Telephone Rates in the New Economy

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Introduction

It has been said that the only constant is change itself. That axiom certainly proves true in the technologically and economically turbulent marketplaces described collectively by some as the New Economy. A complex and dynamic array of new information and communications technologies is dramatically transforming the way we conduct ourselves in most areas of our day-to-day existence.

Words, a few words anyway, are hard-pressed adequately to describe the richness of ways and the extent to which digital technologies infusing hardware, software, content and communications networks are changing the human condition. One needs only take a minute to ponder the differences between today and a decade ago – in the details of conducting our daily lives – to appreciate the colossal reach and significance of the digital revolution.

It has also been said that it’s impossible to change just one thing – an event, a process, a person or an institution – without simultaneously unleashing forces for change in other domains. Everything, it seems, in some way or another, depends on everything else in our socially, economically and technologically interconnected world.

So it is with the nation’s switched, common-user telephone networks in the New Economy. Digitization of the means of producing, storing, processing, distributing and using information of all kinds – whether the information takes the form of voice, video, audio, data, graphics, numerics, words, pictures or whatever – has been influenced by, and is having an enormous impact on, technological and economic developments in the nation’s telephone networks. Demands for new uses are being imposed, unimagined new services are appearing, new investments are replacing old, and of course, the level, structure and form of network costs for providing services are materializing in new and unfamiliar ways.

Distance is now less important as a cost driver. Costs are less sensitive to holding times and minutes of use. The amount of available bandwidth – the amount of limited radio frequency used by a point-to-point call – and its cost have been changed by orders of magnitude in the digital revolution. Users who once spent, on average, a half dozen minutes for a voice call now hold lines for hours while surfing the Internet, sending mail, or reviewing and downloading content. All of these and other changes driven by digital technologies have fundamentally altered conditions of both supply and demand for services provided by the interconnected, switched telephone networks, pieces of which are owned and operated by hundreds of different, cooperating and competing companies.

Here, as elsewhere in our competitive, market-driven economy, changes in supply and demand create forces that dictate changes in prices and rates and service bundles and patterns of use. While those forces may be rebuffed, temporarily at least, they must be accommodated in the long run if the market system is to do the job for
which it is frequently praised: assigning scarce capital and labor and technology to
their most productive use, in order to create wealth and well-being for citizens.

In response to those changes and forces, and in response to other critical
regulatory changes discussed below, a coalition of long-distance and local-exchange
companies has recently submitted to the Federal Communications Commission (FCC,
or Commission) a proposal for restructuring telephone rates, known as the CALLS
proposal (Coalition for Affordable Local and Long Distance Services).

The CALLS proposal would reorient the charges imposed by local telephone
companies to recover the costs of providing network facilities – trunks, lines,
interconnecting devices, switches, operating systems and the like. Those facilities are
shared by long-distance telephone companies – AT&T, MCI WorldCom, Sprint and
others (sometimes referred to as interexchange carriers) – and by ordinary telephone
subscribers, who use the networks for both local and long-distance calls, for voice,
data, Internet, or other services, as well as for calls in urban and/or rural areas.

Like the overhead costs of many businesses, the common network costs of
providing telephone services must be spread over, and recovered in collections from,
diverse user bases. The problem is similar to the one faced by airlines, which must
recover the costs of a flight from charges on different kinds of tickets; or
McDonald’s, which recovers rent, utilities and corporate costs from burgers and fries
of different varieties, in different amounts, in different locations. How the costs are
assigned and how the burden of recovering costs is distributed among citizens and
customers is, in a sense, discretionary. What is not discretionary is that somebody
has to pay them and pay them fully, if capital is to be maintained and renewed and
upgraded so that services will continue to be offered.

Under the CALLS proposal, a major part of the responsibility for recovering
common local-telephone network costs would be shifted from long-distance carriers,
who currently are passing the costs to their long-distance customers, directly to all
telephone subscribers, without regard to how many long-distance calls the make.
Users would perceive this change as a reduction in per-minute charges for long-
distance calls along with an additional line-item on their monthly telephone bill.

