 341-348.

86. Dr. Taylor advances essentially the same line of argument as Prof. Harris, and thus is also rebutted by the analysis set forth in this section.

87. Harris (Pacific Bell) Testimony, at 7, lines 7-9.

88. *Id.*, at 7, lines 4-5.

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that person,⁸⁹ as they would ordinarily be for any other sort of local telephone call. Instead, he surmises that in the ISP case, economic efficiency requires that the “party acting on behalf of the cost-causer” — which he identifies as the ISP — must recover the costs of that telephone call from the caller, and then compensate the ILEC with whom the caller placed the call.⁹⁰

Acceptance of this conclusion requires a myopic and ultimately erroneous view of the customer relationships extant between individuals placing telephone calls, their serving LEC, and the called party (i.e., an ISP, other business, a friend, etc.). Here, the caller is seen as *the originating LEC's customer* when he places a local call to a friend or a non-ISP business (irrespective of whether another LEC is involved), but that same caller is *not* the customer of the originating LEC when the call is a long distance call or a call to an **ISP**. The assumption here seems to be that an end user cannot be a customer of more than one entity at a time, and that it is somehow necessary to have a *single* party acting on behalf of the cost-causer, who must handle all billing and compensation arrangements for all of the services utilized by an end user.

The basic question at issue here is who is whose “customer” under various scenarios (e.g., when someone uses a telephone to call a friend, a non-ISP business, an ISP, or to make a long distance call). One way of looking at the question of who is whose ‘customer’ is to look simply at who pays who for what. From this perspective, when an end user makes a long distance call, the end user is the ‘customer’ of the IXC (to whom it pays all per-minute charges associated with the call). From this perspective, although the end user actually makes use of the originating LEC’s switching and transmission facilities (and the switching and transmission facilities of the terminating LEC as well), the end user is neither the originating nor terminating LEC’s customer for purposes of this call. On this level (trivial from an economic perspective), who is whose ‘customer’ is simply a matter of regulatory fiat. Moreover, Section 201(a) of the **1934 Communications Act** expressly states that the FCC generally can decide who pays whom in cases where multiple carriers collaborate to provide an interstate service — referred to in the statute as a ‘through route.’ This illustrates why this ‘who pays who’ perspective is not helpful in sorting out the economics of the situation.

It can help to analyze customer relationships from an economic standpoint. From an economic perspective, what matters in assessing who is the ultimate “customer” in a multi-party transaction are familiar principles of cost causation. An end user making a call causes the costs associated with that call and, ultimately (except in situations where a subsidy has

89. *Id.*, at 13, lines 14-19.

90. *Id.*

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purposely been built into the system) should pay those costs. As a result, from an economic perspective, the end user making a call that involves multiple carriers is the customer of all of the carriers involved in getting the call to its intended destination. Now, for various practical or other reasons, the customer may not write separate checks to each of the entities involved. To the contrary, the more common practice is for the customer to pay only one of the carriers, who then becomes responsible, directly or indirectly, **for** passing money on to the other carriers who are jointly involved in carrying the call to its ultimate destination.

Thus, in economic terms, in all of the cases cited above (calls to a friend, a non-ISP business, an ISP, or a long distance call), the end user is the customer of all the carriers involved, since the end user is originating a call that involves all of their services.

Some economists, including Prof. Harris, attempt to draw distinctions between ISPs and other businesses that deal with customers over the telephone and/or that deliver their services over the telephone. These distinctions do not hold up under closer scrutiny. Prof. Harris first advances the notion that in the case of both the ISP and the IXC, the end user is trying to “get” somewhere else, whereas when the end user calls a local business such as a bank or a pizza parlor, he has “gotten” where he wants to **go**.⁹¹ However, this is sophistry, not economics. When I make a trip to a business meeting in Washington, **D.C.** and my flight lands at National Airport, I still need to take a taxi or the Metro to “get” to where I want to go. The airline has no involvement in that decision or in the actual ground transportation service that I engage; in each instance I am a customer of the taxi or the DC Metro, not of the airline, once I get off the plane. The effect of Prof. Harris’ presentation is to conflate certain regulatory choices concerning the payments process — choices that had been made on grounds other than economics — with the economic implications of those choices.

