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FEDERAL COMMUNICATIONS COMMISSION
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Access Charge Reform	)	CC Docket No. 96-262
	)	
Price Cap Performance Review for Local Exchange Carriers	)	CC Docket No. 94-1
	)	
Transport Rate Structure and Pricing	)	CC Docket No. 91-213
	)	
Usage of the Public Switched Network by Information Service and Internet Access Providers	)	CC Docket No. 96-263

REPLY COMMENTS OF U S WEST, INC.

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SUMMARY

In this docket, the FCC seeks comment on the future regulatory structure to govern the provision of interstate enhanced services. This issue has become critical because entities which provide access to the international Internet are classified as enhanced service providers, and Internet usage is expanding exponentially. In the context of this proceeding (and U S WEST's comments), it is key that Internet Service Providers use local exchange switching facilities in the same manner as interstate carriers, but do not pay the same access rates as are paid by those carriers. In these reply comments, several points.

First, many commentors in the initial round of comments misperceive the nature of the so-called "ESP exemption." The ESP exemption is entirely a function of regulatory classification of ESPs as end users, based not on their actual service configurations and offerings but on the technology they employ. This dislocation creates problems because ESP usage of local exchange networks results in very heavy usage of LEC switches and trunks — which incur costs based on usage. Because ESPs and their customers pay flat-rate prices for this usage, important diseconomies are created. It is necessary to eliminate these diseconomies as part of overall access reform. U S WEST suggests that such elimination of the ESP exemption be accomplished on a transitional basis.

Second, a document called the Selwyn Study has appeared on the record in this proceeding, purporting to demonstrate that ESPs really do not make heavy use of local exchange switching facilities. This document is so riddled with error that it

ought to be ignored completely. In this regard, U S WEST submits additional documentation to the effect that Internet usage is significantly increasing holding times and switch usage in its local exchanges.

Third, U S WEST agrees with a contention put forth by AT&T in its comments to the effect that Internet access can legally be declared interstate in its entirety.

Fourth, U S WEST points out that the pricing of local exchange services to Internet Service Providers and other ESPs must be permitted to reflect economic reality. The current structure is contrary to what would happen in a competitive marketplace, and operates to retard investment and market creativity. In this same vein, the FCC should refrain from seeking to impose a technological solution on incumbent LECs. Not only would such an imposition carry with it serious legal risks, but it would risk mandating the wrong technological solution. Proper pricing of ESP access will permit all parties to utilize accurate market signals to guide technological development.

Finally, U S WEST comments briefly on the issue of whether Internet Service Providers or others involved in Internet services ought to be classified as common carriers. As a general matter, U S WEST opposes expansion of the universe of common carriers, subject to one caveat. That is, in order to obtain the benefits available to carriers under the 1996 Telecommunications Act, an entity must agree to assume the obligations of carriers under that Act (and other provisions of the Communications Act). Attempts by some commentors to obtain carrier benefits without assuming carrier obligations should be rejected.

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REPLY COMMENTS Of U S WEST, INC.

U S WEST, Inc. ("U S WEST") hereby submits its reply comments in the above-captioned Notice of Inquiry proceeding.[1]

I. THE "PROBLEM" POSED BY ENHANCED SERVICE PROVIDERS' ("ESP") USE OF LOCAL EXCHANGE-SWITCHING FACILITIES MUST BE PROPERLY DEFINED

Many of the comments filed in response to the Federal Communications Commission's ("Commission" or "FCC") Notice of Inquiry in this docket are

[1] In the Matter of Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Transport Rate Structure and Pricing, and Usage of the Public Switched Network by Information Service and Internet Access Providers, CC Docket Nos. 96-262, 94-1, 91-213 and 96-263, Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, 5 Comm. Reg. (P&F) 604 (1996). U S WEST herein replies to Mar. 24, 1997 comments to the Notice of Inquiry portion in this proceeding.

symptomatic of the reason the FCC has had so much difficulty dealing with the so-called ESP exemption from switched access charges over the years — the "problem" facing the FCC is stated in so many disparate ways that the FCC must often feel itself at a loss to determine just what it is being called on to solve. Thus, comments on one side often make it seem that ESPs are bordering on larceny when they use local exchange carrier ("LEC") networks without paying interstate carriers' carrier access charges, while comments from ESPs often seem to contemplate a right to flat-rate exchange access which is almost theological in nature. While the problem which arises when ESPs are billed on a flat-rate basis for usage of local exchange networks is complex indeed, misdefining the nature of the problem makes resolution well nigh impossible.

