

Intercarrier Traffic in a Multi-Carrier Environment

respects, and the proposed revisions as set forth in the *Intercarrier Compensation NPRM* would actually work to exacerbate the existing condition. Under both existing as well as the proposed rules, the amount of the payment is related to, among other things, whether the ultimate end-user telephone call is “local” or “long distance,” whether it is “voice” or “data,” and whether it terminates at a live “end user” or at an entity that has been arbitrarily designated as a telecommunications service provider. To the extent that the carrier’s “work” in terms of switching, transport and termination functions, are virtually if not exactly *identical* in all of these cases, the intercarrier compensation payments should be correspondingly the same as well.

The fifth principle requires that the intercarrier compensation arrangement recognize, reflect and accommodate longstanding retail market pricing practices. Proposals such as those advanced by the FCC’s Office of Plans and Policies (“~~OPP~~”) or a universal “bill-and-keep” compensation paradigm (discussed in Section 3 of this report) may be incompatible with the existing “sent-paid” pricing regime applicable to end user services.

The sixth principle encourages simplicity and the minimization of transaction costs. Bill-and-keep may well satisfy this principle as between the carriers themselves, but it will engender complex and far-reaching pricing changes and new end user charges that may themselves introduce significant new transaction costs. And in that regard, bill-and-keep would clearly violate the seventh principle, because when flowed through in retail prices, it would be anything but transparent to the end user.

Finally, it is critically important that all participants in the market be confronted with reasonable predictability as to the compensation regime that will apply at any given point in time. Compensation paradigms that are subject to political or other non-economic influences, that may be modified whenever a particular special interest believes that such revisions may improve its financial or competition position, serve only to introduce additional uncertainty into a market environment that is already beset with high risk and disappointing results, and in so doing will work to the benefit of the incumbents by impairing entrants’ ability to attract and raise capital.

Unfortunately, and as we address in greater detail in the sections that follow, the process by which intercarrier compensation arrangements for the interchange of local traffic have thus far been established — and which seems to be dictating the agenda for the current policy debate — is anything but reflective of these principles.

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The present reciprocal compensation mechanism was dictated by ILECs based upon their assessments as to the ability of entrants to compete

The controversy over the treatment of intercarrier compensation stems largely from the fact that CLEC/ILEC traffic flows are often out of balance, sometimes significantly so. Where the compensation mechanism involves explicit cash payments by the originating carrier to the terminating carrier for handed-off traffic, a net traffic flow from the ILEC to the CLEC would require that the former make monetary payments to the latter for its work in terminating ILEC-originated calls.

CLECs have been singularly unsuccessful in attracting, serving and retaining large numbers of Plain Old Telephone Service (“POTS”) customers — particularly in the residential segment. Five years since the enactment of the federal *Telecommunications Act of 1996*, ILECs nationally retain in excess of **96%** of the residential and small business local exchange service market.³⁰ New capital investment in CLEC ventures has all but disappeared, and CLEC share prices have plummeted (see Table 1).

There are a number of explanations for this condition, but much of the blame lies directly with the incumbent carriers, who have been particularly uncooperative in pursuing the various measures required by Sections 251 and 252 of the *Act* that would make their

³⁰ See *Trends in Telephone Service 2000 - 2nd Report*, FCC Industry Analysis Division of the Common Carrier Bureau, (Released December 2000), Table 9.2, at 9-5. Dividing the number of the ILEC Residential & Small Business for June 2000 by the total number of Residential & Small Business for June 2000 (i.e., $140,486,770 / (140,486,770 + 4,597,807) = 96.8\%$).

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various network resources available to CLECs on a seamless and economically viable basis.” It is thus hardly surprising that the overwhelming majority of local calls will necessarily be originated by *ZLEC* customers over *ZLEC* local network facilities. Consequently, the vast majority of calls that are terminated by a given CLEC to its end-user customers will necessarily have come from an ILEC. For those CLECs that have specialized in serving customers with high inward calling volumes (such as voice mail providers, call centers, and Internet service providers (“ISPs”)), most of the traffic they handle will thus involve an intercarrier hand-off, and will necessarily result in a large traffic imbalance in the CLEC’s favor. Consequently, the intercarrier compensation payment by the ILEC may be substantial.

Reciprocal compensation payments for terminating traffic are properly viewed as “competitive losses” — rather than as “costs” — to the originating LEC.

ILECs typically portray their reciprocal compensation payments to CLECs for the termination of inbound traffic originated by ILEC end users as representing *revenue losses* that would be avoided if traffic between the ILEC and CLEC were more nearly equal in volume (“balanced”) in both directions. The same could, of course, be said of *any* competitive loss (if a firm in any industry doesn’t lose business to a competitor, its revenues would obviously be higher), but this truism is — or at least should be — entirely immaterial in terms of the policy question at issue here. ILEC intransigence has foreclosed CLECs from successfully competing in the “POTS” market. CLECs have thus been forced to seek out and serve specialized market niches, such as customers with high inward calling requirements. Since most of those inward calls will have come from the ILEC-dominated POTS customer base, most will necessarily involve intercarrier compensation payments flowing from the ILEC to the CLEC. If this is a problem for ILECs, it is also clearly one of their own making.

31. Underscoring this point, as of the mid-2001, Bell companies had “satisfied” the Section 271(c)(2)(B) “competitive checklist” necessary for long distance market entry in only five states. FCC rulemaking decisions issued in 1996 to implement the *Telecommunications Act* are still, some five years later, under the cloud of court challenges by ILECs. SBC and Verizon have been fined in excess of \$40-million for failure to comply with various conditions and requirements relating to interconnection and other transactions with CLECs that had been imposed by the FCC. And even the instant *Intercarrier Compensation NPRM* by its very existence serves to create further uncertainty and further discourage investment in CLEC ventures.

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Table 1				
CLEC Market Capitalization September 1999- August 2001				
Company Name	Market Cap Sept 30,1999 (millions)	Market Cap Sept 30,2000 (millions)	Market Cap Aug 8, 2001 (millions)	% Change Sept 1999- Aug 2001
Adelphia	\$ 1,439.70	\$ 650.16	\$ 529.40	-63%
Allegiance	\$ 4,086.50	\$ 2,512.79	\$ 1,550.00	-62%
AT&T Corp	\$ 151,592.90	\$ 102,286.76	\$ 76,400.00	-50%
Commonwealth Telephone	\$ 972.87	\$ 837.43	\$ 993.00	2%
Connectiv	\$ 1,712.68	\$ 1,585.20	\$ 2,010.00	17%
CoreCom	\$ 2,679.43	\$ 459.16	\$ 15.60	-99%
CTC Communications	\$ 239.24	\$ 538.19	\$ 165.20	-31%
CTCI	\$ 936.49	\$ 756.98	\$ 315.20	-66%
Intermedia	\$ 1,274.64	\$ 1,303.25	\$ -	N/A
Focal	\$ 1,451.72	\$ 1,085.25	\$ 102.00	-93%
Global Crossing	\$ 21,061.42	\$ 28,022.93	\$ 5,260.00	-75%
GST Telecomm Inc	\$ 265.18	\$ 0.63	\$ -	N/A
Northpoint	\$ 3,044.88	\$ 941.58	\$ 6.27	-100%
ICG Communications	\$ 736.77	\$ 22.77	\$ -	N/A
Level 3 Communications	\$ 17,810.58	\$ 28,317.09	\$ 1,700.00	-90%
Worldcom	\$ 144,541.84	\$ 72,623.19	\$ 41,270.50	-71%
RCN	\$ 3,785.42	\$ 1,378.47	\$ 364.10	-90%
Sprint	\$ 42,597.39	\$ 21,148.60	\$ 20,200.00	-53%
Winstar Comm Inc	\$ 2,145.89	\$ 1,429.48	\$ 6.19	-100%
XO Comm/Nextel	\$ 19,360.84	\$ 7,970.99	\$ 666.30	-97%
Total CLEC	\$ 421,736.38	\$ 273,870.88	\$ 151,553.76	-64%
S&P 500 Index	\$ 1,282.81	\$ 1,436.51	\$ 1,190.16	-7%
Dow Jones Industrial Avg.	\$ 2,998.87	\$ 3,173.96	\$ 3,110.70	4%
Note: Intermedia was acquired by Worldcom; ICG Comms. filed for Chapter 11 reorganization; and GST Telecomm declared bankruptcy and its assets were subsequently sold.				
Source: Carrier 10Q reports. www.thediaest.com/stocks/				

