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Federal Communications Commission
Office of Secretary

EX PARTE

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: *CC Docket No. 96-262 - Access Charge Reform*

On Friday, February 28, 1997, Rex Mitchell of Pacific Bell and Nancy Woolf and I of Pacific Telesis met with Jon Garcia of the Office of Plans and Policy, Commissioner Susan Ness and Jim Casserly and Dan Gonzales of Commissioner Chong's Office to discuss the attached material. Because the meetings extended until late in the afternoon, this notice is being filed on the next business day.

We are submitting two copies of this notice in accordance with Section 1.1206(a)(1) of the Commission's rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions.

Sincerely,

Alan Ciamporcero (JZB)

Attachment

cc: Commissioner Ness
Jon Garcia
Jim Casserly
Dan Gonzales

No. of Copies rec'd 0+1
List ABCDE

Analysis of Subsidy, Access Reform and Universal Service

Rex G. Mitchell
Regulatory Vice President
Pacific Bell

I. Description of the Problem

Implicit subsidy, the vehicle that allowed the implementation of important social goals of the past is the enemy of competition. It must be eliminated for a competitive environment to produce the goal of efficient allocation of scarce resources. This paper discusses the fundamental reasons that competition is inconsistent with subsidy in the particular context of access reform. That is, in an environment where CLECs can choose, on a customer-by-customer basis to use resale or unbundled network elements or use facilities they own to reach their customers, the current implicit subsidies become the profit opportunity of the CLEC. It concludes that in order for resale/unbundling competition to be successful, the subsidy must be eliminated from LEC retail and access prices. If this does not occur, then 1) the subsidy contribution that supported universal service yesterday becomes the profit opportunity of CLECs today, 2) universal service subsidy will disappear without a replacement mechanism, and 3) overall compensation for the facilities-based network is inadequate to support the network and, thus, the incentive to invest in facilities-based networks is minimized. The shortfall in funding the network will be exactly equal to the subsidy burden of today, which is not covered by an explicit universal service fund.

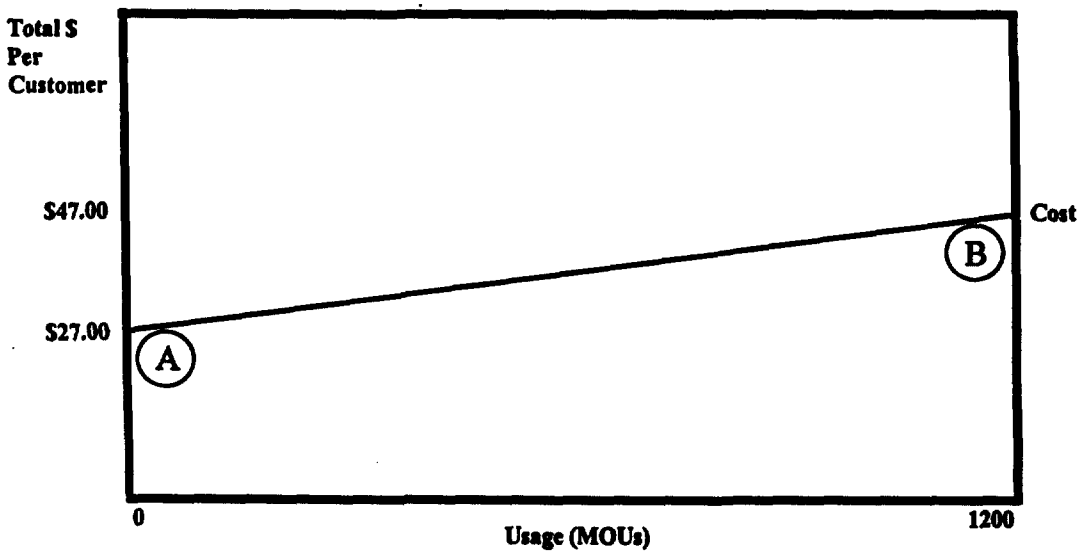
I will also demonstrate the motivation of AT&T and MCI to support a proxy model that seriously understates costs of local service. The greater the distortion in ILEC's costs and prices, the greater the profit opportunity for CLECs that have the chance to either purchase facilities by paying the lower of unbundled element cost or a discount off of retail, or target facilities deployment to the most profitable areas. Therefore, the greater the understatement of costs for one part of this closed system of cost/price, the greater the profit opportunity for CLECs. Finally, I will show that if ILEC access prices have *any* subsidy burden that represents legitimate costs (that is, they recover some portion of costs that are real costs of operating a local exchange network not covered in unbundled network elements), at least that portion of access charges must be passed along to the purchaser of unbundled network elements. If that does not occur, there is a very real tax only on ILEC retail services that is not borne in any way by a CLEC or the retail customer of a CLEC.