This paper offers sufficient background information to provide the context for
the CALLS proposal, describes the proposal itself, summarizes the issues and
identifies the principal stakeholders, and outlines the main positions. The paper then
builds a case for the CALLS proposal, arguing that it will serve the national interest
by promoting greater economic efficiency while stimulating competition in the
marketplace and encouraging investment and innovation. The paper concludes that,
on balance, the CALLS proposal will benefit consumers in the aggregate – both in the
short term and in the long term, particularly – without adversely effecting the
traditionally protected classes of users, those with low incomes or in those in rural
areas.

Especially critical to America’s economic welfare, this paper finds that a
decisive, albeit indirect and hard-to-measure, benefit of the CALLS proposal is its
role as an instrument of transition to a long-term, natural level and structure of

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charges for users of packet switched, internet protocol (IP) networks. Level and structure are presently being driven irresistibly by technological and market forces embodied in the evolution of high-capacity, broadband digital telecommunications networks. If the promises of the New Economy are to be realized in an efficient and timely manner, however, it is imperative that the nation’s communications links be rationally and economically priced. Otherwise, inefficiencies in underlying telecommunications networks, the *sine qua non* of the New Economy and its promises, will be embedded and compounded in virtually all of its subsidiary, downstream and collateral services.

**Background**

Details of the economics of telephone rates are nearly as arcane as the federal tax code. Everyone is affected by them, except for a handful of expert practitioners, nobody really understands what they are and why they are, or why changes matter. Everybody wants lower rates, but most are willing to pay more if they get better service. The CALLS proposal involves no rate increase, but merely shifts responsibility from one class of user to others, while changing the rate basis (from minutes to months) of charges, and yet it is a mark of the complexity and the universal importance to consumers and businesses in this country that such a proposal will be so controversial.

An analogy between setting taxes and setting telephone rates may be helpful here. Much of the expenditures of government – such as the existence of universal, interconnected, easily accessible telephone networks – inures to the benefit of all, while the taxes that support them are quite varied in their basis (sales, income, property, etc.) and subject to frequent change.

As with many other network-based services (transport, energy, financial and other distribution services), a large proportion of the costs of providing local telephone services is not caused by any single user (business or residential) or class of use (local or long-distance calling, voice or data), but is rather the common responsibility of all users. Lines, switches, trunks and other network elements required to provide call origination, routing and termination are built and operated to serve a variety of users and to provide several different types of service. As with transportation systems, energy distribution systems, postal systems and other networks, the costs of telephone networks are largely common to many users and not the direct responsibility of any single one.

Variously called indirect costs, non-traffic-sensitive costs, sunk costs, fixed or overhead costs, or joint and common costs, these outlays by carriers are not usage- or traffic-sensitive and are not directly attributable to individual users, classes of user (business, residential or carrier) or classes of use (local or long distance, voice or data) on the basis of unique cost-causing responsibility.

In the old days of pervasive telephone monopolies – before the breakup of the Bell System, the introduction of competition, and the Communications Act of 1996 – state public service commissions and the Federal Communications Commission were

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able to compel carriers to establish rates in a manner largely independent of the ways costs were incurred, and independent of the cost responsibility. Rates were set according to sociopolitical considerations, not economic ones, a practice driven by the desire to subsidize some uses and classes of users by establishing charges for them that were well below full costs. Those political subsidies to special user classes were funded by charging for other services, and to other users, rates that exceeded full costs by varying amounts. In this way, local services, residential services, and services provided to rural areas were generally made available at less than costs (subsidized), while long-distance services, business services, and services provided in dense, urban markets were effectively rated at well above full costs (taxed).

This tax and subsidy scheme was stable for several decades, but was sustainable only for so long as regulators were able fully to control rates for all services and for all user classes. The ability to control all rates and thereby to bring about real income transfers among different users was manifest in an environment of a regulated monopoly protected by government from competition. The basis for that scheme was undermined, however, and its demise assured by the Federal Communications Commission’s adoption of policies allowing and encouraging new firms to enter and compete with monopoly incumbents.

Predictably, new entrants attacked markets with high-margin uses and users, the very markets that previously had been taxed to create the subsidy pools. The result has been to unleash forces that have been, and will continue, impelling rates – all rates – toward economic cost and away from levels administered by regulators to implement various tax and subsidy schemes.