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There is, of course, no question but that the loss of call termination business constitutes a *competitive loss* to the incumbent. A careful examination of the circumstances associated with this particular competitive loss will, however, reveal that it resulted from the incumbents' fundamental mis-assessments of the market and their mispricing of services, and is certainly not the "fault" of CLECs who made entirely legitimate market responses to the pricing signals that they were receiving from ILECs.

Call origination and call termination are separable activities each one of which confronts its own set of market conditions. There is nothing in the 1996 federal *Telecommunications Act* nor in any other competitive telecom policy framework that requires that CLECs become mere clones of the incumbents, that the nature and mix of the services they provide precisely mirror those being offered by the ILECs, albeit on a smaller scale. In a competitive local telecom market, carriers can compete for call termination business without having to necessarily compete for the corresponding call origination business. If a CLEC is able to furnish the call termination service more efficiently than the ILEC, the goals of competition are served when customers requiring this service are induced to switch from the ILEC to a CLEC; it would be an extraordinarily unjust and unreasonable, if not also an unlawful policy that would force CLECs who elect to specialize in serving customers with high-volume inward calling requirements to *also* seek out and serve customers with offsetting *outward* calling needs just so as to achieve a "balance" of **traffic**.³²

Under a system of explicit reciprocal compensation payments and as long as the ILEC's rates are based upon the ILEC's costs, there is no logical connection between the traffic flow and associated compensation due in one direction, and the traffic flow and compensation that might occur in the reverse direction. Compensation must in each case be paid for the work performed by the terminating carrier and the volume of traffic that may or may not flow in the reverse direction **is** — or should be — irrelevant.

32. There can be no dispute that a significant demand exists for one-directional calling, either inward or outward. Specialization aimed at serving such customers should be both *expected* and even encouraged within the framework of a competitive telecommunications policy. This attribute of the market for telecommunications services is entirely analogous to the case of firms that specialize in handling large volumes of paper mail, some of which specialize in *outgoing* mail (direct mail advertising, billing, and order fulfillment, for example) whereas others specialize in *receiving* and dealing with large volumes of *incoming* mail (payment processing, for example). No one would seriously suggest that a "direct mail house" that generates a large volume of outgoing mail should be forced to accept correspondingly large volumes of incoming mail as a condition for its existence, nor would anyone seriously suggest that a firm that receives large volumes of incoming mail, for which it **is** not required to pay any postage charge (since that will have been paid by the sender) should be forced either to generate correspondingly large volumes of outgoing mail or, alternatively, to pay a fee of some sort to receive the mail addressed to it. Incumbent LECs receive tens of millions of pieces of mail each month containing checks in payment of the ILECs' bills, mail from which the ILEC derives enormous benefit. Yet we are aware of no proposals that would require that ILECs pay the US Postal Service a fee to receive that highly beneficial mail.

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When the issue of intercarrier compensation between ILECs and CLECs first arose in the mid-1990s, CLECs generally supported the use of an in-kind payments mechanism known as “bill-and-keep.” Bill-and-keep had been the traditional method of compensation for local traffic interchanged between interconnecting ILECs. ILECs, however, at the time had strenuously opposed the use of bill-and-keep for ILEC/CLEC interchanges, and insisted that explicit “reciprocal compensation” cash payments be made by the originating carrier for traffic handed off to the other carrier for termination. For example, in California, Pacific Bell supported the application of explicit reciprocal compensation payments for intercarrier termination of local traffic. In April 1995, Pacific submitted a proposal to the California Public Utilities Commission for a “Competition to the Core” plan for opening its local markets to competitive entry.³³ A key feature of Pacific’s proposal at that time was that network interconnection for the exchange of local traffic between carriers would be accompanied by explicit cost-based reciprocal compensation payments:

New entrants have asked that interconnection arrangements be established for completion of local calls between LECs with appropriate coverage of the costs of the use of each network. The Plan establishes the capability to exchange local calling between customers of two or more local carriers with reciprocal compensation arrangements between the carriers. The price for interconnection will be equal to switched access charges, about 1.4 cents per minute, which is among the lowest in the country. new [sic] entrants should establish their interconnection prices based on their costs.³⁴

US West advanced similar arguments in support of reciprocal compensation and in opposition to bill-and-keep. For example, during the course of US West’s arbitration of an interconnection agreement with AT&T in Utah, US West witness Laura D. Ford testified that it was US West’s position that bill-and-keep should apply only if traffic was balanced within a five percent threshold.³⁵ Ms. Ford went on to explain:

33. See April 3, 1995 Letter from Pacific Bell Vice President Regulatory, J. A. Gouldner to Calif. PUC President Daniel William Fessler.

34. *Id.*, at 5.

35. See Utah PSC Docket No. 96-087-03, Direct Testimony of Laura D. Ford, September 16, 1996, at pages 322, line 11 through page 323, line 3 (“U S WEST does not oppose the waiving of reciprocal call termination charges in a given month should the traffic between U S WEST and AT&T be reasonably balanced. U S WEST supports the Michigan Commission’s conclusion that a **five percent threshold** for determining if traffic **is** in reasonable balance is an appropriate standard. In the event the five percent threshold **is** exceeded in a given month, the call termination charges should apply reciprocally -- otherwise, the charges may be waived.”).

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Two market realities — that AT&T can choose to serve particular types of customers (e.g., businesses), and that different customers have different patterns of originating and terminating traffic — will generally result in traffic that is out of balance between U S WEST and AT&T. An extreme example of this phenomenon would be a new entrant local exchange carrier who chooses to serve the pay phone market. Such a new entrant local exchange carrier will typically terminate a substantially greater number of calls on U S WEST's switch than U S WEST will terminate on the new entrant local exchange carrier's switch. A bill and keep arrangement applied to such a case would not permit U S WEST to recover the cost of terminating the new entrant local exchange carrier's traffic.³⁶

Furthermore, US West's economist in that same proceeding, Dr. Robert G. Harris, expressly characterized bill-and-keep as "economically inefficient":

The central tenet of economics is that prices play a critically important role in the allocation and distribution of goods and services in a market economy. Bill and keep violates that principle. Unless traffic between two carriers is in balance and/or the cost of terminating that traffic is equal, bill and keep is economically inefficient because carriers and their customers do not pay for the costs they generate from originating calls. *Even if costs are in balance in the short term, bill and keep is economically inefficient because it provides an incentive for carriers to overuse what is essentially a free good — call termination services from the other carrier.*³⁷

Of course, in 1996 when this testimony was written, US West apparently believed that it would be called upon to *terminate* more traffic handed-off to it by CLECs than it would be delivering to CLECs for termination (hence the payphone example), i.e., that traffic would be out-of-balance, and that US West would be a *net recipient* of interchanged traffic. The Company's emphatic support for reciprocal compensation and opposition to bill-and-keep are entirely consistent with that business assessment.