The ESP exemption problem is caused by a confluence of technological, market, economic and regulatory forces which are themselves readily identifiable. From a technological perspective, the problem is caused by the fact that data networks are not time sensitive — packet switches utilize resources only when data is being sent or received. On the other hand, circuit switched networks are time sensitive — circuits, once established, consume switching and trunking resources whether data is being sent or not. From a market perspective, most local exchange calls are flat rated, which means that the price of a circuit-switched connection to a packet-switched network is not based on the time of connection.

From an economic perspective, the flat rating of this circuit connection has two results: 1) consumers using the local exchange network for this connection are motivated to keep the local exchange connections up for protracted periods; and

2) ESPs and LECs alike are disincented from developing more efficient serving vehicles to meet their mutual needs. The problem is ultimately a regulatory one because regulatory agencies have created the structure in which this fundamental disconnect can flourish.

In a competitive, non-regulated marketplace, the market would react fairly quickly along the following lines to the technological disconnect which defines the ESP exemption. Once users who connected data networks to circuit networks discovered that very long holding times on the circuit network were essentially cost free (that is, no more expensive than short holding times), the holding times of these users would begin to increase (precisely what has happened). When the circuit network providers noticed these increased holding times and identified that they were attributable to a particular class of users, those providers would be motivated to seek a manner of provisioning to this class of users which either captured a reasonable proportion of the usage-sensitive costs being incurred on account of the data network usage or provided the economic incentive for data network users to utilize alternative circuit network solutions more compatible with the usage characteristics of a data network.

Obviously, the competitive market would not motivate circuit network providers to seek to drive data network users to leave the networks of the circuit providers — unless the usage characteristics of the two types of networks were so completely incompatible that it did not make sense commercially for the two groups to do business with each other. Likewise, the competitive marketplace would not motivate circuit network providers to seek to raise the prices of data network users

above market levels to subsidize below-cost rates of other customers. By the same token, it would be utterly unrealistic to expect circuit network providers to simply watch their pricing become distorted by the fact that the technology of a particular class of customers had made their own pricing structure outmoded (at least as to that class of customer). Market forces would ultimately demand that some form of usage-sensitive recovery be devised for data network interconnection to circuit networks — at least to the extent that data network subscribers had significantly greater holding times than those of other users.

This fairly simple market scenario turns into a serious problem with the intervention of regulation. The FCC has ruled that ESPs are to be treated as end users, which means that they pay no usage-sensitive rates for interstate access (i.e., the subscriber line charge, and, when applicable, special access charges and special access surcharges are all priced at non-usage-sensitive rates). Usage-sensitive rates are available at the interstate level for the type of service utilized by ESPs, but are not assessed on ESPs because of the ESP exemption. The situation is especially compounding because of the myriad growth of the Internet and the fact that Internet Service Providers are classified as ESPs. This scenario normally would result in development of rates which are usage sensitive at the state and local level, but U S WEST is not authorized to charge mandatory measured rates in any of its 14 state jurisdictions. Thus, despite the fact that proper market and economic analysis would naturally lead U S WEST and other incumbent LECs to price local exchange access for ESPs in a manner which properly reflected the fact that holding times for ESPs' customers (and ESPs) are considerably longer than for other

customers, governmental *force majeur* has prevented this normal and salutary operation of market forces.

In this context, it is possible to evaluate what U S WEST considers to be several of the chief obstacles to reasoned analysis of what is clearly one of the key issues facing telecommunications regulation in the near future.