A necessary and predictable consequence of relying less on regulation and more on competition and market forces has been the undermining and eventual destruction of the very basis of the tax and subsidy scheme. New rivals slashed rates and forced incumbents to follow, thereby draining the subsidy pool and creating upward pressures on rates that had been administratively fixed below costs.

The largest mismatch between costs incurred and revenue generated by local telephone companies has been associated with their provision of origination and termination services, access services to long-distance carriers. Those carriers – AT&T, MCI WorldCom, Sprint and hundreds of others – are the largest direct users of local telephone networks, but they use local networks not strictly for their own needs but, rather, as a means of originating and terminating calls for their long-distance customers. In essence, they resell local access and distribution services obtained from local carriers to their long-distance customers.

Following rate-making and costing practices established well before the breakup of AT&T, regulators have continued to prescribe local-exchange access rates that are well above the cost to local companies of providing such services. Moreover, those charges are based on minutes of use, despite the fact that most of the relevant costs being recovered are usage-insensitive – that is, they do not vary directly with minutes of use. Thus, the charges to long-distance companies are too high, and they are improperly based on use rather than on the way they are incurred.
The mismatch between cost and revenue streams for local and long-distance telephone service providers was recognized, debated and addressed by Congress when it passed the Telecommunications Act of 1996. Congress recognized that the implicit tax-and-subsidy scheme imbedded in the historic rate structures for different services was not sustainable in the face of increased reliance on competition, and it could only be maintained through use of pervasive regulation as the mechanism for establishing rates, in contradiction to market forces. After more than a decade of debate, Congress recognized that market forces of the kind promoted by the 1996 Act – numerous rivals competing for consumer favor and market share through aggressive pricing and service offers – will inevitably erode the artificial structure of historically administered rates. Accordingly, Congress provided specific language encouraging the FCC to establish a cost basis for the rate structure and provide more direct means for subsidizing special classes of use and user.

While the FCC has been moving in the general direction of rationalizing the rate structure, the pace has been labored and slowed by both bureaucratic processes and the contentious nature of the undertaking, in which dozens of interest groups have an abiding economic interest. The result has been a growing pressure for change, as both technology and markets undermine the rationale and stability of the old rate regime.

The CALLS Proposal

The CALLS proposal is consistent with the market trends unleashed by the introduction and promotion of competition, and also with the statutory directives of the 1996 Act. The proposal would fundamentally change the way common, usage-insensitive costs are recovered. As noted above, those costs can be likened to more common notions of fixed or overhead costs incurred in the course of serving all customers. Moreover, they are a large share of local-exchange-carrier costs and of long-distance-carrier revenues. The CALLS coalition proposes to replace usage-sensitive, minute-based charges now assessed on long-distance carriers (and recovered from subscribers via higher long-distance charges) with flat rate, monthly charges assessed directly on subscribers.

The proposal has three major parts. First, it provides for explicit, rather than implicit, funding of $650 million support for the Universal Service Fund, a fund authorized by the 1996 Act and subsequently implemented by the FCC as a means of subsidizing some services and thereby promoting widespread, affordable, universal service. While no new money is involved, the proposal provides for direct assessment of end-users via a charge imposed on each subscriber line, rather than, as is currently done, having local exchange companies collect from long-distance carriers that, in turn, pass on the charge to end-users via markups in their long-distance bills. Ultimately, users pay in either case, but the mechanism is different: one is direct, the other is indirect. In addition, the burden of charges is different, inasmuch as some users will pay more and others pay less under the proposed scheme than they do under the status quo.

Second, the CALLS proposal would replace a patchwork of specific subsidies
currently embodied in various special, ad hoc charges billed by local carriers to long-distance carriers. Those charges, with exotic names like TICs and PICCs (PIXIEs), now paid by long-distance carriers and passed on to consumers, will be rolled into a single charge assessed to end-users on the basis of the number of lines they use. The plan would also allow carriers limited discretion to de-average line charges by differentiating rates among customers to reflect real cost differences and thereby mimic the way prices for most goods and services in the economy are established.