As it now turns out, of course, US West's and most other ILECs' business judgments on this point have been proven to be dreadfully wrong. The various reciprocal compensation call termination rates that had been *dictated* by ILECs during the first round of interconnection negotiations and PUC proceedings on this subject were set at large multiples of cost. For example, where Pacific Bell had proposed a 1.4 cent per minute

36. *Id.*, at 324, lines 2-11.

37. Utah PSC Docket No. 96-087-03, Direct Testimony of Robert G. Harris, September 16, 1996, at 52-53, footnotes omitted, emphasis supplied.

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charge, the FCC found the cost to be in the range of 0.2 to 0.4 cents,³⁸ and recent ILEC call termination rates being dictated in the wake of the large traffic imbalances in the CLECs' favor have been even lower.³⁹ In setting these high call termination rates, the ILECs obviously expected to be net recipients of reciprocal compensation payments, that is, they expected the traffic imbalance to be in their favor. They clearly underestimated the ability of CLECs — faced with substantially above-cost prices that they could either pay or be paid — to selectively seek out customers with primarily inward calling requirements. The ILECs also underestimated the potential demand for inward calls to ISPs that would be created by the extraordinary growth of the Internet. In assessing the market outcome, ILECs appear to have failed to recognize (a) that call origination and call termination are different services, and (b) that CLECs could be selective in the mix of customers they elected to pursue and to serve.

In dictating the reciprocal compensation rate that would apply for interchanged local traffic, ILECs confronted CLECs with what amounted to a straightforward business decision as to whether the CLECs should be buyers of call termination services from the ILECs, or sellers of call termination services to the ILECs. Because CLECs were faced with much higher reciprocal compensation rates than the CLECs themselves had proposed in negotiations (and which, despite ILEC claims at the time, now appear to have been set decidedly in excess of cost), some CLECs elected to “sell” rather than to “buy” at that price, and solicited customers (including ISPs) with relatively high inward calling requirements. Thus, ILECs lost the opportunity to serve these high-volume call termination customers by mispricing their services. *It would be entirely inappropriate at this time to now engage in what amounts to nothing short of a bail-out of those ILEC errors.* In competitive markets, competitors live or die by their own business judgments and decisions, *and it is not the role of regulators to backstop these market choices by after-the-fact protective measures.*

There was nothing unreasonable or inappropriate about this deliberate attempt on the part of some CLECs to seek out particular types of customers with unusually high inward calling needs and thereby to become net recipients of terminating traffic — and terminating reciprocal compensation payments. In fact, this outcome is fully consistent with the proper functioning of a competitive market. In this instance, the ILEC, as the dominant player in

38. *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 and Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, CC Docket Nos. 96-98 and 95-185, *First Report and Order* (rel. August 8, 1996), at paras. 811-815.

39. Recently, Verizon-Maryland proposed a reciprocal compensation rate for end office termination of 0.144 cents per minute. See Maryland PSC Case 8879, Panel Testimony of Louis D. Minion and Marsha S. Prosin (Verizon-Maryland), May 25, 2001, Attachment A (Reciprocal Compensation: Terminating End Office per MOU, VZ-MD Scenario = \$0.00144).

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the market, established and held out a price at which it was willing to either *buy* or *sell* call termination service. If a competitor was able to furnish the same service at a lower cost than the price signals it was receiving from the dominant ILEC, both the CLEC and the economy overall are well served by the CLEC pursuing this market opportunity.

In dictating the reciprocal compensation rate, the ILEC was engaging in a form of economic negotiation sometimes described as “I cut, you choose/you cut, I choose.” Suppose that Bob and Bill are trying to evenly divide a chocolate cake between them. Under “I cut, you choose,” Bob, for example, would cut the cake into what he believed were two equal pieces, and Bill would then have the right to select which piece he would get. Obviously, in such a process, Bob has a powerful incentive to make his slice as close to a 50/50 split as possible since, if the two pieces are unequal, Bill will then have the right to select the larger piece. Note also that under this type of negotiation arrangement, it doesn’t actually matter which party does the slicing and which does the choosing, since both would share the identical incentive no matter which role each assumes.

The establishment of a symmetric reciprocal compensation rate by the ILEC that the CLEC is then free to either pay to the ILEC or have the ILEC pay to it should provide the ILEC with precisely the same incentive to “get it right” as Bob has in slicing the chocolate cake. So it is therefore entirely reasonable and correct for CLECs to *assume* that in setting their existing reciprocal compensation rates, ILECs attempted to get as close to their (and their competitors’) actual costs as possible, since the risk of being wrong (too high or too low) would necessarily cost these companies money. In fact, ILECs would have deliberately set their price in excess of cost *only if they believed that CLECs would be unable to achieve a net traffic flow in the CLECs’ favor*. That error would be in the nature of a bad business judgment which, like other management decisions, firms must live with in competitive market environments. Of course, in the instant situation, it would appear that the ILECs engaged in precisely this market behavior, mistakenly believing that CLECs could not be so selective as to focus disproportionately upon customers with high-volume inward calling requirements.

But what if the ILECs had deliberately overstated their costs and thereby quoted excessive prices for call terminations? In setting their call termination reciprocal compensation rates, the ILECs were well aware that the price each established would apply in both directions, and therefore should have had the incentive to set a price level that was at or very close to the actual costs involved in providing call termination functions. But if, for example, an ILEC had deliberately established an excessive price, that action would necessarily have been driven by an erroneous business judgment as to competitors’ ability to be selective in seeking out and serving customers with high inward calling needs. In competitive markets, there are often serious consequences of mispricing one’s product or service, and competitors are certainly entitled to take full advantage of the conditions they

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confront in developing their business strategies and in defining the market segments that they will serve.

In the instant situation, however, the specific reciprocal compensation rates that had been dictated by the ILECs were proffered as being cost-based; indeed, they were *required* by law and by regulation to be cost-based. Section 252(d)(2) of the *Telecommunications Act of 1996* sets forth the specific relationship between the reciprocal compensation rate and the underlying costs of terminating calls:

Section 252(d)(2) CHARGES FOR TRANSPORT AND TERMINATION OF TRAFFIC-

(A) IN GENERAL- For the purposes of compliance by an incumbent local exchange carrier with section 251(b)(5), a State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless—

(i) such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier; and

(ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.

In fact, ILECs expressly *represented to regulators* that their reciprocal compensation rates were cost-based. For example, US West's Dr. Harris testified in Utah that US West's proposed rates for transport and call termination "were cost-based and in compliance with the FCC's TELRIC methodology." Harris then went so far as to affirmatively testify that he had personally

worked with US West in the development and implementation of its economic costing methods and [had] reviewed the US West cost studies that provide the basis for its proposed prices of call termination and transport of interchanged local traffic. The fundamental economic premise of these studies is that the incremental cost of transporting or terminating calls in the long run is caused by the incremental capacity burden imposed on the system by the interchanged traffic. US West has analyzed traffic flows during typical busy hours for switching offices to determine the most technologically efficient means of providing capacity. This forms the basis for the capacity cost analysis, and is consistent with the notion of forward looking costs. Incremental costs of

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billing are also included in US West's cost measures, as is appropriate because these are costs that must be recovered under cost-based pricing.