Second, Prof. Harris contends that an **ISP** or an IXC directly utilizes the services of LECs to fulfill its “contract” with its subscriber, but that this does not occur in the case of a local non-ISP business. To illustrate, he states that “a pizza parlor “contracts” with its customers to provide them pizzas and does not use the phone call as part of its fulfillment of its “contract.”⁹² Prof. Harris is simply wrong, as there are any number of non-ISP businesses and service providers for which the telephone call placed by the end user **is an** indispensable aspect of their transaction with the end user.

91. *Id.*, at 15-16.

92. *Id.*, at 16, lines 7-9.

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Consider the case of a call answering bureau, to which an ILEC end user subscribes, entirely independently of her local telephone service subscription. There is nothing in the nature of the call answering bureau business that makes it any less efficient for the ILEC to charge the end user directly for local calls placed to the bureau, as the ILEC does for calls to other local businesses.

However, Prof. Harris would apparently argue that, because the end user must place a local call in order to avail itself of the answering bureau's services (and thereby allow the bureau to fulfill its "contract" with that user), the call answering bureau is responsible for the end users' calls into that bureau (e.g., to check for and receive waiting messages), and that it is more efficient for the call answering bureau to charge the end user for those local calls directly, and to then compensate the LEC for the use of its facilities to make those calls. Prof. Harris' logic could also be extended to encompass travel reservations bureaus, weather information bureaus, credit card verification firms, emergency medical lines, and the like — and produce equally nonsensical results.

In reality, an ISP is no different than any other firm that does business over the telephone and/or that delivers its service via the telephone, a point expressly noted in the recent D.C. Circuit Court of Appeals' reversal of the FCC reciprocal compensation order. As the Court stated:

Even if the difference between ISPs and traditional long-distance carriers is irrelevant for jurisdictional purposes, it appears relevant for purposes of reciprocal compensation. Although ISPs use telecommunications to provide information service, they are not themselves telecommunications providers (as are long-distance carriers).

In this regard an ISP appears, as MCI WorldCom argued, no different from many businesses, such as "pizza delivery firms, travel reservation agencies, credit card verification firms, or taxicab companies," which use a variety of communication services to provide their goods **or** services to their customers.⁹³

Moreover, economic efficiency is in no way impaired by having two separate parties "acting on behalf of the cost-causer," which is precisely the case in an ISP-bound call originated by an ILEC telephone customer and terminated by a CLEC. As Prof. Harris admits, "in many instances the Pacific Bell end-user and Internet subscriber are one and the

93. *Bell Atlantic Telephone Companies v. FCC and U.S.*, U.S. Court of Appeals for the **D.C.** Circuit, Decided March 24, 2000, No. 99-1094, Consolidated with 99-1095 et al, On Petitions for a Review of a Declaratory Ruling of the Federal Communications Commission, mimeo at 13-14 (footnote **omitted**).

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same person.”⁹⁴ All this means is that such a person is using two services from two different entities simultaneously. As long as the cost-causer compensates those two entities for the services that they render — which is precisely what occurs today given existing compensation arrangements between an ILEC and its telephone subscribers, and ISPs and their subscribers — there would be no improvement in economic efficiency by merging those two transactions together.⁹⁵

Conclusion

Two other proposals have been advanced to remedy perceived shortcomings in the existing LEC reciprocal compensation system, namely the imposition of traffic imbalance adjustments, and movement to an access charge model for intercarrier compensation for ISP-bound calls. We have shown that neither alternative would promote economic efficiency or otherwise prove superior to existing reciprocal compensation arrangements. While traffic imbalance adjustments certainly have the effect of limiting ILECs' revenue outflows to CLECs that cater to the ISP/high-volume user call termination market, they have no economic justification, fail to allow mutual compensation to take place, and overtly discriminate against those carriers electing to provide specialized local services in a manner antithetical to the *Act*. Similarly, ILEC attempts to persuade regulators to adopt the access charge model for ISP traffic are also devoid of economic foundation and should be rejected.

94. Harris (Pacific Bell) Testimony, at 7, lines 15-16.

95. One might think that transaction costs would be reduced **if** there was a single point of contact with the end user which **handled billing** the end user, **but any** such cost savings would be offset by the **cost** of the intercarrier compensation which would then have to occur and would otherwise not be required if the two entities billed the end user separately.