Third, inasmuch as the first two provisions take long-distance carriers out of the middle and shift costs directly to end-users, the plan provides an offsetting reduction in charges to long-distance carriers and services, reducing by 50% the usage-sensitive, switched, access rates charged to long-distance carriers by local carriers. The plan provides for freezing rates at that level.

The proposal also includes other complementary provisions, but its essence is captured by these three.

**Issues Raised by the CALLS Proposal**

Given the ubiquitous use of telephone networks and services by consumers, it is no surprise that virtually every ratepayer will be affected by the proposed change, as will both suppliers and competitors of the carriers directly involved. However, not every member of each of the stakeholder classes will realize the same impact. Some will benefit immediately and substantially, while benefits to others will be less and will be realized more gradually and indirectly.

A crude indicator of the depth and breadth of implications raised by the CALLS proposal may be inferred from the fact that thirty-four separate parties responded recently to an FCC invitation to comment on it. Respondents included a variety of consumer groups, carriers – large and small, local and long-distance – state regulatory agencies, and a variety of associations representing niche interests of carriers and users. Interested parties filed thousands of pages of comments, criticisms and counter proposals. Summaries of comments alone ran upward to a hundred pages, and those summaries were concise and written for practitioners who understand the complexities of the economic, legislative, judicial and regulatory context within which the issues are being addressed. Nevertheless, the issues can be boiled down to a handful, as suggested by the following list:

**The proposal redistributes real income.** By restructuring rates, lowering some and raising others, the proposal disadvantages some users when the impact is calculated over the short run and when only direct effects are considered. The benefits and costs of the proposal are not uniformly distributed among services and user classes. Beneficiaries of past inefficiencies in the rate structure have come to regard them as entitlements, and they resist rationalization of the rate structure. Generally speaking, since long-distance rates will decline, consumers who make extensive use of the national switched, interconnected telephone network are likely to benefit more than will low-volume, infrequent users. All telephone subscribers, without regard to level of long-distance use, will pay an added monthly charge. As
The proposal was devised by a small subset of the interested groups. Virtually every telecommunications user and every provider, present or future, of these and related products and services will be affected by the proposal. Moreover, the proposal calls into play longstanding tensions between state and federal regulators, who share responsibility for regulating networks used to provide interstate and intrastate services. Each of those parties has a particular stake in the outcome. The proposal does not take into account fully and reflect the interests of the full array of disparate interests.

The proposal does not guarantee long-distance rate reductions. Several parties want regulatory guarantees that the rate reductions for long-distance carriers will be passed along to long-distance users, even though rates in markets for long-distance services have not been regulated for several years following FCC’s recognition that MCI WorldCom, Sprint and hundreds of other long-distance carriers have eliminated AT&T’s dominance in that market. Related to that, consumer interests complain that the proposal finesses current investigations into the level of rates being charged by local companies for interstate services and does not require any rate reductions.

The proposal does not provide for immediate across-the-board rate cuts for all users. Consumer groups have pressed in other forums and in other proceedings for rate cuts to all subscribers and services. They are critical of CALLS for merely redistributing the burden of fixed costs among users, rather than reducing the burden and shifting costs to the company’s shareholders.

The proposal has differential consequences among carriers. Some carriers fare better than others. The evolution of the current system has been marked by hundreds of decisions and compromises, some large and some small, that combine to create substantial stakes, quasi-entitlements, in the status quo. Carriers of different sizes have different interests, as obviously do those that now compete or may eventually compete with each other. As with subscribers, some carriers and competitors do better (or worse) than others under CALLS, when compared to the status quo.

The proposal raises both legal and political issues. Like most proposals in the telecom policy arena, this one raises a variety of questions of a legal or political nature. Does it conform to the not-always-clear-and-explicit language in the Act? The petition provides for a new process that will redistribute political power among different classes of regulators, carriers and users. Both losers and winners would like to come out with more power.

The foregoing sketch is indicative of the terms on which the issues are now being debated. No short summary can do full justice to the issues raised by this proposal. That such concerns should be broad and rich is not at all surprising, given that the means for collecting over a half a billion dollars in annual charges is at issue, and that virtually every economic and political entity in the telecom sector is affected,
for better or worse, and with wide-ranging intensity.