These principles can be derived from the use of a simple illustration. The illustration starts with a description of how costs and prices of ILECs are misaligned today. Representatives of ILECs, including me, have discussed at length the misalignment of costs due to geographic averaging. However, for this purpose, it is more useful to set aside the geographic subsidy issue and focus on the usage subsidy issue. It is also useful to set aside any issue of inefficiency or past costs. We can, therefore, start with a set of facts that everyone can agree upon. The geographic issue and inefficiency issue will be discussed below. To set

these issues aside, we start with an area in which the cost of universal service is $27. We believe that this is an average area; the Hatfield model would say that this is a relatively high cost area. Either area will do. We should agree that the forward looking cost of providing basic local exchange service in this area is $27.

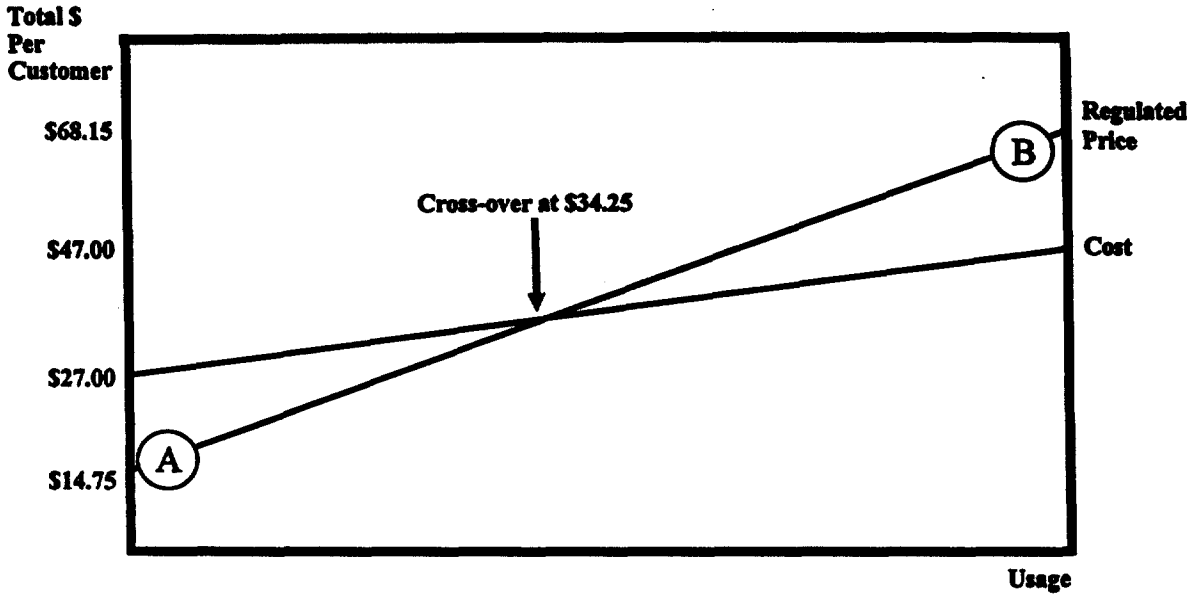
Let's next assume that usage has real costs that are non-trivial, but are, as AT&T and MCI are quick to point out very low. Let's say $0.01 per minute for access and $0.03 for an intraLATA toll call. Let's plot a cost curve using two customers to produce a line. First let's plot Customer A that buys basic residential exchange service and nothing more and Customer B who also buys 400 minutes of intraLATA toll, 400 minutes of originating and terminating interLATA intrastate access, and 400 minutes of originating and terminating interstate access. Customer A has costs of $27. Customer B has costs of $47 consisting of $27 plus 800 times $0.01((400 + 400) * $0.01) and 400 times $0.03. If we plot the simple cost curve with dollars on the Y-axis and usage on the X-axis, we have the following:

Figure 1



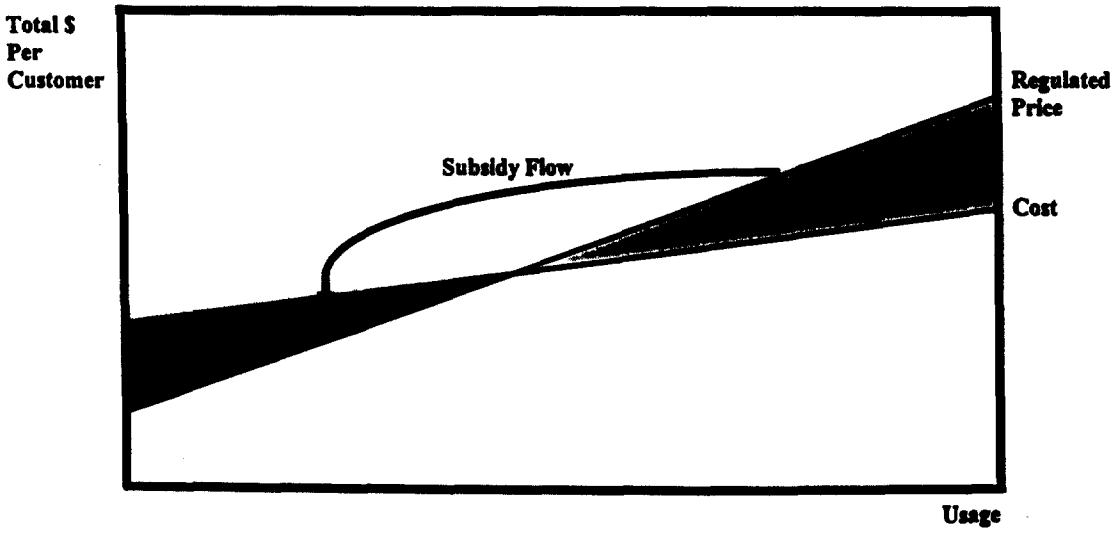
This represents a fairly realistic picture of ILEC costs for a given geographic area. It is a very flat curve. Now let's examine prices. In Pacific Bell's service territory, the same two customers would illustrate prices as follows: Customer A and Customer B would pay $11.25 for residential basic exchange service and $3.50 for the SLC for a total retail price of $14.75. Customer B would pay an additional $40.00 for the toll (400 minutes at $0.10 per minute) and the customer's interLATA carrier would pay about $5.60 (400 minutes at $0.014 per minute) for the intrastate access and $7.80 (400 minutes at $0.0195) for the interstate access for a total of $68.15. Customer B's retail bill would be in the range of $150, a prize customer. Since the costs and prices are per minute, the cost and price curves are each straight lines. The intersection of the two lines represents the customer whose usage creates enough subsidy to compensate for the shortfall in basic residential service for this particular area. The crossover point is reached at about $34.25 with 147 minutes each of intraLATA toll, intrastate access and interstate access. The price and cost curves can be represented as follows:

Figure 2



The subsidy within this area can be illustrated by the two triangular regions created by the price and cost curves. The triangular region to the right is the current subsidy contribution and the subsidy area on the left is the current subsidy burden. It can be said that the customers to the right of the intersection of the price and cost curves subsidize the customers to the left of that intersection. The subsidy flow can be illustrated as follows:

Figure 3



The CLECs are entirely insulated from the burden of the subsidy. It remains exclusively the problem of the ILECs and facilities-based CLECs that serve all customers. The facilities-based CLECs can, however, avoid investing in areas where the subsidy burden is so

significant that investment in that area is unwise. In the monopoly-provider, regulated world of the past, there is not a significant problem. This subsidy situation allows basic residential service to be priced below cost and averaged across the state in order to satisfy the important public policy goal of universal service.

As we move to a competitive environment of multiple providers, however, a problem is immediately obvious. Some customers are overwhelmingly attractive and others are unattractive. This problem does not occur in the area that we have hypothesized, however. This area is assumed to be a given neighborhood with a uniform density and approximately the same distance from areas of greater density. The area is also balanced in subsidy burden and subsidy contribution.

Moving to the next step of analysis, we introduce first resale of service of an ILEC and purchase of unbundled network elements (rebundling) to enter the competitive environment. As CLECs have the option to choose to buy the identical facilities from ILECs using one of two pricing algorithms, the price/cost distortions become a serious problem. Resale is the wholesale purchase of ILEC facilities based upon the current *price* of those facilities. Rebundling is the wholesale purchase of ILEC facilities based upon the current forward-looking *cost* of those facilities. The wholesale price of the resold facility is illustrated as a dotted line below the price curve as shown in Figure 4. The difference between the two lines is of course the amount of the wholesale discount and represents the marketing, billing, collection and other costs that will be avoided. The wholesale purchase of the rebundled facility is illustrated as a dotted line below the cost curve as shown in Figure 5. The difference between these two lines is the retail services that are not purchased from the ILEC.