It was thus entirely reasonable and appropriate, then, for regulators *and for competitors* to rely upon the ILECs' representations with respect to their costs for terminating local traffic. When ILECs attempt to introduce "new" cost studies in support of a changed agenda that produce dramatically different results than those proffered by the very same companies a few years ago, the new results must necessarily be viewed with extreme skepticism.

Even worse, some ILECs are now attempting to manufacture a distinction between traffic that CLECs hand off to them and traffic that they hand off to CLECs, and based thereon to establish *differential* prices whose effect is to eliminate the existing symmetry in the treatment of reciprocal compensation. Specifically, ILECs are seeking to differentiate between the cost associated with traffic that CLECs terminate to them and the cost associated with traffic that they terminate to CLECs.⁴⁰ Not surprisingly, the ILECs' new "cost studies" produce dramatically higher values for the former than for the latter. Both of these results purport to be based upon these companies' own costs, but in fact there is substantial reason to expect that, all else being equal, CLEC costs may actually be higher than an ILEC's costs for providing the equivalent call termination service⁴¹ *unless the CLEC is able to develop alternative network architectures and serving arrangements geared specifically to its particular traffic mix.*

Under an explicit reciprocal compensation regime, the appropriate compensation for calls terminated by one of two interconnected carriers is entirely independent from the volume of traffic and associated compensation flowing in the reverse direction. ILECs often portray situations in which traffic flows are significantly out of balance as somehow inconsistent with the intent of opening local markets to competition, and argue that CLECs with heavily-lopsided inbound traffic are somehow taking advantage of a "loophole" in the ILEC's tariff. In a competitive local telecom market, carriers — including the ILECs themselves — are free to compete for call termination business. If a CLEC is able to furnish the call termination service more efficiently than the ILEC, the goals of competition are served when customers are induced to switch from the ILEC to that CLEC for this service.

40. See, for example, the public version of the "Cost Analysis for Internet-Bound Traffic" which SWBT filed in Texas PUC Docket No. 21982.

41. For example, individual CLECs purchase far less central office switching equipment that does a large ILEC such as Verizon or SBC, and thus commands far less purchasing power in the telecommunications equipment market than most incumbent LECs. As such, CLECs will necessarily pay more than the ILECs for the same equipment, resulting in higher per-unit cost to the CLEC if all that it does is to replicate the ILECs' network architecture and service production strategy.

Payments should compensate each participating carrier for the work each performs in completing calls handed-off to it.

Under a system of explicit reciprocal compensation payments *and as long as the ILEC's rates are based upon the ILEC's costs*, there is no logical connection between the traffic flow and associated compensation due in one direction, and the traffic flow and compensation that might occur in the reverse direction. In fact, if the symmetric reciprocal compensation rate is set *at the ILECs' cost*, then only those CLECs that are able to provide call termination services more efficiently than the ILEC will elect to engage in this particular market segment. On the other hand, inasmuch as the *Telecommunications Act* and resulting FCC regulations *require* that the reciprocal compensation rate be set *at the ILEC's cost*, CLECs acted reasonably in assuming that the rate confronting them in their respective interconnection agreements did in fact represent the ILECs' cost. If the CLEC found that it was able to furnish high-volume call termination services at a lower cost, then it acted legitimately in making the necessary investment in switching and related equipment and in developing a business plan premised on the reciprocal compensation price that was dictated to it by the ILEC. The volume of traffic that may or may not flow in the reverse direction - i.e., from the CLEC to the ILEC, is irrelevant.

There is no technical basis for differentiating carriers that specialize in serving customers with unique traffic properties from those whose customer mix exhibits more typical or "average" properties. Fundamentally, the cost characteristics of local traffic do not depend upon the *content* of the call or the purpose or use motivating the call (e.g., to connect to and transmit data to/from an ISP vs. a voice call to a friend or to a nearby retail or service establishment). The factors affecting the cost of processing a call through an ILEC's local network, or of processing a call from an ILEC's customer to the point of interconnection with a CLEC, depend solely upon the PSTN resources that are utilized by the call — primarily switching and transport — which are affected, to varying degrees, by the call's duration, the number of switching operations involved in processing the call, the distance over which the call travels, and the extent to which the use of these resources affects the carriers' peak-demand capacity at the time that the call is in progress.

For this reason, calls to **ISP** modem lines that are connected to the PSTN within the calling party's local calling area are technically indistinguishable from "ordinary" end-user to end-user local calls, whether completed entirely on the ILEC's network or involving a hand-off by the ILEC to a CLEC for termination.

There is no difference between the process by which "ordinary" end-user to end-user calls are handled vs. the way in which an end-user-to-ISP call is handled where the call is

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originated by an ILEC customer and terminated to a CLEC customer.⁴² Routing a call from an originating end user to an ISP's incoming modem line is technically identical to routing a call from the same end user to any local telephone number served by the incumbent or by another LEC. The switch serving the recipient end user's line receives the incoming call on a trunk from another switch (either another end office switch or a tandem switch), identifies the appropriate line to "ring" (i.e., the line on which to signal an incoming call), and then proceeds to generate a ringing signal to the recipient access line. When the incoming call is answered (whether by a person picking up a handset, an answering or fax machine going "off-hook" in response to the ringing signal, or by a modem automatically going "off-hook") the ringing signal is immediately terminated and a direct (circuit-switched) connection between the calling and called parties is established. This same sequence of events takes place when someone in San Francisco or a nearby suburb calls his or her local bank, or places any other local call, *including a call to an ISP whose number is within the originating party's local calling area*. In terms of the use of local network resources, it is also essentially the same thing that happens when an incoming long distance call reaches the switch serving the called customer. On a technical basis, there is no reason to distinguish among any of these types of PSTN traffic. While some ILECs have argued that ISP-bound calls are different because they do not "terminate" at the ISPs modem bank but instead "terminate" somewhere "in" the Internet, the ISPs Internet-related functions beyond the modem at which the call terminates are irrelevant to the definition and treatment of ISP-bound calls.

Where the call is directed to a customer (end user or ISP) served by a CLEC, the originating LEC (typically an ILEC) routes the call from the originating Class 5 end office to a Class 4 tandem office from which it and other calls from other Class 5 end offices that are bound for the same CLEC are aggregated and routed to the CLEC's Point of Interconnection ("POI") with the ILEC. The CLEC then routes the call from the POI through its network to its ISP customer. If the ISP is served directly by the ILEC, calls would be routed either from the originating Class 5 end office to a tandem office, and then to the terminating Class 5 end office from which the ISP's service is furnished, i.e., to which the ISP's access lines are connected, or directly to that end office via a Class 5-to-Class 5 interoffice trunk. Where a high volume of traffic exists between the originating and terminating end offices, the use of direct interoffice trunk routing that bypasses the tandem may in some cases be more efficient. The matter of direct vs. tandem routing is an economic decision for the ILEC to make based upon the volume and variability of the traffic, and the relative costs of direct trunking and tandem switching in each instance.