Despite the breadth of these issues, they unfortunately do not cover the full range of the public’s stake in the outcome. Also, there is some risk that some of the larger and more important issues will not be fully addressed in the debate. In particular, none of the parties has adequately addressed the macroeconomic implications of the proposal or its congruence with broader forces at play in the information technology sector.

A Macroeconomic View of the Implications of CALLS

The linkages between developments in local and long-distance telecommunications networks and services, the Internet, and the broader information technology sector, on the one hand, and the dynamism of the U.S. and world economies, on the other hand, is coming to be more widely appreciated. For many decades prior to the proliferation of new information and communications technologies, regulators of telephone services could reasonably assume that their rate-making decisions would have little material and direct impact on the nation’s larger macroeconomy. That is no longer valid in the New Economy, where information technologies, computers, networks, the Internet and the nation’s nervous system are inextricably linked with the nation’s larger macroeconomic well-being. Phone rates and their structure matter to more than just the users of voice services, because they are now critical to a wide range of the nation’s economic activities.

An authoritative voice on these linkages, Chairman Alan Greenspan of the Federal Reserve Board, has on several recent occasions informed Congress and the financial markets that productivity gains and other economic benefits of investing in information technologies have substantially contributed to price stability, job creation, economic growth and fiscal balance in the domestic economy.

Indeed, the combination of low unemployment, price stability, and growth in per capita income is unprecedented in the U.S. and world economies. These stimuli have been spurred largely by the remarkable and unanticipated development of the Internet and have been driven by information technology. Combined with the low interest rates they have enabled, these stimuli have propelled the market capitalization of public U.S. companies upward by about $10 trillion and, since 1994, have generated increases in wealth of nearly $100,000, on average, for each U.S. household. They also provide the basis for expectations that the federal budget will generate over several billions of dollars in surpluses over the next decade.

Some economists believe that the Internet-led economic rejuvenation of the domestic and world economy, though still young, could, if properly nurtured, continue indefinitely and at even a faster pace. They emphasize that growth tends to accelerate with growth in, and improved access to, the nation’s pool of intellectual capital in an information-intensive economy such as ours. As a vehicle for creating, sharing, storing and using information, the Internet has accelerated the process of accumulating intellectual capital, which is useful in fueling growth, boosting productivity and dampening inflation.
At the same time, the Internet has made unprecedented amounts of quality information available to researchers, entrepreneurs, managers and public decision makers at little or no cost. This has led some to observe that, in many respects, future growth of the information technology sector and the Internet is as important to continued expansion of the economy as Federal Reserve Policy. Internet-driven growth is deflationary growth spurred by increased efficiency, cost reductions and demand expansion, all brought about by the remarkable economics of new IT applications and the Internet.

Analysts warn, however, that continued exponential growth of the Internet, and the economic benefits and stimulus it provides, is by no means inevitable. Analysts at Morgan Stanley Dean Witter put it succinctly: “The high-productivity economy is a hungry machine, and will have to be fed with continued rapid increases in high-tech investment to sustain the higher rates of productivity growth.” (Morgan Stanley Dean Witter, U.S. Investment Research, Economics – Inside the U.S. Economy, November 8, 1999, at p. 2.)

As discussed below, the CALLS proposal will facilitate and encourage the kinds of infrastructure investment called for by the Morgan analysts. Several analysts have called attention to the critical but often overlooked fact that, if the Internet is to continue fueling productivity growth throughout the economy, very capital-intensive communications networks will have to be modernized, adapted and replaced in order to extend high-speed offerings at affordable rates to all users – both residential and small business users, in sparsely populated as well as metropolitan areas. In the words of Morgan Stanley Dean Witter:

Using computers for many business functions didn’t really pay off until they could exchange information using the Internet’s shared infrastructure [interconnected telecommunications networks]....The Internet made possible business to business commerce, which is just gathering steam. And the upsurge in telecommunications capacity should accelerate the process by making it cheaper. (Inside the U.S. Economy, p.2)

There are two critical, related reasons for the dependence of macroeconomic performance on developments in the IT and telecom sectors. First, most next-generation e-commerce applications relied on by the IT sector and Internet service providers (ISPs) to add the next wave of value to the Internet will require bandwidth-intensive features that dial-up phone modems will simply not support. Current alphanumeric and still-graphics applications will be superseded by more sophisticated graphics, audio and video streaming, full motion video and two-way video – applications that require higher speeds and bandwidth. The arithmetic and economics are clear: Internet growth at recent rates is simply not sustainable with current bandwidth constraints on public user networks.