Figure 4

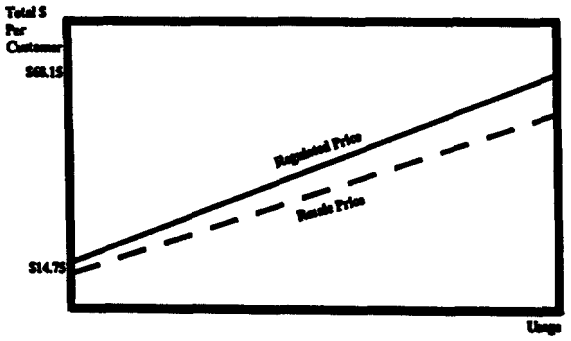
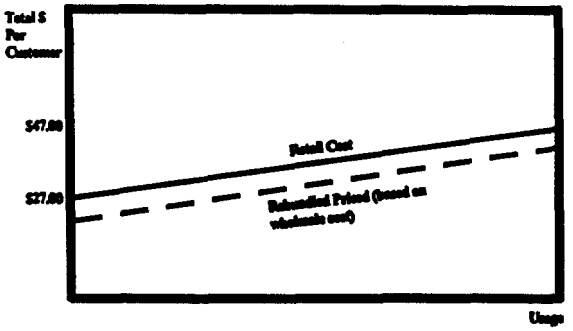
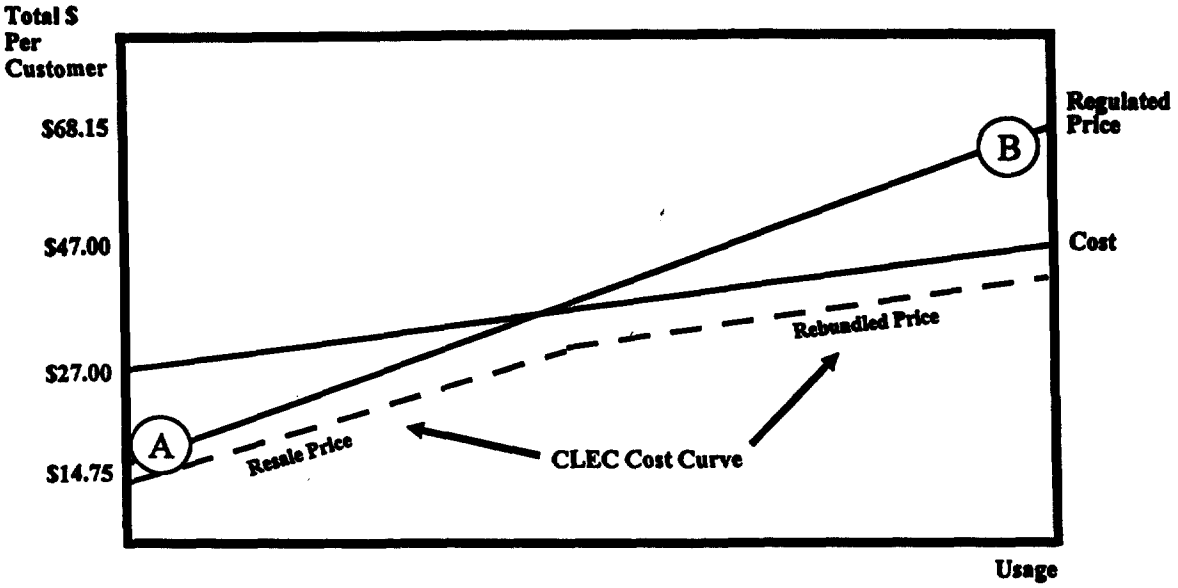


Figure 5



Assuming that the non-facilities based CLEC has the opportunity to choose on a customer-by-customer basis to use resale or rebundling to purchase facilities of the ILEC, the existence of the subsidy produces an incredible undeserved profit opportunity for the CLEC. The creation of that profit opportunity has devastating consequences for subsidy contribution. The cost curve of the non-facilities based CLEC is a bent line representing the lower of the resale price and the unbundled network element price of the ILEC as shown in Figure 6.

Figure 6



II. Implications

A. Without Any Investment in Facilities the CLEC Can Serve Every Customer and Avoid the Subsidy Burden

The first lesson of this exercise is that the subsidy burden is not shared between the ILEC and the CLEC. Notice that the combination cost curve of the CLEC does not include any subsidy burden. The customers that were consuming the subsidy (left of the intersection) are served optimally by the CLEC using resale pricing. Resale prices are based on a discount from the subsidized *price* of the CLEC. Since the retail price is subsidized, the discounted resale price takes full advantage of that subsidy.

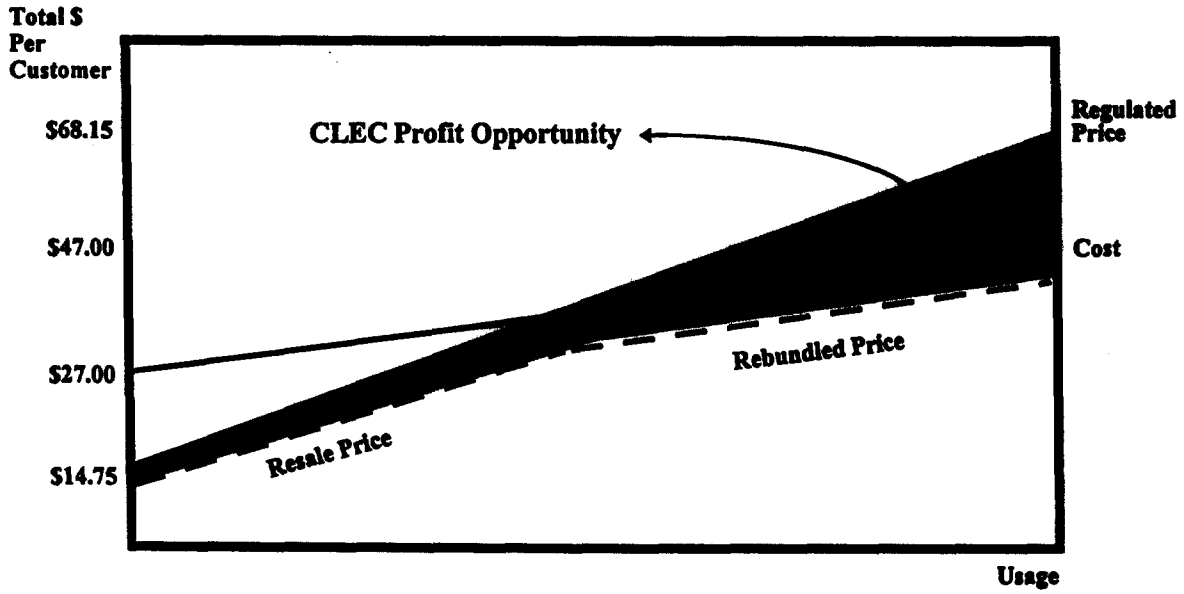
B. The Subsidy Burden of the Low Use Customer Remains the Burden of the ILEC

