

Although the CALLS proposal is a comprehensive solution to a large number of intractable problems that have been plaguing the Commission and industry for years, it does not purport to resolve every single issue that has arisen or will arise in the telecommunications area. GTE urges the Commission to focus on the proposal and the solutions it offers and to move forward to adopt the proposal without considering these other issues right now. These issues can be considered, if warranted, in an orderly fashion in other proceedings.

A. Payphone Issues Are Pending in Other Proceedings and Should Be Resolved There.

Payphone operators and operator service providers urge the Commission to address a number of issues related to the application of SLCs to private payphones and to presubscribed carriers at payphones. American Public Communications Council, for instance, argues for the first time in this proceeding that the SLC should not be applied to payphones at all.¹⁰⁸ One payphone provider argues that the PICC is discriminatorily applied to independent payphone providers.¹⁰⁹ Finally, One Call repeats its arguments made in an earlier comment round that payphones should pay the single-line business SLC, not the multi-line business SLC.¹¹⁰

Regardless of the merits of these arguments, the Commission has been addressing payphone-related issues in a variety of rulemaking and complaint

¹⁰⁸ Comments of the American Public Communications Council, at 5-7.

¹⁰⁹ See Comments of One Call Communications, Inc./Opticom, at 6.

¹¹⁰ *Id.* at 11-13.

proceedings.¹¹¹ These parties have not demonstrated that there is a critical need to address these issues here, or that a resolution of the issues would somehow affect or undermine the way in which the main provisions of CALLS proposal are implemented. Therefore, the Commission should refuse to address these issues here.

B. The Level of CLEC Access Charges Is Beyond the Scope of This Proceeding.

Allegiance, for the first time in this proceeding, asks the Commission to address the level of CLEC access charges.¹¹² It seeks such a resolution in order to force AT&T and Sprint to pay their access bills from certain CLECs.¹¹³ The FCC should refuse to decide this issue here because it is already under consideration in another rulemaking.¹¹⁴ More importantly, the CALLS proceeding is intended to focus on how to reform interstate access for price cap carriers. CLEC access services are treated as nondominant and, therefore, are not actively regulated by the Commission at this

¹¹¹ See, e.g., *CF Communications Corp., et al. v. Century Telephone of Wisconsin, Inc., et al.*, File No. E-89-170 et al., (Apr. 13, 2000); *Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996*, 11 FCC Rcd 20541 (1996). For the record, GTE's refusal to answer these arguments here should not be interpreted to mean that it agrees with these parties comments.

¹¹² See Allegiance Comments at 4 (submitting a "public offer" that CLEC access rates be capped at NECA levels).

¹¹³ See Allegiance Comments at 2 & n.2. RICA also expresses concern about this issue, but does not offer a specific solution. See RICA Comments at 3-5.

¹¹⁴ See *Pricing Flexibility Order* at 14338-49.

time.¹¹⁵ As such, CLEC access issues are irrelevant to the CALLS solution and should not be addressed here.

C. The FCC Should Not Consider Arguments About Changing the Exogenous Cost Rules.

Ad Hoc suggests that the Commission modify the current rule that dictates how exogenous costs are to be treated within the price cap formula. It argues that ILECs should not be permitted to seek price cap adjustments based on exogenous costs for legal or regulatory changes that the ILECs themselves have supported.¹¹⁶

The FCC should refuse to consider this rule change. Exogenous cost treatment is governed by Section 61.45(d) of the Commission's Rules. The Commission has described exogenous cost treatment as one that deals only using "extraordinary" costs, which is an exception to the general rule that price caps are not adjusted for changes in ILEC costs.¹¹⁷ For this reason, the Commission considers each request on a case-by-case basis. Although Ad Hoc's argument may have a certain emotional appeal for parties that disagree with ILEC policy positions, there is absolutely no reasoned basis for a blanket rule that exogenous cost treatment is not justified simply because the legal change was supported by an ILEC. GTE submits that any such argument can be made at the time exogenous cost treatment is sought and, if the particular change is not justifiable under the current rules, the Commission should reject it on its own merits at

¹¹⁵ See, e.g., *Access Reform Order* at 16140-41.

¹¹⁶ Ad Hoc Comments at 7.

¹¹⁷ *Price Cap Performance Review for Local Exchange Carriers*, 12 FCC Rcd 16642, 16711-12 (1997); *LEC Price Cap Order* at 6810.

that time. There is no justification, however, for adopting a blanket rule to prohibit exogenous cost treatment in this circumstance and it should be rejected.

D. It Would Be Counterproductive to Freeze All Proposed and Future Changes to the Pricing Flexibility, Depreciation, Accounting, and Affiliated Transaction Rules.

MCI WorldCom argues that the Commission should suspend its pricing flexibility rules to prevent anticompetitive effects from the Commission's decision temporarily not to allow the use of unbundled loop and transport combinations as a substitute for special access.¹¹⁸ It also urges the Commission to refuse to make any further depreciation, accounting and affiliated transactions rule changes during the CALLS implementation period.¹¹⁹

The FCC should reject these requests. Even though the CALLS plan is comprehensive, there are strong public policy arguments that require the Commission's pricing flexibility rules to remain in place.¹²⁰ In fact, the CALLS plan does not even address these flexibility rules. The market is changing rapidly and competition is growing. Although hobbling one set of competitors will help an individual competitor like MCI WorldCom, it would produce disastrous results for customers who will be denied the benefits of full and vigorous competition. Furthermore, there are continuing needs for accounting and depreciation reform even after CALLS is adopted.¹²¹ The

¹¹⁸ Comments of MCI WorldCom, Inc., at 17-21.