Second, adding bandwidth will create demand for even more bandwidth. Just
as improved PC performance – storage, speed and reliability – was rapidly absorbed and begat more demand for bandwidth by software providers and end-users, so will additions to bandwidth in common user networks spawn more bandwidth-intensive applications, more users, more packets, and more hits. More network bandwidth may well make "killers" out of some currently unfeasible applications and render many others economically viable.

The value of the Internet varies with the number of users, the number of applications, the number of packets transmitted, and the number of entries to the network, all of which will grow with increased bandwidth. But the scale of value is not linear. Like other communications networks, the value of the Internet tends to increase by the number of users squared, thereby creating something of a virtuous circle. New e-commerce applications attract new Internet users, making it easier for service vendors to recover development costs, which tend to represent the lion’s share of total costs. Similarly, as the prospects for recovering costs – including reasonable returns to investors who pay to develop new applications – become more predictable, more venture capital is invested in new applications, which leads to more rapid innovation, higher productivity growth, lower prices and interest rates, and a more robust economy.

In short, the potential impacts of rationalizing telecommunications rate structures, as proposed by CALLS, reach far beyond the issues traditionally debated in telephone rate cases and extend into the very heart of the New Economy. CALLS will stimulate telephone investment, which will spur broadband-related investment in the broader information technology sector, which, as it has in recent years, will continue to create assorted macroeconomic values: growth, productivity, stable prices, international competitive advantage and, most importantly, good jobs.

**Regulation Is Instrumental in Growth of Bandwidth and New Services**

The Federal Communications Commission takes great pride in claiming that it does not regulate the Internet. Nevertheless, it does routinely wield great economic power over the network infrastructure that conveys Internet traffic, both directly over incumbents and indirectly over entrants whose fortunes are shaped by regulatory constraints. Using its regulatory powers over market structures, corporate structures, carrier rates and services, as well as other elements of market behavior in the regulated sector, the FCC exerts powerful leverage over the pace and composition of investment in key technologies and infrastructures that can either boost or stymie the desired growth and benefits of the IT sector and the Internet.

In fact, the influence of FCC regulatory programs on capital budgeting and investment decisions is on par with market determinants like interest rates, investor expectations, risk, growth and others. Indeed, each of those market variables is, to an important extent, contingent on various Commission regulations. Securities analysts, as well as budget planners within firms, invariably devote significant attention to the regulatory environment and trends while assessing the likely payoffs of different investment programs.
In short, regulation matters. The course of regulatory reform will determine the market signals – risk, cash flow, growth – that will influence investor willingness to underwrite the enormous capital costs required for transforming the national infrastructure from the currently ubiquitous narrowband, circuit-switched, analog, voice-oriented network to the future, universal, affordable, broadband, packet-switched, digital, multi-format network of networks expected throughout the public and private sectors.

To get from here to there will require, by various estimates, over a trillion dollars in new capital formation just to underwrite construction of the necessary infrastructure. Hundreds of billions more will be tiered onto that, in investments for assorted hardware, software and content. The details of FCC regulatory programs going forward can be pivotal in the pace and composition of such a network revolution.

The Federal Communications Commission is faced with two distinct regulatory models – one is backward looking and the other forward looking. The first is based on the traditional tools used to control monopolies, to manage rates and to regulate services in ways designed to promote stability, uniformity and predictability. That common-carrier model was historically successful in the context of its times, the prevailing technologies and past national priorities. It was abandoned, in large part, because it did not provide the kinds of diversity, creativity, user options, innovations and efficiencies anticipated with competition and freedom from government regulation.