The second lesson of this exercise follows directly from the first. The subsidy burden does not disappear, however, when that customer is served by a CLEC using resale. The costs of the facilities used to serve this customer -- the loop capital, loop maintenance, switching costs all continue exactly as if the ILEC were the exclusive service provider. Any costs avoided by the ILEC are passed along to the CLEC in the resale discount. In this example, any portion of the $27 (say 17% of $11.25 in the extreme example) is passed along. To the extent the cost of basic residential service is greater than the price of basic residential service in this area, the wholesale discounted price is dollar for dollar less than the wholesale cost. The subsidized customer is served on a retail basis by the CLEC; the burden of the subsidy remains one-hundred percent a burden of the ILEC.

C. The Subsidy Contribution of the High Use Customer Becomes the Profit Opportunity of the Non-Facilities Based CLEC

The third lesson of this exercise is that the subsidy contribution becomes a profit opportunity for the non-facilities based CLEC. Since the right side of the CLEC cost curve follows the cost curve rather than the price curve, there is no subsidy burden in the prices that the CLEC pays for rebundled purchase of facilities. Unbundled network elements are being priced based upon TELRIC, TSLRIC or other estimates of costs. Prices are not relevant in this equation. Figure 7 illustrates this phenomenon. The valuable customers—the customers providing the greatest subsidy contribution today will be the targets. In the example of the high use customer discussed above, the profit opportunity is $21.15, a gross margin of 45% for the portion of the service formerly provided by the ILEC under retail and now largely provided by the CLEC using rebundled facilities.

Figure 7



D. The Subsidy Contribution of the High Use Customer is Moved from Universal Service Support to CLEC Profits as the Customer Becomes the Customer of a CLEC Using the ILECs Rebundled Facilities

The fourth lesson is again a corollary of the third. The subsidy contribution is entirely lost for the support of universal service. The CLEC can take the subsidy contribution if it can attract the customer without a price discount or can share it with the customer in order to attract the customer. Either way, the subsidy contribution is available to them to share with their customers without any investment in local facilities, increasing efficiency, improving quality of service, or benefiting society or the customer. In fact, the only improvement that can be offered by non-facilities based CLECs is marketing and billing since the rest of the service is actually provided by the ILEC. The only benefit to the customer is a decrease in price. Because the

ILEC incurs the same costs, the loss of contribution is at the expense of the ILEC initially and ultimately at the expense of universal service.

E. The Link Between Subsidy Burden and Subsidy Contribution is Entirely Broken with Potentially Dire Consequences to Investment in Telecommunications Facilities

The combination of the first four lessons is the breaking of the link between subsidy contribution and subsidy burden. In the regulated world of a monopoly-provider where subsidies were created, the subsidies performed the valuable function of extending and preserving universal service. In the competitive world endorsed by the Telecommunications Act, implicit subsidies cannot survive. Congress certainly recognized that and required that subsidies be made specific, explicit, and predictable.

F. By Adding the Geographic Subsidies the Picture Becomes Even More Bleak

The geographic subsidies were eliminated from the above picture so that the nature of subsidy could be examined without any geographic differences in cost. The work that Pacific Bell and others have done indicate that the cost of residential basic exchange service varies by geography and varies very significantly. Runs of the Cost Proxy Model (CPM) as proposed by Pacific Bell, for example, demonstrate that the cost differences in the Chico, California wire center vary from a low of about $24 per month to a high of $128 per month. The Hatfield model erroneously estimates significantly lower costs, however, but certainly indicates a wide variation in costs by geography.

Changing from the $27 cost area to higher and lower cost areas requires only a change in the cost curves. The prices today do not yet vary from geography to geography. From the work done on geographic cost studies, it has been determined that the cost of usage increases in sparsely populated areas because the usage sensitive costs of the switch are not shared with as many customers in sparsely populated areas as they are in densely populated areas. The following charts illustrate what happens to the cost curves as other areas are examined. In a sparsely populated area (Figure 8), the cost curve moves up representing the increased cost of basic residential service and the slope increases demonstrating the increased costs of usage. Conversely, in a densely populated area (Figures 9) the cost curve is moved down to represent the decreased cost of basic residential service and the slope is decreased to illustrate the decreased cost of usage.