¹¹⁹ *Id.* at 26.

¹²⁰ *See, e.g., Pricing Flexibility Order* at 14232-33, 14257.

¹²¹ The FCC recently adopted an order on depreciation, on which they have recently sought further comment. *See 1998 Biennial Regulatory Review, Review of*

(Continued...)

Commission should not hesitate to make real strides in accounting reform that will help to create a competitive market structure. With such efforts the Commission can ensure that, at the end of the CALLS transition, there will be no further need for intrusive regulation.

VII. CONCLUSION.

It cannot be stressed enough that the CALLS proposal represents the Commission's best road map out of the regulatory thicket of three of the largest issues facing it today: universal service, subscriber line charges and access rates. The Commission has been working tirelessly for years to achieve resolution to these issues, yet each time it took a step the Commission only found itself stuck in a morass of legal, procedural, and policy issues. Today, those parties that have long been at loggerheads have worked together to draw up a plan that will help move the industry out of the thicket and onto the clear road leading to the open fields of competition.

Those parties throwing rocks at this effort have missed the target. The procedure used is right and reasonable; attempts to derail the process by introducing side issues must be rebuffed. The public interest benefits to the CALLS plan are real, the plan will help consumers, and the holistic approach will bring competition to all sectors of the country. GTE strongly urges the Commission to take the right first step and adopt the CALLS plan as proposed.

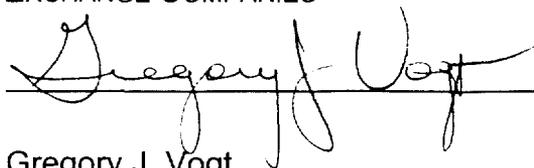
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Depreciation Requirements for Incumbent Local Exchange Carriers, FCC 99-397 (Dec. 30, 1999); see also Comprehensive Review of the Accounting Requirements and ARMIS Reporting Requirements for Incumbent Local Exchange Carriers: Phase 1, FCC 00-78 (Mar. 8, 2000).

Respectfully submitted,

GTE SERVICE CORPORATION AND ITS AFFILIATED
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By:

A handwritten signature in black ink, appearing to read "Gregory J. Vogt", written over a horizontal line.

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**Comments on the Proposal by the Coalition for
Affordable Local and Long Distance Service**

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I. OVERVIEW AND PURPOSE

The Coalition for Affordable Local and Long Distance Service (CALLS) plan describes a process for access charge reform that will establish explicit subsidies to replace a portion of implicit subsidies included in current access prices. The purpose of my comments is to: 1) place this plan within the framework of economic principles; and 2) explain why it is a positive step toward a regulatory environment that promotes the development of efficient competition in telecommunications and furthers the development of a quality infrastructure that benefits all consumers.

Subsidies are necessary for maintaining support for universal service, but, in the emerging competitive environment, the current method of collecting this money through implicit subsidies is unsustainable and inefficient. In a regulated monopoly environment, implicit subsidies in the form of prices held well above costs for selected services were sustainable and provided funds for investments that resulted in the most extensive telephone network in the world. In a competitive environment, entrants can price under the incumbents' pricing umbrellas and siphon off the "tax" revenue that was previously used by incumbents to fund universal service. The loss of the tax revenues is removing funds necessary to continue the high level of investment in the infrastructure, especially in rural areas.

In Section II, I provide a brief discussion of the legacy of implicit subsidies in telecommunications. This provides a framework for discussing the changes in the current pricing structure that are required to develop efficient competition. In Section III, I describe economic goals that guide the transition from implicit to explicit subsidies. In Section IV, I discuss changes in the nature of communications demand and supply that have increased the value and affordability of access to telecommunications networks. In Section V, I summarize the components of the CALLS plan and view this plan in light of the economic goals described in Section III and the overall affordability of access to telecommunications networks discussed in Section IV. In Section VI, I offer concluding remarks.

II. THE LEGACY OF IMPLICIT SUBSIDIES

Implicit subsidies in telecommunications prices are the legacy of decades of regulation, the split up of the Bell System in the mid-eighties, and the inherent characteristics of telecommunications demand. Funding the long-standing goal of universal service provided the motivation for regulators to create many of the implicit subsidies that persist in telecommunications today. In a regulated monopoly environment, implicit subsidies were sustainable, and any inefficiencies from non-cost-based pricing were deemed worth the price. After divestiture in 1984, cracks in the sustainability of subsidies began to show with the emergence of bypass alternatives. One subsidy created at divestiture is above cost access prices that local phone companies charged interLATA service providers to connect to the local

networks. Not long after divestiture, competitive access providers (CAPs) surfaced. These companies aggregate interLATA traffic for large business carriers and deliver it to the long distance companies at a price closer to cost, thereby reducing funds that were designed to subsidize universal service. The concentration of demand in low cost, high revenue areas helps make this a successful strategy. The combination of implicit subsidies collected from access and other services and the high concentration of telecommunications demand are also directing the entry strategies of today's competitive local exchange carriers (CLECs). With numerous entrants actively pursuing profit opportunities, the incumbent local telecommunications companies are no longer able to collect charges that operate like "taxes" (revenues far in excess of costs) required to subsidize residential service and investments in rural areas.