That shared management model of public utility regulation has been yielding to a second, newer model, marked by promotion of entry and market rivalry, in which some market contestants are freed from traditional regulatory constraints. There is a fundamental asymmetry between the elements of the old "public utility model" of regulation and the requirements of a twenty-first century regulatory program that encourages risk taking, growth and diversity. Begun over two decades ago, and given impetus by the 1996 Act, the transformation of the old to the new model is only partially completed.

Given the importance of network infrastructure investment to the development of IT and the Internet, as well as the importance of each to America’s continued macroeconomic performance, the Commission can, and should, reasonably reorder its preferences among individual elements of the public interest – growth vs. stability, trial and error vs. predictability, increasing wealth rather than dividing it, diversity vs. homogeneity, and risk vs. security.

If investors are to respond and provide the capital necessary to transform the IT infrastructure, regulators must provide encouragement, and especially the assurance that government rules will recognize that new markets and technologies are driven by risk and growth, not by security and stability. Investors can manage technological risk, market risk and financial risk, all of which are much greater than they were under the old market and regulatory regime. The FCC can, and should, assist in offsetting part of those risks by minimizing the regulatory risks – that is, by
minimizing the uncertainties, costs, handicaps and inefficiencies inherent in old-style regulations driven by the common-carrier-analog-voice-circuit-switched-network view of the world.

Given a more enlightened environment, markets will work, even though they will sometimes be messy. From the perspective of some special interests, of course, markets will sometimes yield negative outcomes, but those are simply the necessary costs of the overwhelming benefits they will contribute to the common weal.

Restructuring Rates -- A Critical Transitional Mechanism

Analysts inside and outside the Commission are well aware that most of the regulatory issues on the Commission's agenda carry with them substantial implications for both the speed and makeup of the transition from the old to the new network environment.

Although the CALLS proposal has been tabled in this transitional environment, it is remarkably consistent with the residual, but changing, requirements of the old regime, as well as with the new regime. It enjoys a high degree of consistency with traditional Commission goals and other policy initiatives, while strictly complying with specific statutory and judicial mandates. More important than its conformance to the old standards of the public interest, however, the CALLS proposal is very much in harmony with emerging forces of the new digital economy, as embodied in and exemplified by the astounding growth of the Internet.

Congruence with Forces Underlying and Unleashed by Internet Growth

Most of the debate and inquiry at the FCC over the CALLS proposal has been couched in terms historically addressed in rate cases for regulated utilities – fairness, efficiency, impact on investment and on the public interest very generally. As will be set forth presently, the CALLS proposal, on balance, passes these tests.

However, there are other important considerations that have come to the fore as the result of the development of new digital, packet switching technologies and their manifestations in the dramatic growth of the Internet. Significantly, the CALLS proposal is very much congruent with the requirements of forces propelling the growth of the Internet and the goods and services required to support (hardware, software, content, info-mediaries, etc.) and exploit (e-commerce and improved distribution of social services) that growth.

The CALLS proposal eases the transition to a natural rate structure in an Internet protocol environment. Beyond fulfilling traditional goals, the CALLS proposal is sensitive to the forces of the changing technological and market environment. While complex and varied, those forces are rooted in the unique regulatory challenges arising from convergence of markets for the current ubiquitous, narrowband, circuit-switched, analog, voice-oriented network and the affordable, broadband, packet-switched, digital, multi-format, Internet protocol (IP)
network of networks that will mark our future. The structure of rates that made sense in the former will be destructive if carried over into the latter.

For example, in the old regime, the basing of rates on minutes of use had the effect of discouraging lengthy phone conversations and impelling users to be brief. In an Internet environment, charging users for the time they spend online would, in effect, defeat most economic applications of the Internet. The disastrous effect of such pricing is now being realized in both Europe and Japan, where minute-of-use-based tariffs are widely blamed for suppressing the rate of Internet development there.

It is of little value, therefore, for the FCC to disclaim any desire to regulate the Internet as a matter of policy, then contradict that intent by requiring minute-based charges for local networks as a matter of practice. While it was quite reasonable to charge for holding times in the circuit-switched-voice-network environment that prevailed until about a decade ago, carrying that practice over into the New Economy can only spread the contagion of inefficiency, waste and lost opportunities.