Figure 8

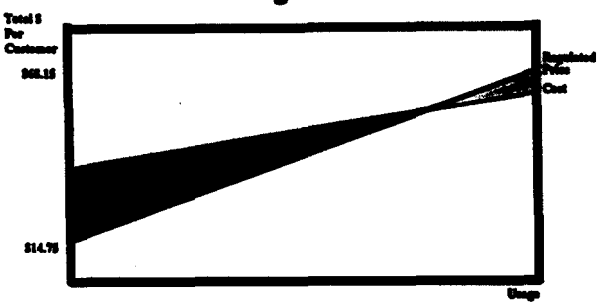
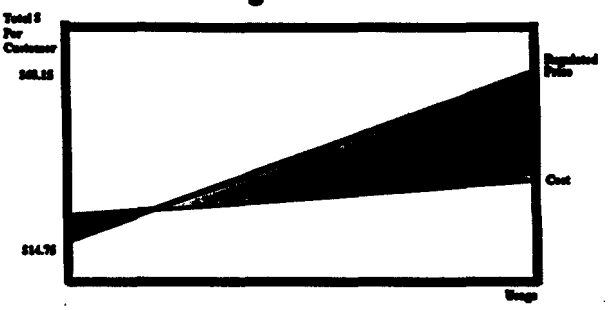


Figure 9



These diagrams illustrate sizes of the subsidy burden triangles and the subsidy contribution triangles that do not match. It is a pictorial representation illustrating that beyond the subsidy generally flowing from high usage to low usage customers, there is a subsidy flowing from low cost geography to high cost geography reflecting the differing costs to serve. It is important to note that the concepts do not change. While there are relatively fewer attractive customers in the high cost areas and relatively more attractive customers in the low cost areas, it is still the subsidy contribution that creates the profit opportunity for the CLEC. The level of subsidy in any picture is the measure of the extraordinary profit motive of the CLEC. To capture more than the subsidy in any area, the CLEC must demonstrate an improvement of cost or quality to the customer. The subsidy contribution is available without any such demonstration.

III. Access Reform Solutions to the Subsidy Dilemma

A. Leaving Subsidy in Switched Access Charges -- Extending Switched Access to Unbundled Network Elements

The first solution that should be examined is the status quo -- leaving the subsidy in switched access. This is not a viable long term solution because facilities-based carriers will be able to choose service territories that enable them to take advantage of the geographic price/cost distortion created by the geographic subsidy. Unless switched access charges are highly geographically deaveraged (and deaveraged by differing costs of the loop not by differing costs of usage), this is not viable in the long run. There is a more immediate problem, however, as demonstrated above, in that the subsidy contribution is available to non-facilities based CLECs today.

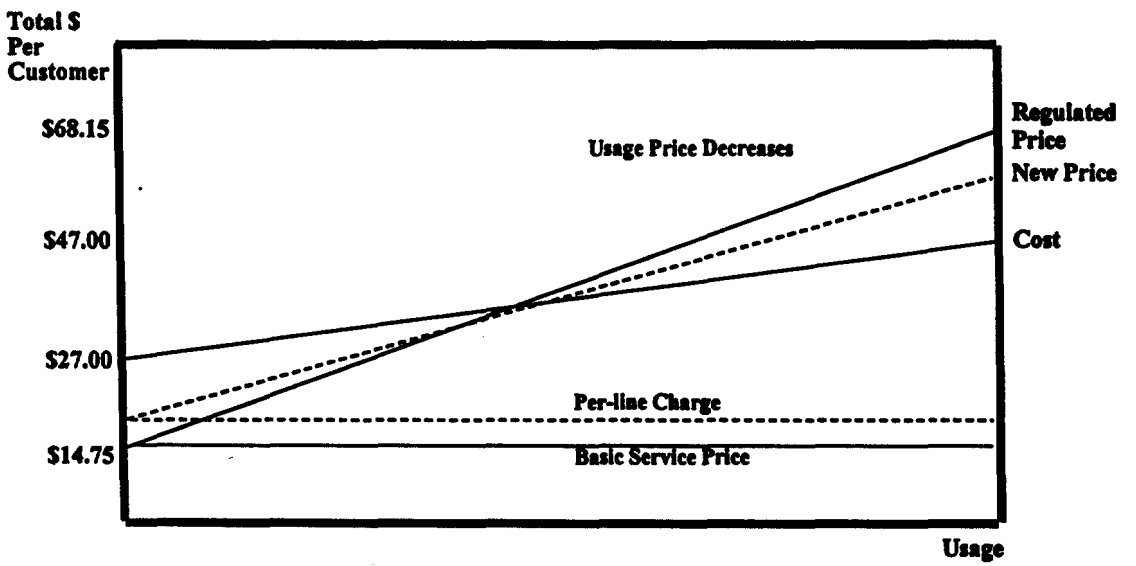
In order to allow the contribution to be sustainable (predictable in the words of the Act, competitively neutral in the words of the Joint Board), it must be applied equally to unbundled network elements. If the subsidy contribution is collected only from customers that choose to remain the retail customer of the ILEC, it amounts to a tax on the retail provision of service by the ILEC. Even though the tax is not applied directly to the retail service, it is applied to IXCs only if the retail services are purchased from the ILEC. The tax is a consequence of the decision of the customer to choose retail services of the ILEC. Failure to extend the universal service support mechanism to unbundled elements will result in the eventual loss of subsidy

and will artificially push customers from ILEC retail services to CLEC services. The FCC should not be so interested in encouraging competition so as to erode the universal service support in order to promote competition.