A. Local Telephone Pricing and Rate Regulation Prior to Divestiture

By the 1920s in much of the nation, a variety of political and economic forces led to the consolidation of competing local telephone networks into monopolies. As consolidation occurred, regulation increased. By 1921, regulators in 44 states, typically public utilities commissions, were granted authority to regulate local telephone companies. Rate of return was the predominant form of regulation over prices in telecommunications.¹ Overall, rates of return were based on cost considerations, including the cost of capital. For specific services, however, prices were often set with an eye toward public policy goals. To derive funds to support affordable, below cost, residential service in rural areas, prices for urban and business customers were held above cost. This is often called value of service pricing. Another source of funds to support universal service is the jurisdictional separation of costs between interstate and intrastate services. In time, this separation process resulted in artificially high amounts of costs allocated to interstate services, which led to subsidy laden prices charged to interstate service providers for access to local networks and the current need for access charge reform.²

1. Rate of Return Regulation

The purpose of traditional rate of return regulation was to balance the interests of privately owned utilities with those of captive ratepayers. Regulation allowed companies to generate enough revenue to cover reasonable costs, earn returns on shareholder investments, maintain their credit ratings and invest in new facilities. Rate of return regulation also prevented

¹ Jeffrey E. Cohen, "The Telephone Problem and the Road to Telephone Regulation in the United States, 1817- 1917," *Journal of Policy History*, 1991, pp. 42-69.

² The amount of subsidy remaining in interstate and intrastate access prices differs significantly by state.

companies with market power from earning excessive profits or discriminating against certain classes of consumers.³

During rate cases, regulators closely scrutinized companies' financial books to determine the legitimate costs of doing business. These costs, which included a reasonable return on net capital investments, depreciation, and operating costs, were known collectively as the revenue requirement. Prices were set so that companies would generate enough revenue to cover the requirement, and any "over-earning" was subsequently returned to ratepayers through a rebate or price reduction. As part of rate regulation, many states required franchise monopoly local telephone companies to serve all customers in the franchise areas at geographically averaged prices through the imposition of carrier-of-last-resort obligations.⁴

2. Rate Design and Value of Service Pricing by Customer Class

The early approaches to local price design were based on the concept of "value of service" pricing. This approach set prices for different groups of customers (e.g., business versus residential, and urban versus rural) based on the values of the services to the customer groups and not on the underlying costs of providing service. It is common for business customers to pay more for local service than residential customers, even when the cost of providing service is similar. It is also common for urban customers to pay the same or more than rural customers, even though the per customer cost to serve urban areas is typically much less than the cost to serve rural areas. For example, the prices for basic business and residential lines in Atlanta, Georgia are \$48.30 and \$17.45 respectively, and the price of a residential line in the rural town of Lumpkin, Georgia is \$12.50. While there were economic inefficiencies inherent in this type of pricing structure, it was sustainable in a monopoly environment. These prices, which persist in many geographic areas, are not sustainable in a competitive market. They are also inconsistent with the development of beneficial and efficient competition and the continued development of a strong telecommunications infrastructure.

3. Separations and Cost Allocation Between State and Federal Jurisdictions

Setting prices for, and allocating costs between, long distance and local services posed similar problems to setting prices for different classes of local customers. Because the Bell

³ Charles F Phillips, Jr., *The Regulation of Public Utilities*, Public Utilities Reports Inc., 1988, p. 164, 168.

⁴ More recently, many state regulators and the FCC implemented incentive-based price regulations such as price cap plans. Price caps typically require regulated companies to reduce prices steadily based on some measurement of average industry productivity growth. If, however, companies can reduce costs more quickly, then they are allowed to retain at least a portion of the additional profits generated from above average reductions.

System was a multi-product firm, offering local and long distance services, regulators needed to apportion the costs of the network among different services. The process of separating costs and expenses between the interstate jurisdiction (regulated by the FCC after 1934) and state jurisdictions (regulated by public utility commissions) became known as the jurisdictional “separations” process. In effect, separations allocated a portion of the cost of the local telephone network, including the loop, to long distance services. Today, it is widely recognized by economists and policy-makers that this allocation system is inefficient because the cost of the loop is caused by the provision of local telephone service. The use of the loop is not usage sensitive, and its cost should, therefore, be recovered through flat-rate charges paid by the end users to promote the efficient use of the network.⁵ In summary, *long distance* charges subsidized *local* service.

B. Divestiture, Access Charges and Cross Subsidies

When the Bell System was dismantled in 1984 as part of the divestiture process under the Modification of Final Judgement consent decree, the cross-subsidies formerly embedded directly in AT&T’s long distance rates were moved to the access charges received by local telephone companies for connecting long distance calls. These access charges were intentionally set at rates that were above the costs of providing the service.

1. Access Charges, Cross-Subsidies, Local Prices and Revenue Short Falls

Access charges contain substantial subsidies, developed over many years in a regulated environment. As noted by the FCC, “[r]ecovering on a per-minute basis the cost of the local loop, which is a fixed cost that does not vary with use, results in high-volume toll users paying charges to their IXC [interexchange carriers] that exceed the cost of serving those customers, while some low-volume toll users may pay rates that are below cost.”⁶ Cross-subsidies from

⁵ The FCC explained that the Federal State Joint Board on Universal Service reform, comprised of state and federal regulators, agreed that the costs of the loop should not be recovered via traffic sensitive or per minute charges:

“The Joint Board suggested that the Commission change the existing rate structure so that incumbent LECs are no longer required to recover any of the NTS cost of the local loop from IXCs on a per-minute basis. The Joint Board noted that it would be preferable for costs related to the loop to be recovered in a manner that is consistent with the manner in which the costs are incurred.” See Notice of Proposed Rulemaking, *In the Matter of Access Charge Reform*, CC Docket No. 92-626, FCC 96-488, December 24, 1996, paragraph 59. (Hereafter “Access Charge Reform Notice of Proposed Rulemaking”).