- ESPs often claim that the ESP exemption is warranted because ESPs do not purchase, use, or need the same services purchased by interexchange carriers ("IXC").[2] A number of commentors contend that ESPs should not pay interstate switched access prices because their use of the local exchange network is different than the use of the same network by interexchange carriers.[3] Whether factually true or not (U S WEST sees little difference between the line-side services purchased by many ESPs and interstate Feature Group A)[4], this argument is simply irrelevant. The ESP exemption is a distinction based on what subsidies interstate carriers, but not ESPs, must support. These subsidies have nothing to do with what services or functions ESPs purchase. As has been pointed out forcefully in this proceeding and elsewhere,[5] much of the price which interstate carriers

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[2] See, e.g., Teleport at 3; Juno Online at 10; WorldCom at 13.

[3] See, e.g., Juno Online at 10; WorldCom at 12-13; TCG at 2-3.

[4] In fact, as demonstrated in U S WEST's initial comments, ESP usage closely resembles carrier usage. U S WEST at 4-8.

[5] See U S WEST at 10-12.

pay for access today is subsidy driven, not cost driven. For example, the carrier common line charge, which ESPs avoid paying today, has nothing to do with service differentiations between ESPs and interexchange carriers, but is a regulatory device to artificially lower residential rates. By arguing that they are entitled to pay less for access than do IXCs because the service they purchase is different (even if such really is the case), ESPs miss the mark because the price differential caused by the ESP exemption has nothing to do with service. The real problem is the subsidies inherent in access, which must be replaced with rebalanced rates and universal service support.

- A number of ESPs seem to assume that LECs argue that the elimination of the ESP exemption should result in dramatic increases in LEC revenues, and nothing more.[6] Such is not U S WEST's position. U S WEST has long viewed elimination of the ESP exemption as part of overall access reform, not as a profit generator for LECs. For that reason, U S WEST has recommended that the ESP exemption be eliminated as part of access restructure so that ESPs pay rates reflective of costs and market conditions, not subsidy-based rates.
- A number of ESPs contend that LECs have been remiss in not constructing facilities and services which would serve the needs of data

[6] USIPA at 14-15; IIA at 3; CAIS at 9; PaISP at 13.

transmission better than do existing circuit-switched networks.[7] To at least some extent these commentors are correct — in a properly functioning marketplace, both LECs and ESPs would have the economic incentives which would drive them toward additional technological innovation. But this is precisely our point. The ESP exemption robs both ESPs and LECs alike of the necessary economic incentives to innovate and improve service and technology because it creates a false set of economic signals.

- The real problem with the ESP exemption is simple — services which cause costs to be incurred on a usage-sensitive basis are being priced (per governmental fiat) at rates which are not sensitive to usage. This type of government-imposed pricing structure is a ticket to disaster and failure in a competitive market and must be changed.

II. THE SELWYN STUDY IS FATALLY FLAWED

The Internet Access Coalition attached to its comments a document prepared by Lee Selwyn and Joseph Laszlo called "The Effect of Internet Use on the Nation's Telephone Network."[8] The Selwyn Study basically concludes that the ESP exemption is not creating any problems for LECs because ESPs use LEC networks

[7] See, e.g., PaISP at 11-14; IUS at 12-13; CAIS at 10-11; WorldCom at 21-22.

[8] The Effect Of Internet Use On The Nation's Telephone Network, by Lee L. Selwyn and Joseph W. Laszlo, Economics and Technology, Inc., prepared for the Internet Access Coalition, Jan. 22, 1997 ("Selwyn Study").

just like any other end users. The Selwyn Study specifically rejects the notion that ESP usage is putting disproportionate strains on LEC networks.[9]

While not without its good points, the Selwyn Study is fatally flawed, and its main premises cannot be relied on for any purpose. This is because those premises are either palpably wrong or based entirely on "secret" information known only to Selwyn, or both. Some examples are illustrative and dispositive.