5 | CONCLUSION

In this paper, we have attempted to examine the economic and policy basis for inter-carrier compensation between telecommunications carriers as well as to provide an understanding of the various approaches to this issue, particularly relative to Internet Service Provider (ISP)-bound traffic, which has caused the FCC and other policymakers to consider major changes to the existing mechanisms. This has become a particularly urgent effort in recent months, as the FCC has adopted new rules via its *ISP Remand Order* to transition reciprocal compensation for ISP-bound calls to a potential bill-and-keep regime, and proposes in its ongoing *Intercarrier Compensation NPRM* proceeding to establish bill-and-keep for ISP-bound calls and perhaps for ordinary locally-rated (and eventually toll) calls as well. While our principal findings are explained in more detail in the body of this paper, they can be summarized as follows:

- The perceived “problems” with the existing intercarrier Compensation mechanism of explicit reciprocal compensation payments — traffic imbalances and the growth in payments by ILECs to CLECs for termination of ISP-bound calls — are properly viewed as the outcome of exactly the type of competition that the *Telecommunications Act of 1996* and the FCC’s *Local Competition Order* was intended to promote, and do not represent market “failures” that must be remedied by further regulatory intervention.
- Despite the recent revival of interest in a bill-and-keep model for intercarrier compensation — which was flatly opposed by ILECs when the issue was first considered in post-Act arbitrations and regulatory proceedings to establish reciprocal compensation rates — the economics of bill-and-keep have not changed from the period when the FCC previously concluded that it was reasonable to apply bill-and-keep *only when exchanged traffic was roughly in balance* so that *mutual* compensation would take place.

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- Recent attempts to craft a theoretical basis for a wider application of bill-and-keep, in the form of two papers released by the FCC’s Office of Plans and Policy (OPP), fail to afford a sound economic or policy basis for regulators to impose “bill-and-keep” arrangements as the preferred solution for intercarrier compensation on ISP-bound calls as well as for other locally-rated traffic. In particular, **the** OPP papers:
 - (1) Fail to recognize the intrinsic linkage between the method adopted for intercarrier compensation and the retail prices paid by end users, which causes their analyses to be fundamentally incomplete.
 - (2) Make certain assumptions concerning the allocation of the benefits and costs of a call between the calling and called parties, which are unsupported and are most likely wrong as an empirical matter.
 - (3) Inconsistently combine theoretical and pragmatic considerations to support their concrete proposals for how interconnection should be priced.
 - (4) Unduly defer to existing architectures and practices of ILECs, in effect requiring entrants to accept what amounts to a “take-it-or-leave-it” set of interconnection conditions, such as existing ILEC local calling area definitions and the premise that inward and outward traffic that is out-of-balance is to be discouraged.
- When evaluated using appropriate criteria, including economic efficiency, competitive neutrality, and impacts upon end users, neither bill-and-keep, nor other options that have been considered for application to ISP-bound traffic, including traffic imbalance thresholds and access charge treatment, would provide a satisfactory alternative to the existing form of reciprocal compensation arrangements.

The current system of explicit reciprocal compensation for interconnecting LECs has generally worked well and in harmony with the pro-competitive policies underlying the *Telecommunications Act of 1996*. As we have shown in this report, when certain CLECs perceived a competitive advantage over ILECs in providing call termination services to ISPs and other high-volume customers, they were able to define that market and successfully meet their customers’ needs. In *so* doing, those CLECs have exerted competitive pressure on the ILECs’ interconnection rates generally, exactly as the FCC’s policy of establishing symmetrically-applied interconnection rates was intended to do. Cost-based reciprocal compensation, of the form in place today, **is** the only mechanism that is competitively-neutral, allows all **LECs** flexibility in defining the market segments they wish to pursue — whether or not the resulting traffic patterns are balanced — and ensures that each LEC will be fully compensated for its work in completing calls. In contrast, bill-and-keep can satisfy

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none of those objectives, and would seriously disadvantage CLECs in favor of ILECs in a manner contrary to the *Act*. Consequently, the FCC and other regulators should not adopt mandatory bill-and-keep (but allow it to be negotiated, when two interconnecting carriers agree it is mutually advantageous to do so) for **ISP** calls or for any other locally-rated traffic. Instead, regulators should focus their efforts on ensuring that the existing reciprocal compensation system for LECs is applied in good faith by all market participants, and allow competition for local telecommunications services to continue to evolve.



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