B. Per-Line Funding of Access

A second, attractive solution is to change the access mechanism to collect the NTS costs recovered by switched access prices by creating a per-line charge that the IXC pays the LEC for the privilege of having a customer connected to a particular facility -- a standing ready charge for long distance access. This solves the non-geographic portion of the subsidy problem. If that charge is geographically deaveraged, it can also solve the geographic subsidy problem. The per-line charge looks to the facilities provider much like an increase to basic service prices in that it is a monthly charge that is not dependent upon usage. This, corresponding with an equivalent decrease in usage charges, has the favorable effect of flattening (decreasing the slope) of the usage prices and raising the non-usage prices as shown in Figure 10.

Figure 10



Note, however, that the price line still does not converge with the cost line because there is not an equivalent solution for the intraLATA toll product. The corresponding solution for intraLATA toll (or any service provided directly by the LEC) would be to create a flat charge for access to the toll network and to decrease the usage price. That solution is not demonstrated in Figure 10.

Once again, however, it is important to note that this subsidy burden cannot be placed exclusively on or as a direct result of ILEC retail services. A tax on the retail provision of service in any form cannot be used as a source of universal service subsidy. It is not viable in a competitive environment; it serves only to fatten the coffers of CLECs; and, it does so at the expense of universal service support. If unbundled elements are based only on cost, and the

per-line mechanism includes subsidy burden that must be borne by customers purchasing any retail service, then that subsidy burden must be passed along to CLECs who purchase unbundled elements. Otherwise, the subsidy contribution will be eliminated by the competitive environment.

C. Universal Service Funding

The problem of subsidizing universal service in a competitive environment has been addressed and several solutions proposed. One solution is to create an alternative funding mechanism for universal service. This solution most directly transfers what is an implicit funding mechanism within each LEC to an industry mechanism that accomplishes the same thing. A universal service mechanism that calculates the correct amount of subsidy within a given geographic area and makes that subsidy available to any provider of universal service in that area externalizes the subsidy. LECs that formerly received subsidy through usage prices that are too high would reduce usage prices and instead receive compensation from a fund.

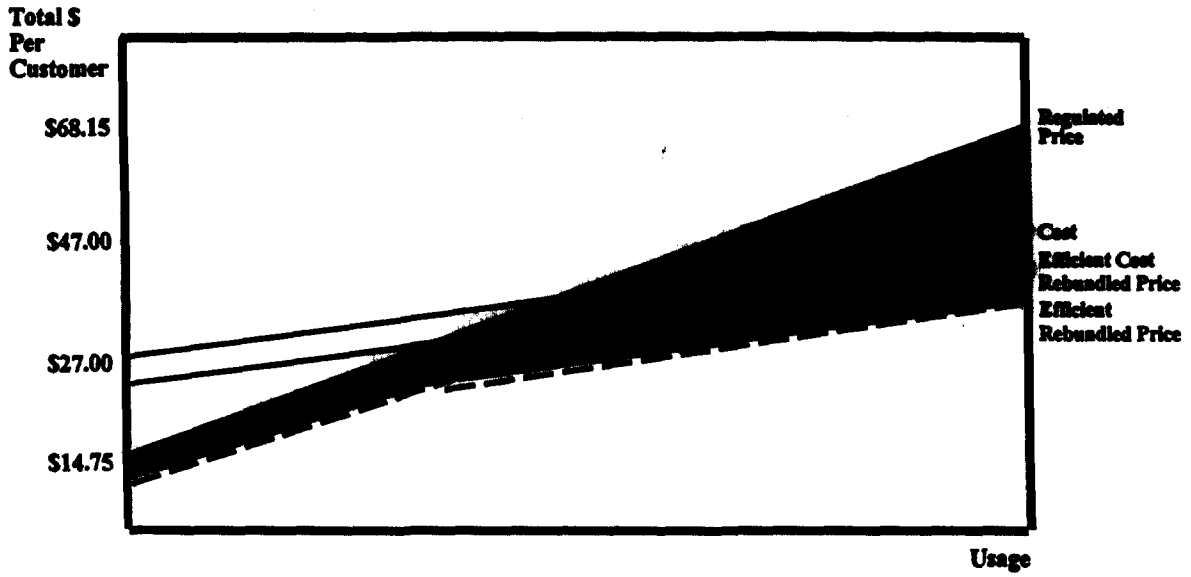
The reason this solution is so effective is that, assuming the funding is distributed on a per line per month basis, the funds are now received in a manner much closer to the way costs are incurred. The price decrease, assuming it applies to usage products, results in decreasing the slope of the price line. From the point of view of the provider, the subsidy fund acts much like an increase in basic service prices. Further, a universal service mechanism more effectively eliminates geographic subsidy because it distributes funds on a highly geographically deaveraged basis. Much effort has been expended understanding and estimating the geographic deaveraging of costs which should be used to precisely target the subsidy and align total compensation available to facilities based carriers with the cost of providing service to that geography. The results are costs and prices that are much more closely aligned. CLECs must now compete by demonstrating an increase in quality, a decrease in price or providing ancillary services that are more valuable than the overall package presented by the LEC -- precisely the kind of improvement that a competitive environment demands.