42. ILEC contentions in this regard were addressed and rejected by the FCC in the *ISP Remand Order*. As stated therein, "The record developed in response to the *Intercarrier Compensation NPRM* and the *Public Notice* fails to establish any inherent differences between the costs on any one network of delivering a voice call to a local end-user and a data call to an ISP." *Id.*, at para. 90. See also paras. 91-92 (rejecting ILEC arguments for such cost distinctions).

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Termination of concentrated inbound traffic, including ISP-bound traffic, requires somewhat different switch engineering than terminating more dispersed (i.e., POTS-like) inbound traffic, and in some cases may be more costly — particularly where the LEC's network is not configured specifically for this type of usage. Specifically, when an end office serves a significant fraction of lines that have a very high volume of inbound calls, the line-to-trunk concentration ratio in the switch must be reduced, meaning that more trunk ports must be in place for each line port. In a typical “POTS” end office serving an ILEC's average traffic mix, the concentration ratio is ordinarily in the range of 6:1 to 4:1, whereas the ratio for a high inbound-calling office may need to be reduced to 2:1 or even 1:1. In some cases, ISPs and other end users with heavy volumes of inbound calling may terminate their lines directly on the trunk-side of the switch. While ISP-bound traffic cannot be identified or segregated *per se*, it is a subset of the class of concentrated inbound traffic, and some CLECs have targeted this general category of traffic as a market niche, and have adopted network designs tailored to accommodate precisely this type of calling.

ILECs have in the past contended that the costs associated with handling concentrated traffic are greater than the costs associated with handling a like volume of dispersed traffic. In the course of lobbying the FCC to eliminate the exemption of enhanced services providers (ESPs)⁴³ from interstate access charges, several ILECs submitted studies purporting to show that the concentrated nature of ISP-bound traffic has caused them to incur costs incremental to their ordinary call termination costs. In a “Pacific Bell ESP Impact Study” filed with the FCC in July 1996, Pacific claimed that the growth of ESPs had “caused Pacific Bell to incur additional costs to increase network capacity as Pacific has already identified \$13.6-million in central office reengineering costs for 1996 associated with providing business lines to ESPs. These costs are over and above the normal growth expenditures associated with comparable quantities of business lines provisioned for typical business customers.”⁴⁴

In June 1996, Bell Atlantic filed a study with the FCC that addressed the impacts of increased Internet usage.⁴⁵ Similar to Pacific, Bell Atlantic contended that serving ISPs with high levels of inbound calling caused it to incur increased investments in traffic-sensitive facilities to accommodate the termination of that traffic, and specifically concluded

43. The category of enhanced services providers encompasses Internet service providers and other suppliers of on-line services.

44. Pacific Bell ESP Impact Study, attached to July 2, 1996 Letter from Alan F. Ciamparcaro, Pacific Telesis Vice President, to James D. Schlichting, Chief, FCC Competitive Pricing Division.

45. Report of Bell Atlantic on Internet Traffic, attached to June 28, 1996 Letter from Joseph J. Mulieri, Bell Atlantic Director — FCC Relations, to James D. Schlichting, Chief, FCC Competitive Pricing Division (“BA Internet Usage Study”).

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that “the network elements most affected by heavy traffic loads from ISPs are line units, switch modules and interoffice **trunking**.”⁴⁶

While some aspects of these studies are **flawed**,⁴⁷ they nevertheless provide some evidence that ILECs’ avoided costs for termination of concentrated traffic, including **ISP-bound** traffic, are actually **higher** than a rate based solely upon an ILEC’s forward-looking economic cost for terminating all traffic (both concentrated and relatively dispersed traffic). ILECs have argued that the longer average call durations for ISP-bound calls causes those calls to have a **lower-than-average** per-minute cost, because the costs of the switching set-up function are recovered over more minutes per call. However, these two sets of arguments do not square with one another. In any event, if call set-up were a significant cost element, this matter could be easily addressed in the reciprocal compensation rate structure. While the ILEC-dictated reciprocal compensation rates have almost universally ignored call set-up as a rate element, there is no particular reason why this cost component, if it is consequential at all, could not be captured in a separate call set-up reciprocal compensation charge that, like the per-minute rate, would apply symmetrically in both directions. In fact, Pacific Bell’s approved TELRIC-based prices for unbundled switch usage make precisely such a **distinction**.⁴⁸

Conclusion

Competition should promote innovation and specialization, and should reward entrants for adopting techniques and technologies that improve the overall efficiency with which services are provided and offered in the market. There is no inherent reason why individual competitive carriers should not be permitted to identify and serve market segments whose traffic and usage characteristics differ from “average” market-wide conditions. There is also no reason why entrants who are able to reduce the costs of satisfying a particular type of service demand should be penalized for such innovations by, for example, being required to provide interconnection/call termination services to ILECs at less than the price that ILECs impose upon them for similar functions.

46. *Id.*, at 14.

47. In particular, the Pacific and Bell Atlantic studies, as well as similar studies prepared in the same timeframe by US West, NYNEX, and BellCore, failed to perform proper comparisons of the total revenues and costs associated with increased ESP/Internet usage, and thus did not substantiate their claims that the ESP exemption should be discontinued. See Selwyn, L. and Laszlo, J., “The Effect of Internet Use on the Nation’s Telephone Network,” Internet Access Coalition, January 22, 1997, at 35-49.

48. Calif. PUC Decision (D.)99-11-050, November 18, 1999, Appendix A (“Summary of Unbundled Network Element Recurring Prices”), page 2.

3 THE FALLACY OF 1 BILL-AND-KEEP

“Bill-and-Keep” is not *reciprocal* compensation unless traffic is in balance

Over the past several years, many state regulatory commissions have been called upon to wrestle with the issue of finding the best financial mechanism for intercarrier compensation on locally-rated calls, including ISP-bound calls, in the context of ILEC/CLEC arbitration cases and generic proceedings. The FCC has indicated a strong interest in bill-and-keep, at least with respect to ISP-bound traffic, as reflected in the *ISP Remand Order*⁴⁹ and in the *Intercarrier Compensation NPRM*.⁵⁰ In the following two chapters, we discuss some of the possible alternatives to explicit reciprocal compensation available to the FCC and state regulators. In brief, these include:

- “*Bill and keep*” — under this model, interconnecting LECs would compensate each other “in **kind**” by agreeing to terminate each other’s calls without explicit charge or, where traffic is out-of-balance, each carrier would look to its own end user customers, rather than to each other, for compensation.”
- *Imbalanced traffic thresholds and adjustment mechanisms* — these devices generally limit the amount of reciprocal compensation paid by one LEC to another,

49. *ISP Remand Order*, at paras. 6 and 71-76.

50. *Intercarrier Compensation NPRM*, at paras. 4 and 66-77.

51. *Id.*, at para. 9.

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based upon the degree to which their interchanged traffic within a given time interval is out of balance.⁵²

- *The “access charge” mode2* — this model would treat locally-rated calls that are handed off to a LEC for termination to an ISP like traditional long distance calls, with the ISP placed in the role of the interexchange carrier. Under this view, the LEC serving an ISP would impose usage-based (e.g., per-minute) switched access (or equivalent) charges on the ISP to cover the costs of termination, and would not receive any reciprocal compensation from the originating LEC.