⁶ Access Charge Reform Notice of Proposed Rulemaking, paragraph 43.

access services to local service are part of a wider pattern of subsidies designed to promote universal telephone subscription.

- business customers subsidize residential customers;
- high volume callers subsidize low volume callers;
- urban customers subsidize rural customers; and
- customers who use vertical services, such as custom calling features, subsidize customers who do not use such features.

These subsidies are not windfalls to the incumbent local exchange companies. They are a means of “taxing” certain customer groups to support below cost service for other customer groups. Taxes are collected by incumbent LECS and other facilities-based providers and are used to: 1) pay for the cost of the local network, including basic local service for all households and small businesses at “affordable” prices; and 2) make continuous investments in the network to ensure high quality service and the deployment of advanced services to all customers. The overall impact of these subsidies is that many high cost, low usage customers today pay less for basic local service than it costs to provide this service.⁷

2. Implicit Subsidies are Not Conducive to Efficient Competition

In a regulated monopoly environment, the cross-subsidies described above were sustainable because competitors could not enter the market and cream skim the revenues or drive down prices. In this environment, overall revenues and costs were balanced and incumbent local exchange companies (ILECs) were able to fund universal service and earn an acceptable return on their investments. Even today, implicit subsidies remain important to the financial viability of the facilities-based providers of universal service because some rates remain below cost. In a competitive environment, however, implicit subsidies are not sustainable and are contrary to the development of efficient and beneficial competition. Competitors are circumventing these subsidies by building alternative networks in the high-density urban areas where there are high proportions of business customers. For example, AT&T now uses assets obtained with its purchase of TCG to offer local service. TCG has “local networks aimed at addressing high-volume business customers...TCG initially targets the large telecommunications-intensive businesses concentrated in the major metropolitan markets served by its networks. TCG also targets small- and medium-sized business customers in office buildings or multiple dwelling

⁷ For a discussion of implicit subsidies in the FCC’s regulatory systems see FCC First Report and Order in the Matter of Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Transport Rate Structure and Pricing, and End User Common Line Charges, CC Docket No. 96-262, Released May 16, 1997, paragraphs 28-31.

units already served by its network.”⁸ As competitors enter these markets where prices are held above cost, they skim the above cost revenues and eventually drive prices down. Money tagged for universal service support dwindles, and incumbents’ abilities to continue to maintain and improve the infrastructure is reduced, especially in rural areas. Examples of cream skimming are pervasive in metropolitan areas throughout the nation.

C. Characteristics of Telecommunications Demand

An important aspect of the telecommunications environment that adds an urgency to the current situation is the high concentration of revenues in relatively small geographic areas. In many states, well over one-half of the local telecommunications revenues are in less than 20 percent of the high density wire centers. Cross-subsidies in incumbent LEC’s prices (especially subsidies from urban to rural and business to residential customers) are one reason for these high concentrations of revenues. Prices are typically held high relative to costs for urban and business customers.

The regulatory and economic factors described above – the pricing structure for local telephone service which deviates from cost, the traditional methods for regulating incumbent local service providers, and the characteristics of telecommunications demand – set the backdrop for considering the task of reforming telecommunications policy and pricing in the post-Telecom Act period.

III. MOVING TOWARD PUBLIC POLICY FOR A COMPETITIVE ENVIRONMENT

Telecommunications policy in the United States has three long-standing, interrelated goals: 1) to provide universal service; 2) to ensure that telecommunications services are produced and consumed efficiently; and 3) to promote infrastructure investment and service innovation that benefits consumers. These policy goals are often mutually compatible (i.e., a pricing structure that promotes the efficient consumption of telecommunications services by end users will also typically promote the efficient use of inputs into the telecommunications service production process and promote innovation). The Telecommunications Act shifted the framework for pursuing these goals from one that was predominantly based on regulation to one that is based on competition and cross-entry among different classes of service providers.

Before these goals can be achieved by the competitive process, however, a number of legacy regulations and pricing mechanisms need to be reformed. The transfer of money from high volume long distance callers to low volume callers, for example, is inconsistent with the development of efficient competition. It is also unsustainable. The following sections explain

⁸ AT&T, 1998 10K Report, “Other Businesses, Local Services.”

how reforming the current price structure for access charges and basic local telephone service will promote the three goals of telecommunications policy listed above.

A. Efficiency Objectives and the Reform of Implicit Subsidies

The current access pricing structure impedes the development of efficient competition. To the extent that prices for long distance services reflect the money paid for access to local networks, above cost access prices will contribute to artificially higher prices for long distance usage. This, in turn, will reduce the amount of long distance usage below the economically efficient level. This type of pricing distortion leads to a reduction in *allocational efficiency* because consumers change the allocation of their consumption away from the optimal mix they would have chosen if prices were based on the costs of producing services.

Second, artificially high access charges create a price umbrella that allows new competitors to enter the access services market and win customers from the incumbent, even if they are less efficient producers of the service or charge prices that include a premium. For example, the entry of competitive access providers (CAPs) into urban areas in the late 1980s and early 1990s can be explained in large part by above cost switched access prices charged by incumbent LECs. It is far from clear that many CAPs produce access services more cost-effectively than the incumbents. They are able to beat the incumbent's prices because they are allowed to target their efforts at high revenue, low cost customers. Incumbent LECs are restricted by price averaging and the necessity of maintaining low cost basic residential service. When the suppliers of a service are not the most cost-effective producers, resources are used inefficiently. In this situation, *technical efficiency*, which relates to optimizing the use of inputs to provide a given output in the most cost-effective way, is not achieved.