- Selwyn contends that, contrary to the detailed studies conducted by LECs (and the logic of simple economics discussed above), ESP customers do not use LEC networks in a manner which creates holding times any longer than those of the average user. Selwyn asserts that "the majority of ESP users fall into the range of 0 to 10 hours per month."[10] Selwyn elaborates: ". . .a reasonable assumption is that, on average, each of the roughly 10 million on-line service users (as of the end of 1995) accounted for 15 hours per month of local calling to an ISP/ESP."[11] This is a critical assumption, because all other research indicates that many customers of ESPs keep the local connection between their premises and the ESP open for 15 hours per day, not per month.[12] Unfortunately, there is no way to test Selwyn's assumptions, as they are based entirely on "proprietary 1996 usage data for several

[9] Id. at 3, 19-21, 51-53.

[10] Id. at 26.

[11] Id. at 29.

ESPs made available to the authors of this study, which indicate an average usage of between ten and fifteen hours per month per ESP subscriber."[13]

- Another important assertion made in the Selwyn Study is that ESPs generate massive sums of money for LECs by increasing demand for second lines.[14] Second lines are also priced on a flat-rate basis -- and, in the case of residential lines, are priced below cost. The increase in the use of second lines to support the computer connections, if true (and the notion that six million such lines are dedicated to computer use is extemely suspect) would indicate that problems cuased by the ESP exemption were getting worse, not better.
- Various commentors have pointed out that serious Internet congestion has already occurred, and that this congestion can be attributed directly to the market incentives which flat-rate pricing can give consumers.[15] The Selwyn Study essentially dismisses the congestion problems Internet usage can cause for circuit switching providers by claiming that "congestion in the Internet or in a particular ISP's network pose no cause for concern by the BOCs, since these problems

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[12] See U S WEST Mar. 24, 1997 Comments at 17-20 and Exhibit A.

[13] Selwyn Study at 29, n.57. See also id. at 26, which claims that Selwyn's conclusions are based on "an analysis of proprietary 1996 ESP usage data. . ."

[14] Id. at vii, 25-29.

[15] See, e.g., SWB at 10; BellSouth at 3; SNET at 6-8; Pactel at 27-29.

do not significantly affect users of the PSTN."[16] This allegation is wrong as a matter of network engineering as well as a matter of Internet Service Provider marketing.

- First, in response to Internet congestion, Internet Service Providers have introduced a software device which guaranties that circuit-switched-network congestion will be maximized. America Online ("AOL"), for example, has introduced software which will continuously tie up a local exchange network facility until one of AOL's lines becomes free. Attached hereto as Exhibit A is an AOL Internet message which proudly proclaims:

> Our phone company has created a software program that can connect you to America Online with ease — and we're giving it away for free. If you're tired of listening to busy signals, this program can help.
>
> Simply run our program before you try to connect to AOL, and the software will persistently attempt to log on to AOL until it succeeds.
>
> This is one tough piece of software. It will not let up until it gets you connected. The moment a free line becomes available, the program will sign you in.

This activity will impact significantly local exchange network usage and congestion.

Second, as an engineering matter, congestion encountered in the

[16] Selwyn Study at vi.

Internet Service Provider infrastructure backs up across the circuit network in the form of circuit and control processor congestion whether the Internet Service Provider itself rings busy or not. Even in an SS7 environment, calls which are answered with a busy signal consume network resources — and calls which are continuously redialing a busy number consume significant network resources.

Third, the Selwyn Study's contention that local network congestion does not really occur because end users accessing the Internet are scattered throughout a local exchange[17] is likewise off the mark because this traffic is ultimately concentrated in the ESPs' serving wire center.

- Selwyn assumes that an entire local telephone exchange is engineered around a homogenous busy hour, and that, as ESP calls are made at times other than the engineered busy hour, increased traffic and holding times are actually good for network efficiency.[18] Thus, claims Selwyn, LECs ought not to be able to charge usage-sensitive prices to ESPs for network connections. Selwyn's assumption about how a network is engineered is completely wrong. Each switch is engineered based on its own busy hour assumptions — the entire network is not, as Selwyn seems to assume, based on the largest busy hour of any single switch. Even when off-peak, ESP traffic is often redirected,

[17] Id. at 5-9.

[18] Id. at 11, 40.

sometimes overnight, to different switches which have not been engineered to accommodate the ESP's increased call volume and long hold times.