In this section, we examine the “bill-and-keep” approach in detail. The *Intercarrier Compensation NPRM* in several places cites arguments recently advanced by the FCC’s Office of Plans and Policies (“OPP”) in support of this compensation mechanism. In section 4, we look at several other proposals that have been supported by incumbent LECs. Bill-and-keep is a device for “reciprocal” compensation only if the flow of traffic between the two interconnecting carriers is roughly in balance, because in that circumstance it provides for roughly equal *in-kind* compensation. As we shall demonstrate, each of these alternative compensation arrangements fails to meet the basic economic and policy criteria applicable to intercarrier compensation in that all fail to establish payment and pricing mechanisms that accurately track the costs each of the interconnecting carriers confronts in terminating calls handed-off to it, and in that failure produces an unfair, anticompetitive, and economically inefficient compensation mechanism.

The new interest in “Bill-and-Keep”

While initially *opposing* the bill-and-keep method of intercarrier compensation when they expected that ILEC/CLEC traffic flows would be out-of-balance and in their favor, ILECs have now reversed their earlier position in light of the ensuing market response to ILEC-dictated above-cost reciprocal compensation rates, and now affirmatively push for adoption of bill-and-keep.

From the standpoint of CLECs that have elected to specialize in serving customers with disproportionate inward calling requirements, bill-and-keep is a euphemism for setting the reciprocal compensation rate at zero, a rate that is unambiguously below the costs that the CLEC will incur in terminating ILEC-originated calls handed off to it. To overcome this obvious flaw in the bill-and-keep approach, several efforts have been made in recent months by proponents of bill-and-keep to craft an economic rationale for this compensation (or non-

52. See, e.g., *ISP Remand Order*, at para. 79, which discusses state regulatory commissions that have adopted such mechanisms to limit reciprocal Compensation for ISP-bound traffic.

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compensation) mechanism, and the *Intercarrier Compensation NPRM* seems to have been influenced by these efforts. Of particular note, the FCC's Office of Plans and Policy ("OPP") in December 2000 issued two staff working papers on this subject.⁵³ As a general matter, the OPP papers conclude that some form of "bill-and-keep" arrangement is the optimal solution for intercarrier compensation and, of perhaps even greater significance, for the pricing of services provided at retail to end users. However, the papers take different approaches to analyzing the interconnection issue, and ultimately endorse distinctly different incarnations of bill-and-keep. Neither paper, however, provides a compelling, economically sound rationale for bill-and-keep as opposed to reciprocal compensation and, upon closer examination, both papers' support for bill-and-keep rests upon assumptions and concepts that are both unsupported and are likely not valid.

In brief, the DeGraba paper focuses upon the existing interconnection regimes applying to local voice traffic, ISP-bound traffic, and toll calling, and finds all of them to be problematic. Mr. DeGraba proposes as an alternative a device he refers to as "Central Office Bill and Keep" (COBAK). Under COBAK, each LEC would terminate calls on a bill-and-keep basis, except that the calling party's network would be responsible for the cost of transporting the call to the called party's central office.⁵⁴ COBAK is suggested as a default regime, to be applied by regulators whenever carriers cannot agree upon other interconnection arrangements.

The Atkinson/Barnekov paper attempts to develop a simplified model of network interconnection, and thereby deduce the most efficient practice for interconnection pricing. The authors describe a scheme they call "Bill Access to Subscribers, (Incremental) Interconnection Costs Split" (BASICS). Under BASICS, which the authors put forth as representing an "optimal" compensation arrangement; call termination would also be performed on a bill-and-keep basis, but with two exceptions: Interconnecting carriers would split equally the costs specific to interconnection *per se* (e.g., the costs of the interconnection trunks between the two LECs' switches), and a LEC connecting with a dominant carrier (an ILEC) would pay the costs of transporting traffic from its subscribers into the ILEC's local calling area.⁵⁵

53. DeGraba, Patrick, *Bill-and-Keep at the Central Office as the Efficient Interconnection Regime*, OPP Working Paper No. 33 (December 2000) ("DeGraba"); Atkinson, Jay M. and Christopher C. Barnekov, *A Competitively Neutral Approach to Network Interconnection*, OPP Working Paper No. 34 (December 2000) ("Atkinson/Barnekov").

54. DeGraba paper, at para. 24.

55. Atkinson/Barnekov paper, at paras. 39-40, 69-73. They propose that the rule concerning transport cost recovery should be a default that is applied only when carriers cannot agree on another means to allocate those costs.

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The authors of those two papers have set a highly ambitious goal, i.e., to design an optimal interconnection regime “from the ground up” that could eventually apply to all traffic exchanged between carriers. Unfortunately, they have over-reached, and both papers fall far short of providing a convincing demonstration that their alternative interconnection proposals would be any more efficient or effective than the current arrangements, i.e., reciprocal compensation arrangements for locally-rated traffic (including ISP-bound calls) and switched/special access arrangements for toll traffic. However, even if the theoretical basis for the authors’ conclusions were valid, the paradigm they describe would require a comprehensive and coordinated implementation extending to the pricing of *all* retail end user services, local and “long distance,” interstate and intrastate, that goes far beyond the matter of intercarrier compensation. Indeed, taking the **OPP** papers’ conclusions at their face value, the papers would clearly not support the extraordinarily limited, highly targeted (i.e., to **I**LEC-**C**LEC traffic interchange) “solution” that the *Inter-carrier Compensation NPRM* proposes.

The papers’ principal weaknesses fall in four key areas:

- (1) Neither paper recognizes 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) The two papers share 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) The papers inconsistently combine theoretical and pragmatic considerations to support their concrete proposals for how interconnection should be priced.
- (4) The papers give undue deference to existing architectures and practices of **I**LECs, in effect requiring entrants to accept what amounts to a “take-it-or-leave-it” set of interconnection conditions, such as existing **I**LEC local calling area definitions and the premise that inward and outward traffic that is out-of-balance is to be discouraged.

The following discussion addresses each of these problems in detail.

The analyses advanced in the two OPP papers are fundamentally incomplete, because they fail to consider the impacts that their proposed intercarrier bill-and-keep regimes would have upon the charges applied to end users.

The DeGraba paper focuses upon the issue of how the responsibility for the costs of interconnection between networks should be assigned to the interconnecting networks. DeGraba bases his proposed solution upon an analysis of the distribution of the benefits of a call between the calling party and the call recipient,⁵⁶ as we shall explore in depth below. Curiously, however, he stops short of examining the implications of his intercarrier compensation proposal for those very end users — i.e., the consequences that adopting the COBAK proposal would have for retail pricing. Indeed, DeGraba emphasizes that **COBAK** “does not specify how retail rates should be set,”⁵⁷ and he suggests that **COBAK** could be compatible with a variety of retail pricing arrangements.⁵⁸

The Atkinson/Barnekov paper advances a second argument in support of a bill-and-keep rule, but based instead upon a theoretical construct that attempts to focus solely upon inter-carrier compensation without specific consideration as to how their construct will affect charges that will be applied to end users. Atkinson and Barnekov appear to recognize that the latter approach represents a departure from mainstream analysis of interconnection issues, noting that “until fairly recently, the primary focus of interconnection policy has been the distribution of costs among end users, and the literature has focused on end user pricing.”⁵⁹ Nevertheless, the authors contend that it is possible (and indeed, preferable) to reform intercarrier compensation arrangements for interconnection first, and only after “getting intercarrier compensation right,” turn to the issue of conforming end user charges to the new interconnection regime.⁶⁰

It is important at the outset to recognize the limitations that are inherent in any analysis of intercarrier compensation that does not also consider the ramifications that a given intercarrier compensation plan will have upon carriers’ pricing of services to their end users. In reality, there are inescapable, intrinsic connections between intercarrier compensation and end user pricing. The first linkage is that end users’ consumption decisions drive the level

56. DeGraba, at paras. 49-55.

57. *Id.*, at para. 31.