B. Investment, Innovation and Dynamic Efficiency

A fundamental goal of telecommunications public policy is to promote investment in telecommunications infrastructure and the development of innovative new services and technologies. One of the chief benefits of a free-market economy is that competition stimulates the development, introduction and adoption of new technologies. The pricing of existing services clearly has a critical influence on investment in new technologies. Below cost prices for rural local telephone service today, reduces or eliminates the incentives for competitors to adopt better, lower cost technologies for providing rural service. For example, it will curtail investment by competitors in developing and installing fixed wireless local loop technology, even if the underlying network economics of wireless technology make it a cost effective way to deliver service to rural customers. Conversely, if prices are set based on actual costs and rural subsidies are available to wireless competitors that adopt the universal service obligations, *dynamic efficiency* – the optimal rate of investment in new technologies – is promoted.

The current access charge structure and the corresponding implicit subsidies for rural residential service also reduce the incentive and ability of incumbents to invest in rural networks. With increasing competition, subsidies from high volume urban customers are decreasing, and incumbents are losing the funds necessary for investing in rural networks. Cross-subsidies are

incompatible with competition, because: 1) competitors with no carrier-of-last-resort obligations and price averaging requirements can exploit the prices of those who bear these obligations; and 2) states will no longer be able to use the franchise regulation as a tool to ensure a fair return on the investments of telecommunications service providers. Hence, competition requires the use of different tools to achieve public policy objectives.

Although the telecommunications industry is moving toward a more competitive environment, regulation remains a powerful force in this industry, as is evidenced by the fact that these issues are before the FCC and state regulatory commissions throughout the nation. In this transition period, regulatory uncertainty can provide a large impediment to efficient investment.

C. Universal Service and Distributional Equity Goals

Historically, there have been two distributional equity objectives in telephone regulation. The first equity objective is “universal service.” To reach this objective, it is necessary that basic telecommunications service is affordable for all households that desire service. To achieve this objective in a regulated environment, regulators maintained the prices of residential services at low, geographically averaged levels that nearly everyone could afford and made lifeline support available for the remaining households. In many instances the price of residential service did not cover the full economic cost of providing this service.

There is nothing exceptional about subsidizing the price of goods or services to make them more affordable.⁹ Typically, however, policy-makers fund social equity objectives with taxes and distribute the money directly. In the telephone industry, universal service is funded largely through internal cross-subsidies and distributed with investments and other costs in rural areas. With increasing technological alternatives to the incumbents’ landline networks and the onset of competition, entrants can offer customers who are providing the subsidies a means of avoiding this “tax.”

The second equity objective is to provide the opportunity for investors to earn a fair return for the use of their capital and the risk of investing in network infrastructure. Fair treatment of investors is based on a constitutional principle (the Fifth Amendment protection of property from taking without just compensation), and it is also good public policy. By creating a social contract between the shareholders of a telephone company and citizens of a state, future investment is encouraged. The typical social contract requires the provider to promise to serve all customers in a given geographic area even if it is not profitable (a carrier-of-last-resort obligation closely tied to universal service goals). In return the shareholders receive a commitment that the state will provide them the fair opportunity to recover their invested capital. This quid-pro-quo provided a powerful economic incentive for private capital investment that

⁹ On a Federal level, there has been some public funding of the public telephone network (e.g., loans at subsidized interest rates to rural telephone cooperatives), but that accounted for only a small share of the total cost of constructing and operating the telephone network.

built the most extensive telephone network in the world. Without a “tax” to provide an explicit subsidy for funding universal service, the loss of the implicit subsidies will remove funds necessary to continue high levels of investment in the infrastructure in rural areas.

D. Competition, Regulation and Public Policy Goals

The Telecommunications Act of 1996 and rapid technological advances are replacing regulation with competition as the primary tool for achieving the public policy goals of: 1) ensuring that telecommunications services are produced and consumed efficiently; and 2) promoting investment and innovation. Thus, regulators on both the federal and state levels need to implement policies that provide efficient, cost-based pricing signals for local exchange and access services to allow market forces to enhance economic efficiency. If basic local and access service prices are set based on costs, competitors will make *technically efficient* investments because the incentives that they receive through market signals (prices) will be based upon cost and demand. As subsidies from usage sensitive services are removed and prices better reflect costs, customers will consume a mix of services which better satisfies their preferences, promoting *allocative efficiency*. Competition will act as a catalyst to promote investment and innovation because market prices will signal to new entrants where profitable investment opportunities exist. Finally, given appropriate universal service support, ILECs and other carriers-of-last-resort will have the wherewithal to serve high-cost customers and promote *equity objectives*.

Maintaining universal service in a competitive environment will require careful reform of existing policies. In setting new universal service policies, there are a number of guiding principles regulators should use.

- Prices for basic residential service should be kept affordable for all customers with specific, explicit subsidies targeted to low income and high cost rural customers.
- Service providers should receive enough support to cover the costs of providing high quality and reliable service to all customers.
- The universal service funding scheme should be competitively neutral; no telecommunications providers should be unfairly disadvantaged by its design.
- Finally, the system should be stable and transparent, meaning the funding is derived from clearly defined and predictable mechanisms, so that carriers can develop business plans and make investment decisions based on a known set of universal service rules.