- The local exchange busy hour deserves some additional consideration. Time slot (or its equivalent, depending on the switch manufacturer) capacity in a local switch has been engineered based on peak or busy-hour volumes for the voice network. Each local switch has been engineered for a unique busy hour based on its location and the types of subscribers served. The rapid proliferation in Internet/data traffic has altered these busy hour characteristics and the times when they occur. Peak-usage periods now cover a percentage of the day rather than any given hour. Existing time slot capacities engineered for normal voice network busy hours have become inadequate in many areas. During the new busy hour (or, more accurately, the busy five or six hours), a major portion of the time slots in the local switch are being used to complete Internet calls of long duration, leaving fewer time slots available for normal voice calling. The remaining time slots must now be competed for by the remaining customers needing to make a call. These customers now face an increased chance of blockage and a busy signal. If they, like AOL's customers, have software which continuously engages the local switch until a connection is made, the network congestion problem becomes self compounding.

- To verify these conclusions, U S WEST conducted a peg count usage-and-line-busy study of five existing Internet Service Providers. This study documented the following:

  - Internet Service Providers make heavy usage of local exchange networks during what are perceived to be "normal" busy hours.
  - Internet Service Providers generate considerably more traffic than they are able to terminate (one originate-to-terminate ratio exceeded 3000 percent).
  - Redials caused by Internet Service Providers' inability to terminate generated traffics ties up common equipment with non-productive calls.
  - Considerable switch rebalancing has been necessary to accommodate Internet Service Providers because of long holding times.
  - Call volumes (associated with Internet usage) have increased dramatically.

  A copy of this study is attached as Exhibit B.

- The Selwyn Study argues that LECs have misconstrued the scope of the ESP exemption by failing to recognize that the LECs are paid for calls to ESPs by end users originating such calls.[19] The same analysis, of course, would apply to calls from end users to an interexchange

[19] Id. at 21.

carrier point of presence. But Selwyn is correct in observing that a LEC can be fully compensated for use of its network by properly charging either the originating or the terminating customer. In a competitive market it is not clear just who would pay the usage-sensitive price for the connection between an end-user customer and an ESP. But, in U S WEST's case at least, no one is paying the proper usage-sensitive price for this connection. As carriers today pay this usage-sensitive rate, it seems logical that ESPs pay it as well. However, it clearly is not appropriate to deny LECs any right to recover these usage-sensitive costs on the basis that someone else might possibly pay such a charge, when that second entity does not now pay this amount.

- In the end, the Selwyn Study is reduced to leading a hunt for red herrings. The Selwyn Study is determined to prove that ESPs should not pay interstate switched access charges. As such, it bends and twists the facts in an effort to buttress its predetermined conclusion. But the Selwyn Study's conclusion, when reduced to essentials, is really no more than that — in a market which was really competitive, no one would pay the subsidy-driven rates which currently represent the interstate access charge structure. On this matter we can all agree, but only after access charges have been rationalized — either by market forces or by regulatory directive.

III. AT&T APPEARS TO BE CORRECT IN ITS JURISDICTIONAL ANALYSIS

In our initial comments, U S WEST observed that a typical Internet access call would be a mixture of interstate and intrastate communications — to a large extent because the call would be entirely intrastate except for brief time periods when data were actually being transmitted.[20] AT&T, on the other hand, contends that an Internet connection can properly be classified as interstate in its entirety because the connection between the end user and the Internet Service Provider, whether actually functioning as part of an interstate connection at any given time, is nevertheless established for purposes which have a sufficient interstate nexus to permit the entirety of the call to be classified as interstate.[21] On reflection, AT&T seems to support a reasonable position on the extent of FCC jurisdiction. When a local exchange circuit/transmission is utilized for purposes which are mixed interstate and intrastate, and the relative proportions cannot be determined, the FCC may assert interstate jurisdiction over the entire transmission.[22] In other words, because a connection between an end user and an Internet Service Provider is both interstate in nature (in part) and generally established for the purpose of interstate communications, the fact that all of the connect time is not actually devoted to interstate transmission is irrelevant.