IV. The Efficiency Myth

This discussion should include an analysis of efficiency of ILECs. Efficiency is perhaps the largest red herring in telecommunications regulation. It is used as the excuse to understate costs of universal service, decrease access prices down to cost without worrying about an alternative method of covering costs, and it is used in this argument to avoid appropriate treatment of subsidy. All of the arguments posed above that demonstrate the extraordinary profit opportunity that subsidy contribution creates occur even if the most efficient costs are assumed. The profit opportunity is created by the occurrence of subsidy, not by the existence of inefficiency. If CLECs are allowed to take advantage of the subsidy using the competitive marketplace, the subsidy contribution will be removed with no assurance that any of the inefficiency is removed. In fact the following discussion will illustrate that ILECs cannot avoid or respond appropriately by eliminating the inefficiency. Let's extend our discussion to the situation where the ILEC is inefficient. Below the existing cost line, we add a new cost line in Figure 11 representing the amount of the LEC inefficiency in the geography represented by the

original illustration. Let's further assume that the unbundled element costs are based upon the efficient costs so the unbundled element costs are lower than in the above illustrations.

Figure 11



First, observe that the profit opportunity has indeed expanded for the CLEC by the amount of the assumed inefficiency (whether the inefficiency is real or imagined). Also observe that the picture is indeed bleaker for the ILEC. The subsidy contribution is still entirely present and still vulnerable to the competitive environment. Further notice that the elimination of subsidy burden is still the principal market motivation of the CLEC. As long as the inefficiency discount is flowed through to the CLEC based upon the cost curve, the most attractive customer to the CLEC is the one that also provides the largest subsidy contribution. No matter how large or how small the inefficiency is assumed to be, the CLEC has incentive to seek out the most significant profit opportunity. In so doing, yesterday's universal service support is today's CLEC profit opportunity. Universal service support is in jeopardy and the ILEC cannot cover even their efficient costs.

Notice too that even if the ILEC successfully trims costs to realize the efficient cost curve, the total efficient costs of the firm are not covered. The subsidized customer -- the customer to the left -- is still not covering his or her costs and, in the long run, there is no longer any subsidy contribution to cover those costs. The subsidy contribution is eliminated, without reducing the subsidy burden from even the most perfectly efficient firm. IXCs are arguing that because IXCs should not be burdened with inefficiency, ILEC prices should be set on the basis of forward-looking, efficient costs. By confusing the subsidy issue with inefficiency, they seek a result that allows them to reap subsidy contribution. Under the banner of inefficiency, they really avoid their contribution to the subsidies that form the underpinnings of the nation's universal service policy.

It is not really inefficiency they are after, it is subsidy contribution. Existing subsidies fatten their entrance into the local exchange marketplace. Inefficiency is the banner, but subsidy is the prize.

V. Motivation of CLECs in Influencing Regulatory Decisions

So much has been said about the motivation of ILECs to preserve their existing revenue streams, protect their markets and exclude competition, a word should be said about what this model teaches us about the motivation of the CLECs to influence regulators to do the wrong thing. Some observations: First, note that the greater the subsidy, the greater the extraordinary profit opportunity of the CLEC. This follows from the fact that the CLEC is entirely insulated from the negative aspects of subsidy -- the subsidy burden and the fact that the subsidy contribution is equivalent to the profit opportunity.

Second, their motivation for arguing for a very small subsidy fund supporting universal service must be examined. Imagine, for example, that there was an IXC who desired entrance into the local exchange market on a facilities basis. Would that IXC be arguing that the total compensation for local exchange facilities should be lower? Not likely. Competitors would have the opposite incentive. Imagine that Hatfield has actually discovered a way to serve the entire nation's local exchange service at 50% to 60% of the cost of existing providers. If MCI and AT&T actually believed that, wouldn't they be investing in local facilities as fast as the nation's contractors could deploy them? Wouldn't they also argue for adequate funding for high cost areas so that they could take full advantage of that funding? No. Only if they planned to serve those areas.

An example of the self-interested motivation to increase competitor prices includes the fact that MCI joined AT&T in the mid 1980s to influence the FCC to give AT&T the regulatory freedom to *increase* prices. Of course they did. History has now confirmed that higher AT&T prices mean greater MCI opportunity. Certainly where AT&T and MCI actually compete against ILECs they argue for higher prices, not lower prices. In a 1993 proceeding where Pacific Bell sought to lower intraLATA toll prices even without a corresponding increase in other services, AT&T and MCI intervened arguing that Pacific Bell should be forced to keep intraLATA toll prices high.