58. *Id.*, at para. 32.

59. Atkinson/Barnekov, at para. 5.

60. *Id.*, at para. 14.

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of demand for facilities on the interconnected networks. Consider two interconnected networks, Network **A** serving a subscriber who originates a call, and Network **B** serving another subscriber whom he wishes to reach. In that case, demand for facilities on Network **B**, as well as the interconnection facilities between them, is created entirely by the first subscriber's decision to place a call to the customer of Network **B**. Thus there is no independent demand for interconnection facilities, rather their use is a function of end user demand characteristics. The second linkage is that in any sustainable system, ultimately all of the costs of the complete service, including its interconnection component, must be recovered via revenues generated from end users. From this standpoint, even if any of the OPP papers' authors had made a convincing case that the compensation scheme they support is the ideal, maximally-efficient mechanism for intercarrier compensation (which we do not believe to be the case), such an analysis would be fundamentally incomplete, because they have not shown that it will lead to efficient end user pricing. Moreover, as we explain below, adopting a bill-and-keep approach to intercarrier compensation would require fundamental changes in the traditional retail pricing arrangements for local exchange service, for all carriers and all customers, that are entirely unaddressed by the OPP papers, but are likely to present state regulators with extraordinary difficulties.

In fact, if markets are truly competitive and are not subject to regulatory pricing constraints or price-setting behavior by a dominant incumbent, end user prices might well come to reflect the structure for intercarrier payments. Atkinson and Barnekov themselves implicitly acknowledge this when they point out that interexchange carriers (IXCs) are prohibited by law and FCC policy to pass through the access charges incurred on particular calls to those end users, and instead must apply uniform end user rates that reflect an average of the varying access charges that they **confront**.⁶¹ Obviously, such an explicit prohibition is necessary because the natural tendency in an unregulated, competitive market would be to pass-through access cost differences in a de-averaged manner. In the same way, imposition of a bill-and-keep system for intercarrier compensation will, unless barred by regulatory fiat, eventually create pressures on all LECs to charge their end users directly for all access engendered by their lines, i.e., inbound as well as outbound usage. Thus, the traditional system of "sent-paid" end user pricing for local calling would likely be replaced over time by a "half-call" system, in which calling parties would pay only for call origination (the first half of the call), and called parties would pay to *receive* calls directed to them (the second half of the call); this type of retail pricing arrangement is illustrated in Figure 4. Regulating this outcome out of existence would not work either under competitive market conditions, because like any regulatory requirement that traffic flows be in balance, such a policy would force entrants to adopt business models that foreclose market specialization and pricing innovation.

61. *Id.*, at para. 10.

BILL - AND - KEEP

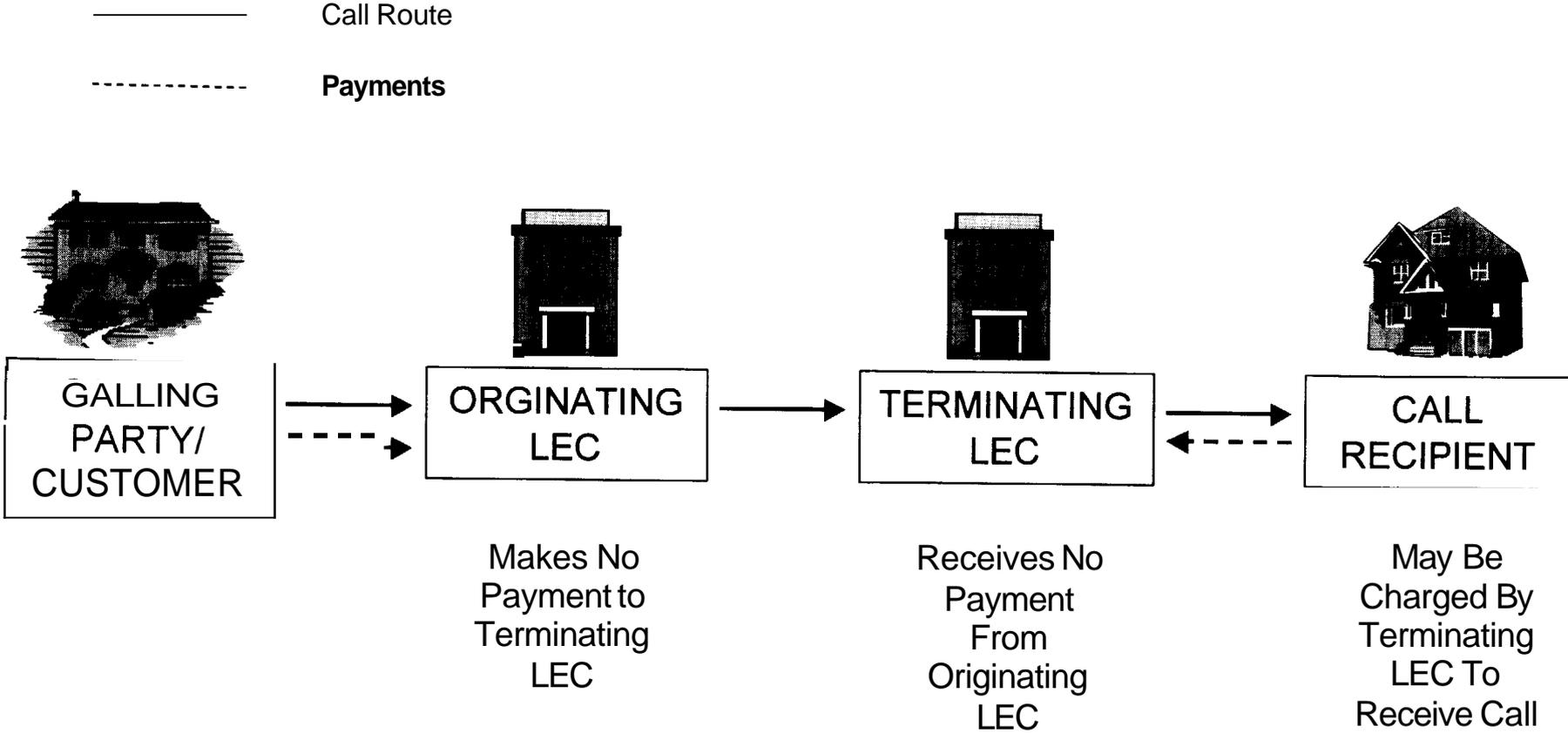


Figure 4. Call Routing and Flow of Payment Under Bill-And-Keep

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Whether or not that scenario ultimately occurs, it is indisputable that the prevailing retail pricing regime of sent-paid local calling would be immediately incompatible with adoption of intercarrier bill-and-keep, and would have to be abandoned entirely — for local calls served end-to-end by a single LEC, as well as those exchanged between interconnected LECs. It is easy to see why this is so for local calls handed off to another LEC for completion: sent-paid pricing bills the originating caller for delivery of the call (as well as origination), so that termination costs would be recovered twice-over, once by the originating LEC, and again by the terminating LEC. Any delay in reforming LECs' local exchange tariffs to separate out cost recovery for the inward versus the outward halves of a call would cause the ILECs to receive a windfall of revenues, as they would continue to receive revenues from their originating callers to cover the costs of calls that are handed off to another LEC for termination. Furthermore, it would be infeasible to ~~try~~ to maintain a sent-paid tariff for local calls handled end-to-end by the same LEC, and at the same time shift to a half-call tariff for the calls handed off for termination, because that approach would be administratively complex and expensive to implement, and confusing to end users.