IV. LOCAL EXCHANGE SERVICES HAVE DRAMATICALLY INCREASED IN VALUE

When considering fundamental changes in the way local telephone and access services are priced, it is important to assess the affordability and value of these services to consumers. As shown in Figure 1, real prices for local telephone service for consumers in the United States have

decreased over the last two decades. Between 1988 and 1997, after adjusting for inflation, the price of telephone service decreased by 15 percent. To the extent that residential service was affordable in the late 1980s, it is even more affordable today relative to other household purchases. During the same time period, the value of local telecommunications services to customers has increased because the quality, reliability and capabilities of the local telephone network have increased dramatically. The local telephone network is a citizen's gateway to numerous complementary services: Internet, FAX, data transmission, toll-free numbers, information services, wireless customers and long distance toll services.

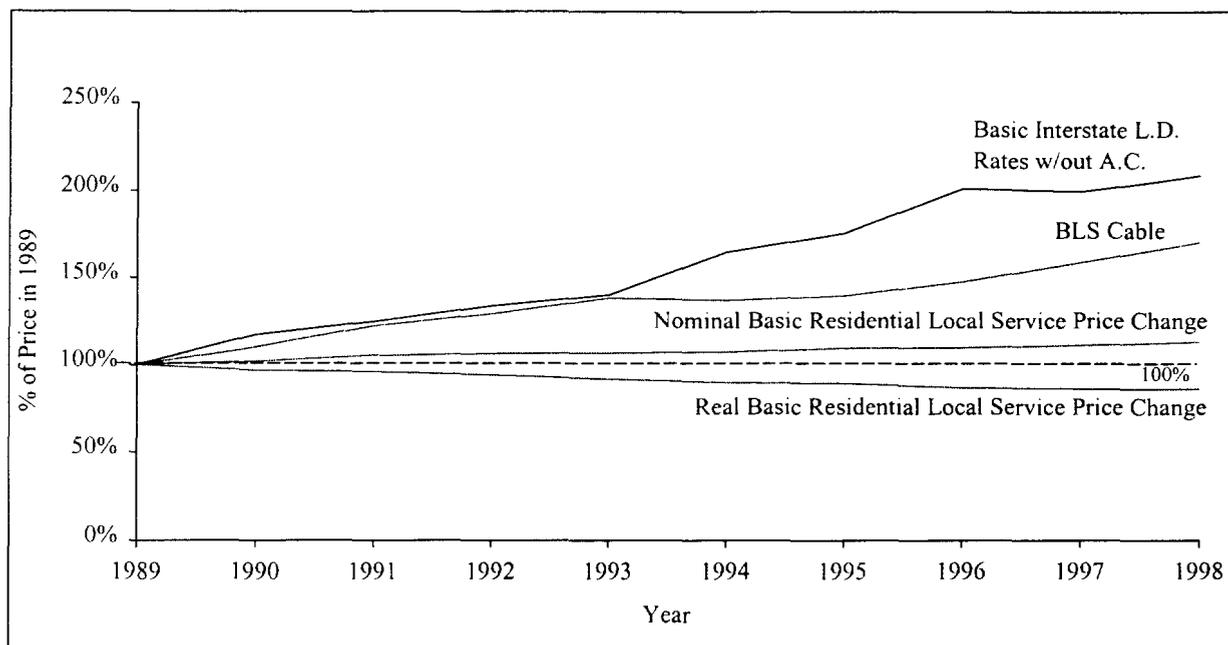
A. Basic Residential Local Exchange Prices

Nominal prices for basic local exchange service have remained stable over time, in part because many prices have been held below cost and cross-subsidized by other services. As shown in Figure 1, since 1987 nominal prices for local exchange service increased more slowly than the nominal prices of basic cable service or basic long distance service net of access charges.¹⁰ In fact, real prices for local exchange service, as calculated by the Bureau of Labor Statistics, have decreased by 15 percent. This negative growth rate has positive implications for the affordability of local telephone service, even if there is an increase in the subscriber line charge, as proposed in the CALLS plan.

¹⁰ Figure 1 shows changes in the basic rates paid by customers who do not select discount plans from their long distance carriers. To the extent that changes in discounted prices are out of sync with changes in non-discounted prices, the interstate price curve is only an approximation of the changes in prices actually paid by consumers.

Figure 1.

**Nominal Price Indices for Basic Local,
 Long Distance (w/out access charges) and
 Cable TV Services**



Source: CPI Cable and Local Telephone Indices from Bureau of Labor Statistics web site
 . Basic Long-distance prices from FCC March 1997 Long Distance Rate Book