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[20] U S WEST at 22-26.

[21] AT&T at 28-32.

[22] Georgia Public Service Comm'n v. FCC, 5 F.3d 1499 (11th Cir. 1993).

IV. PRICING OF ESP LOCAL EXCHANGE ACCESS OUGHT TO REFLECT ECONOMIC REALITY

With the exception of a handful of ESPs,[23] commentors seem in pretty wide agreement on the conclusion that the current rules regarding the pricing of local exchange access services to ESPs cannot stand. This is a matter of particular interest to existing IXCs, many of whose services compete directly with those provided by ESPs (something which will be more and more important as voice on the Internet becomes a reality).[24] There really does not seem to be a good and sustainable reason to treat two competitors differently in the access charge arena based entirely on the technology they employ — especially when the use of local exchange switching facilities made by each seems to be highly comparable, if not identical.

The problem, as IXCs such as AT&T and MCI recognize,[25] is that current access prices do not reflect economic costing principles. Thus, simply having ESPs pay existing switched access prices would not necessarily be beneficial because those prices represent the results of a series of regulatory decisions which currently price interstate switched access services well in excess of economic costs in order to

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[23] See, e.g., Juno Online at 5; CAIS at 3; Assc. Of Online Professionals at 8.

[24] See, e.g., GCI at 2-3; AT&T at 2-4; MCI at 4-5; ACTA at 2-3, 8-9; TRA at 1-2, 5-6, 14-18.

[25] AT&T at ii, 6-8, 23-25; MCI at 4, 22. Much of MCI's comments present thoughtful ideas. To get to these ideas, however, one must wade through a welter of anti-LEC vituperation, which is unfortunate.

subsidize other services.[26] While increasing the number of subsidy payers would have the effect of spreading out the subsidy payments among customers, it does not seem necessarily prudent to dump ESPs into this subsidy structure at this time (so long as we do not get another 14-year transition period such as happened with the supposedly transitional ESP exemption in the first place).

U S WEST's proposal for dealing with the ESP exemption is to have the FCC either assume ownership of the entire problem or leave it to state regulators to fix. Once ESPs are no longer automatically exempt from carriers' carrier charge payments solely on account of their ESP status, the market can at least try to work out some reasonable accommodation between LECs and ESPs until such time as access reform has been completed.

AT&T has a somewhat different suggestion for a transition mechanism, which seems like it has some merit. AT&T suggests that during the transition to cost-based switched access prices, ESPs (or at least Internet Service Providers) be required to pay a TELRIC-based price for local switching, but none of the subsidies which will otherwise be distributed throughout the access structure pending full reform.[27] As a transitional mechanism, something akin to AT&T's suggestion might work. We assume that the FCC will establish an access reform plan which, at least initially, permits charging of a traffic-sensitive element in the neighborhood of $.012 per minute of use for interstate switched access. It would make sense for

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[26] AT&T at 25; MCI at 4. MCI implies that these subsidies go into the coffers of LECs, rather than to support other policy objectives. MCI at 3. MCI is wrong here.

[27] AT&T at 25.

Internet Service Providers to pay this amount — and this amount only — for interstate switched access during a transition to full and necessary access reform.

V. TECHNOLOGICAL SOLUTIONS TO OPTIMAL ESP ACCESS MUST COME FROM THE MARKET, NOT THE REGULATOR

A number of commentors have suggested ways in which the existing LEC networks can be reconfigured to better accommodate the needs of data network suppliers. Chief among these suggestions is deployment of Digital Subscriber Loop (xDSL) technology to increase dramatically the capacity of subscriber loops and permit development of a more friendly relationship between data providers and LECs.[28] U S WEST completely agrees that modern technology has much to offer in this area, and is actively pursuing a number of options to deploy technology along the lines suggested by some commentors. However, as a regulatory matter, there are several key realities which these commentors (who often seem to take the position that only LEC sloth stands between them and a bright technological future) tend to minimize.