The *Inter-carrier Compensation NPRM* appears to lose sight of these problems. Initially, the *NPRM* states that the FCC is “particularly interested in identifying a unified approach to intercarrier compensation — one that would apply to interconnection arrangements between all types of carriers interconnecting with the local telephone network, and to all types of traffic passing over the local telephone network.”⁶² Indeed, to the extent the FCC seeks to rely upon the theoretical underpinnings for bill-and-keep advanced by the two OPP papers, it would have to move to such a unified mechanism, as both the DeGraba and Atkinson/Barnekov proposals assume the widest possible application of their respective bill-and-keep variations.⁶³ However, the *NPRM*'s only concrete proposal in this regard is to apply bill-and-keep to specifically to ISP-bound calls exchanged between carriers, thereby creating a “carve-out” of that category of locally-rated calls for radically different treatment than other local exchange traffic.⁶⁴

There is a parable (the source of which is Professor Alfred Kahn, former Chairman of the New York Public Service Commission) about a debate that once took place in the Irish Parliament about converting from driving on the left (as in the UK) to driving on the right (as in the rest of Europe and in the US). The debate raged on, until one back-bencher, in an attempt at compromise, suggested that the conversion be done on a transitional basis, starting only with trucks.

62. *Inter-carrier Compensation NPRM*, at para. 2.

63. DeGraba, at para. 3; Atkinson/Barnekov at paras. 8 and 85.

64. *Inter-carrier Compensation NPRM*, at para. 66.

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Proposals, such as those apparently being advanced in the *Intercarrier Compensation NPRM*, for a partial transition to bill-and-keep or “shared responsibility” pricing will lead to an outcome that is no less chaotic. CLECs that serve ISPs would be forced either to look to their **ISP** clients for payment for terminating traffic or otherwise to exit that market segment; ILECs, on the other hand, will continue to be compensated by their end user “POTS” customers through traditional sent-paid pricing, and will thus be in a position to regain control of this segment. Where the **CLEC** does look to its ISP client for payment, the ISP will in turn be forced to flow through such payments to its own subscribers in the form of higher monthly charges or perhaps even usage-sensitive charges for Internet access, but those same users will have paid their ILEC, under the sent-paid pricing regime applicable to **POTS** services, for the *entire* end-to-end call. *So* in addition to creating a disparity as between ILECs and CLECs with respect to call termination services being furnished to ISPs, implementation of the *Intercarrier Compensation NPRM*’s proposed rule would also result in a double charge to many end users, forcing them to pay their originating ILEC for the full end-to-end call, and to pay their ISP once again for the portion of the call from the ILEC/CLEC hand-off point to the ISP.

Even if the FCC wanted to avoid these kinds of disruptive consequences of a partial adoption of bill-and-keep, it would be beyond its statutory powers to do *so*. While the **Act** has blurred some of the traditional jurisdictional boundaries between the FCC and state regulators (relative to pricing guidelines for unbundled network elements, for example), it remains the case that *local* retail structures, rate levels, and local calling areas in all cases fall squarely within the purview of the state PUCs. Accordingly, the FCC could not, within the *Intercarrier Compensation* rulemaking, achieve a comprehensive outcome unilaterally.

As a general matter, any attempt to comprehensively align retail local exchange tariffs to a bill-and-keep intercarrier compensation mechanism would create a massive regulatory burden for state public utility commissions (PUCs), who have jurisdiction over those tariffs. Each state PUC would be compelled to craft, for every LEC operating in its state, separate retail rate structures for the recovery of the originating and terminating portions of local exchange calls. This would necessarily include, among other things, the introduction of new *end user charges* to replace payments that at present apply only between interconnecting carriers. The majority of **ILECs** operate under some form of price regulation today, and some would no doubt seize upon a regulatory mandate to alter their tariffs in such a fundamental way as the basis for an upward “exogenous adjustment” to price caps imposed on their local service rates. Indeed, it would be very difficult for regulators to determine whether the resulting tariffs would be revenue-neutral or disguise a rate increase for end users, particularly if flat-rated services were replaced by measured usage rates. At the very least, because of the enormous and largely unexamined consequences that intercarrier bill-and-keep would have for retail local service pricing, the FCC could not undertake to adopt a bill-and-keep mechanism without also involving state regulators (e.g., via the Federal-State Joint Board) in its evaluation.

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The OPP papers rely upon a flawed treatment of the allocation of benefits and costs of a telephone call between the subscriber who places the call and the called party.

Under traditional bill-and-keep arrangements, the carrier that terminates calls handed off to it receives zero *monetary* compensation for the work involved in handling such traffic, but is nevertheless “compensated” for that work on an “in-kind” basis, because the interconnecting carrier will similarly terminate originating traffic without an explicit charge. Where the traffic flows are significantly out-of-balance, the “in-kind” aspect of bill-and-keep is not present, and the uncompensated carrier would presumably decline to accept such traffic absent some other form of compensation. ILECs, of course, have argued that such compensation should come from the call recipient - specifically (with respect to ISP-bound traffic), from the ISP. But those arguments are premised upon the demonstrably false notion that ISPs are themselves telecommunications carriers and thus should be afforded the same treatment as is given to IXCs — i.e., access charges. As discussed above, in the new versions of “bill-and-keep” proposed by the OPP authors, the traditional “sent-paid” method of charging customers for the calls they originate would have to be replaced by a shared responsibility arrangement under which the calling and called parties would each pay a portion of the total charge for the end-to-end connection — whether the call involves an intercarrier interchange of traffic or is handled end-to-end by one carrier. CLECs serving ISPs, for example, would no longer receive reciprocal compensation payments from ILECs for terminating ISP-bound traffic, and would have to look to their ISP customers for payment for this service.

A fundamental premise of both the DeGraba and Atkinson/Barnekov approaches is that it no longer makes sense to consider a call as being “caused” by one telephone subscriber attempting to communicate with another subscriber. Instead, both papers posit that the responsibility for — and benefits from — a telephone call — indeed, from *any* telephone call (i.e., not just those to an ISP) - are shared between the calling and the called parties. Atkinson and Barnekov declare (again, without any empirical basis) that “the entire concept of the ‘directionality’ of a call is rapidly becoming highly ambiguous, if not entirely meaningless.”⁶⁵ Similarly, DeGraba argues that the cost of occupying a telephone circuit through the public switched telephone network (PSTN) “is the same for a network whether the call is originated by its end-user customer or received by its end-user customer.”⁶⁶ Moreover, DeGraba eventually concludes that the most expedient assumption with respect to

65. Atkinson/Barnekov, at para. 11, footnote 21.

66. DeGraba, at para. 53. This statement is, of course, likely true, but is also entirely irrelevant. The fact that the called party’s network incurs costs to terminate a call originated by someone else **does not** make the called party the cost causer, a critically important point that DeGraba appears to entirely ignore.