B. Technological Advances and Increased Value to Consumers

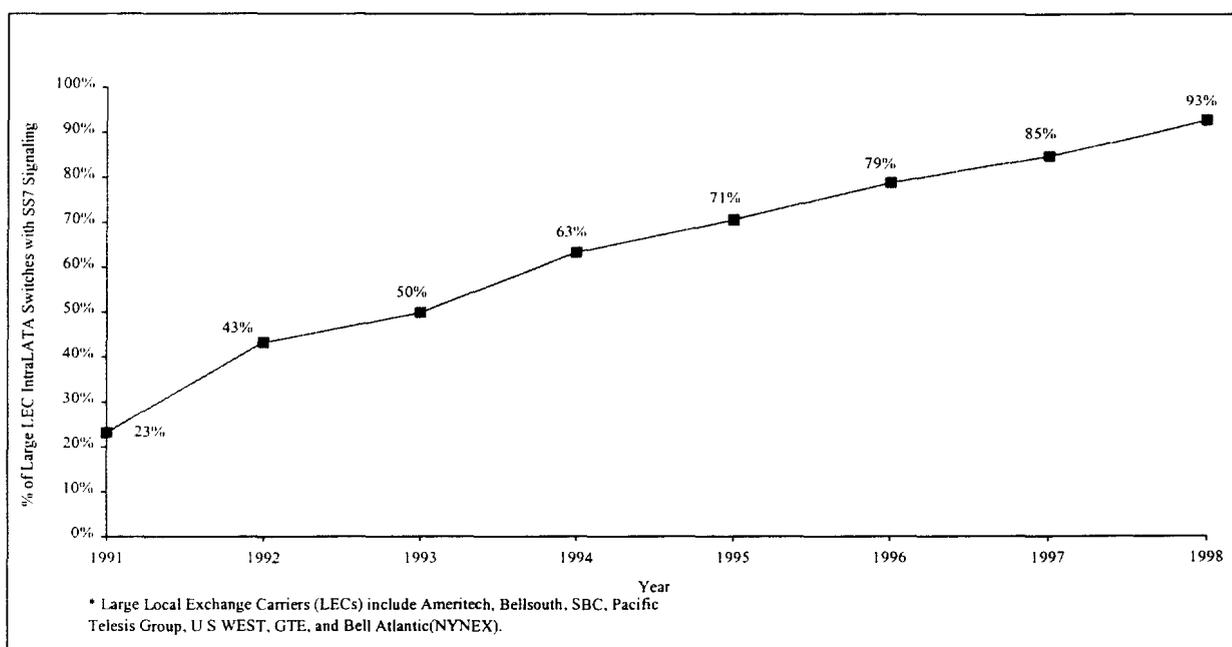
Over the last ten-plus years, a number of new technologies have been integrated into the local exchange network and these technologies have improved the underlying quality, reliability, cost-effectiveness, and functionality of access to the network. These improvements include the deployment of fiber optic transmission facilities, particularly in interoffice transport plant and to a lesser degree in the local loop, improving reliability and functionality and leading to lower costs. Local exchange carriers have also installed digital switches with touch-tone, and advanced signaling capabilities. Digital switches not only improve the quality and reliability of basic services, they also allow telephone companies to offer a wider range of services, such as caller ID, call waiting, call ring back, voice mail and others. And touch-tone services, formerly considered an advanced functionality but now a near ubiquitous basic service, have allowed a wide range of companies - from banks and other financial intermediaries, pharmacies, catalogue retailers and many others - to offer their services electronically via the telephone.

One key advance in local exchange technology within the last 10 years is the pervasive deployment of Signaling System 7 (SS7) technology. In the switch, SS7 provides a protocol for networks and interoffice switches to communicate with each other, speeding call processing and

allowing increases in functionality such as fraud detection, 800 number portability and the deployment of new complementary services.¹¹ Figure 2 shows that SS7 was rapidly deployed in six large incumbent LEC's networks during the 1990s.

Figure 2

**Percent of Total IntraLATA Switches
Equipped with SS7 Signaling**



Source: "Infrastructure Report 43-07: Switching Equipment," ARMIS Data Retrieval System
Federal Communications Commission.

¹¹ *Infrastructure of the Local Operating Companies Aggregated to the Holding Company Level, 1991-95*. Report released March 1997, Federal Communications Commission. (http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/infra.html).

C. Enhanced Complementary Goods and Services

In recent years there has been an explosion in the number, type, and usage of services which are complementary to local telephone service. Over the same time period, prices for these services fell dramatically. This is important because, when two goods are complementary, their joint consumption increases the value of the services to consumers. As new complements to local telephone service become available (or the price of existing complements decreases) consumers are willing to buy new local telephone services and increase the intensity of their use of existing services. For example, in its report, *Digital Tornado*, the FCC cites studies by AT&T, Bellcore, Bell Atlantic, U S WEST and Pacific Bell, that indicate that, while an average voice call lasts 3-5 minutes, Internet users tend to stay on line substantially longer than voice users with estimated hold times of 17-21 minutes.¹² This section provides a brief description of several services that are complementary to basic local service.

a) InterLATA and IntraLATA Long Distance Services

One of the important complementary services to local telephony is long distance service, including switched access, interLATA, and intraLATA toll services. From 1980 to 1997, the portion of all minutes that are long distance minutes grew from 16 percent to 26 percent.¹³

b) Toll Free Calling and Premium Information Services

Another class of services that are complementary to basic local telephone service are the toll free calling (800, 888, 877) services, premium information services (900, 976), and information services. These services are offered by a large number of businesses and government agencies to provide customer support, information, and entertainment services via the telephone.¹⁴ A recent survey estimated that 89 percent of consumers used toll free telephone numbers for customer service needs, making reservations, and ordering or requesting information on products or services.¹⁵ Other common applications include making financial transactions, collect calling, and paying bills. The revenues generated by the toll-free and premium information services market provide an indication of the enormous value generated by these

¹² Werbach, Kevin "Digital Tornado: The Internet and Telecommunications Policy" OPP Working Paper Series No. 29, March 1997, pp. 58-59 Office of Plans and Policy, 1919 M Street NW, Washington, DC 20554 http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp29.pdf

¹³ "Trends in Telephone Service," FCC Common Carrier Bureau, February 1999, p.12-3.