- In the first place, the existing ESP exemption stands as a serious barrier to implementation and development of technological solutions to the problems posed by the interconnection of packet networks and circuit networks. While the extra burdens packet networks place on

[28] See, e.g., MCI at 11; AT&T at 19-20; Motorola at 5-9; CBT at 6.

circuit network suppliers normally would tend to work themselves out in the market, the ESP exemption discourages operation of market forces. Hence, it is misleading to blame LECs for failing to construct facilities under regulatory circumstances which could make such construction uneconomical, which is what the ESP exemption really does.

- Second, the consequences of the FCC's unbundling, pricing, and resale rules on new LEC investment cannot be underestimated. Under the FCC's rules in this area, any new investment is subject to unbundling at the whimsy of an interconnecting carrier with absolutely no showing of economic necessity.[29] Frankly, under these circumstances, extensive new investment by LECs may itself prove a chancy proposition because of the FCC's rules demanding that no new investment can result in a competitive advantage to a LEC.
- In a competitive marketplace, governmental construction obligations imposed on one market player have immense legal and constitutional

[29] See the Commission's unbundling rules in In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, First Report and Order, 11 FCC Rcd. 15499 (1996), on appeal, sub nom. 96-3321 (8th Cir.). Use of the word "whimsy" is not overstating the case. AT&T, for example, has contended in various state arbitration proceedings that it has the right to demand complete revamping of LEC networks, at a fraction of the cost of such revamping. See, e.g., AT&T's Reply to Exceptions of U S WEST and MCI, In the Matter of the Interconnection Contract Negotiations between AT&T Communications of the Midwest, Inc. and U S WEST Communications, Inc. Pursuant to 47 U.S.C. Section 252, Docket Nos. ARB-96-1, ARB-96-2 (Iowa Department of Commerce Utilities Board), filed Nov. 4, 1996 at 10-12.

consequences. While the instant proceeding clearly is not the proper place to resolve these issues, it is important always to keep in mind that when the sovereign uses legal compulsion to force a company to construct facilities for another company's benefit, a concomitant obligation to ensure payment for such construction also arises. Here the technological difficulties which have been identified appear to arise primarily from governmentally mandated pricing structures which themselves skew the marketplace. This seems to be a particularly inappropriate problem for the government to seek to remedy through a different type of compulsion. Hence, we submit that it would not be a reasonable solution for the FCC or other regulatory agency to seek to compel LECs to construct networks along the lines suggested by various commentors — even though these same technologies may ultimately be deployed in response to correct market signals.

- Finally, it should be remembered that many of the technological solutions now under consideration are themselves enhanced services, or contain enhanced functionalities or elements. xDSL technology, for example, can generally be offered as an enhanced service over common carrier lines. If the FCC attempted to impose a particular technology on the marketplace, its selected technology would undoubtedly look toward a common carrier solution to existing anomalies between circuit and packet switching, the source of the ESP exemption. In so doing, the FCC would necessarily be disfavoring deployment of

deregulated technologies and services which could serve far better the interests of the various providers and the public – possibly even discouraging deployment of xDSL technology itself.

- The issue of LEC investment is the focus the PaISP. PaISP contends that network problems cited by LECs are the result of decreased network investment, not the result of ESP usage.[30] Pennsylvania relies on some very suspect statistics to support its claim, ultimately concluding that from December 1990 until December 1994, LECs had collected more than $80 billion in depreciation and amortization expense from their customers but had only "increased their investment in plant by approximately $35 billion."[31]

In fact, because of additions, retirements and other items, the change in total gross plant cannot be equated with investments made by carriers. In U S WEST's case, for the period 1992 through 1996, total investment exceeded MR depreciation expense by almost $2.2 billion.

Year	Capital Expenditures	MR Depreciation Expense	Excess Capital Over Depreciation
1996	$2.806 billion	$2.501 billion	$305 million
1995	$2.739 billion	$2.300 billion	$439 million
1994	$2.477 billion	$2.151 billion	$326 million
1993	$2.226 billion	$1.826 billion	$400 million
1992	$2.385 billion	$1.681 billion	$704 million

[30] PaISP at 11-14.

[31] Id. at 12.