¹⁴ For example the Federal government offers Medicare referral, Social Security information, veterans affairs, student aid, food and auto safety hotlines, housing and employment discrimination hotlines, postal services, information and reservations for national parks and many other services over toll free numbers.

¹⁵ Staff report (August 17, 1998), *Marketing News*, Marketing Alliances section, p. 2.

services. In 1997 alone, interLATA toll-free revenues were over \$11 billion, intraLATA toll-free revenues were \$290 million, and 900/976 revenues were approximately \$1.5 billion.¹⁶

The growth in the use of toll-free numbers also indicates that consumers value toll free services. The original 800 numbers were depleted in 1996 after nearly 20 years. Given the increased popularity of toll free calling, it took only two years to deplete almost all of the 888 numbers. As of November, 1998, 99+ percent of the total available 800 numbers and 74 percent of the total 888 numbers were in use.¹⁷

c) Computing, Data Communications, and Applications

Home PC use, Internet access and fax use have experienced dramatic growth in recent years. An increasing number of households now have personal computers with modems and use them to access Internet and online services for telecommuting, education, information, transactions, and entertainment. A large and growing number of households are using the local network to access the Internet. The majority of customers that dial-up for Internet access from home, however, continue to pay the local network provider the same low prices for their basic local service.¹⁸ A recent publication by the FCC cites from a survey that “nearly 80 million Americans are online today, with a total of 100 million Americans expected online by the end of the year 2000.”¹⁹ The FCC goes on to observe that,

“The average cost of basic telephone service is between 13 and 29 dollars per month...Internet service providers offer unlimited dial-up Internet access (no hourly fees) over that inexpensive phone line...Internet service providers themselves utilize this same phone network to offer an amazing array of Internet services to customers, and the

¹⁶ Frost and Sullivan, see DM News, “Increased Competition Equals Growth for Toll Free Market,” July 6, 1998.

¹⁷ Britt, Phil, “Toll-free help is on the way, But 888 numbers must last a little longer,” Telephony Marketing & Services, November 17, 1997.

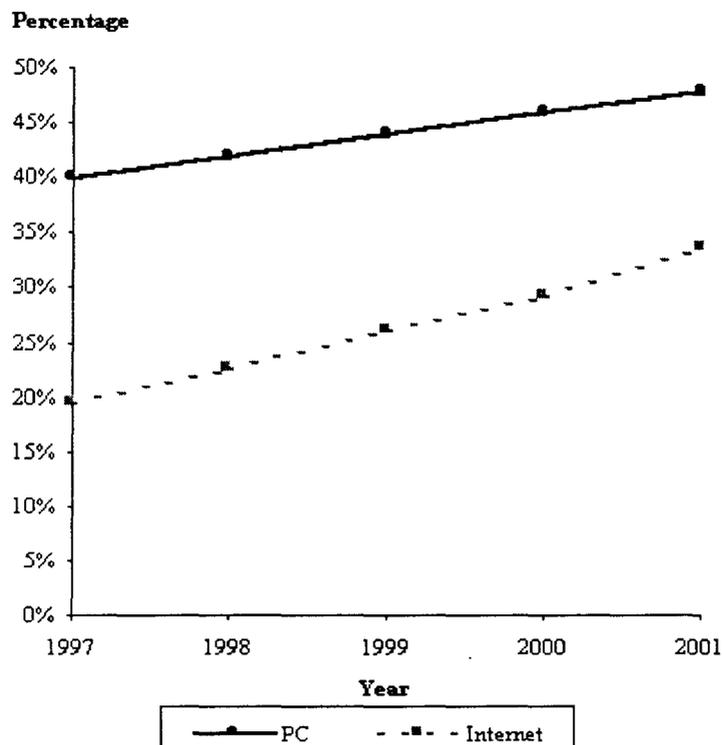
¹⁸ The number of subscribers accessing the Internet with non-dial-up technologies are dwarfed by dial-up subscribers. Jupiter Communications estimates that as of year end 1999 there will be 32 million dial-up households, 1.2 million cable modem households, 0.4 million DSL households, 0.2 million Internet satellite households and 0.5 million ISDN households. See Jupiter Communications, *Consumer Broadband – Last Mile Strategies*, January 1, 1999 (nexius).

¹⁹ Oxman, Jason, The FCC and the Unregulation of the Internet, Office of Plans and Policy, Federal Communications Commission, OPP Working Paper no. 31, July 1999, p. 4. The FCC is citing a survey by Intelliquest, cited at Nua Internet Surveys, http://www.nua.ie/surveys/how-many_online/n_america.html.

affordable use of the telephone network has allowed these providers to offer inexpensive access to the Internet to virtually all Americans."²⁰

Figure 3 shows current and projected penetration rates for home PCs and Internet access in the United States.

Figure 3
Projected Penetration of PCs and Internet Services in US Households



Source: "ADSL Coalition UAWG Unveiled; List of UAWG Promoters: Cable Modem 1997-2006," in *Cable TV Technology (CTT)*, February 28, 1998, Paul Kagan Associates, Inc.

Although penetration rates for home PCs and Internet access vary greatly based on demographic factors such as income, education level, ethnicity and geography, there is a growing penetration even among traditionally under-served groups. The National Telecommunications and Information Agency released a report entitled *Falling Through the Net II* which analyzed

²⁰ Oxman, Jason, The FCC and the Unregulation of the Internet, Office of Plans and Policy, Federal Communications Commission, OPP Working Paper no. 31, July 1999, p. 5.