The CALLS proposal propels monopoly telephone rates toward a competitive Internet protocol structure. Packet-switched computer networks have entirely different cost structures from circuit-switched voice networks. Incumbent local-exchange company networks will, indeed must, eventually be priced in ways that reflect the unique cost and demand economics of the former. The CALLS proposal is a good first step, albeit only a limited first step in that direction.

Ultimately, incumbent local-exchange company networks will be priced in accordance with evolving principles of computer network pricing. Experts are currently discussing a variety of schemes, involving both flat rates and charges that vary with usage as measured by the number of hits, the number of packets, and the bandwidth required. Other approaches involve dynamic assignment and pricing, sometimes even real-time auctions. While such principles and methods are still being explored and evolving, there is no longer discussion over the merits of minute-of-use charges of the kind now imposed by incumbent local-exchange companies on interexchange companies. The consensus is that there are no efficiency gains from recovering usage-insensitive costs through usage-sensitive rates.

We are presently saddled with a structure of rates that evolved under a set of technological, market and regulatory conditions that bear little resemblance to those now prevailing and no resemblance at all to those that are emerging. If we had the luxury of starting with green fields and constructing a rate structure consistent with current techno-economic and regulatory realities, it would look much like the one toward which the CALLS proposal will propels us.

The CALLS proposal reduces pressure to regulate Internet service providers. CALLS will put Internet service providers and interexchange companies on the same footing, with similarly structured rates, and thereby reduce the pressures to maintain and/or impose regulations and additional costs on this dynamic sector of the market.
The CALLS proposal is consistent with the natural rate structure that will evolve in an environment of competing IP networks, as envisioned by Commission policy. The Commission has insisted that it will not regulate Internet service providers. Given, however, that the structure of rates for all technologies and networks providing closely competitive services must be roughly comparable in the long run, it is unavoidable that either incumbent network prices must mirror those of new Internet protocol networks or the latter must be brought into line with incumbent networks. CALLS will move telephone network pricing toward Internet-protocol-based network pricing as an interim step toward the ultimate market-driven conformity. The alternative is simply not acceptable.

The CALLS proposal sends a positive signal to the Internet community of interests. Adoption of the CALLS proposal will signal to the community of Internet firms supplying complementary goods and services – hardware, software, content and assorted network-enabling goods and services – that the Commission is committed to moving beyond traditional regulatory models and politics in pursuit of policies specifically designed to accommodate and encourage new technologies and economic growth. Such a move can only add value to investment in that sector and spur capital formation and diversification accordingly. The added investment and innovation will have direct effects in the sector, but it will also contribute mightily, for reasons discussed above, to continuation of our magnificent macroeconomic performance of the past few years.

The CALLS proposal moves toward symmetric regulation of competing technologies. An important policy objective frequently repeated by the Commission has been to design regulations that are technology-neutral and thus to permit intermodal competition unbiased by government action. Currently, only wireline telephony is subject to pervasive economic regulations, a situation that has created sympathy and pressure to replicate elements of telephone regulation for other technologies capable of providing broadband services – cable, in particular. By stripping away the usage-sensitive elements of telephone cost recovery and assessing end-users directly for costs they impose, the CALLS proposal will eliminate temptations to impose inefficient, outdated regulations and pricing constraints on emerging technologies and services from cable, wireless and satellite firms.

The CALLS proposal forces local access charges toward a sustainable IP service rate structure. Unlike circuit-switched analog services, the underlying costs of packet-switched services do not depend on call or session holding times. Instead, packet network costs are determined by the amount of data or number of packets that individual parts of the network (e.g., switch, loop and interoffice transport) can handle at a given period of time (e.g., peak demand).

It follows from that difference that attempting to recover Internet protocol network costs via per-minute charges traditionally collected by local telephone companies would be highly inefficient; would likely slow the conversion from circuit-switched to packet-switched architectures, and in any event, would be unsustainable as competing, unregulated networks develop and combine to shape the long-term natural rate structure for IP capacity and services. In the long run, the structure of rates will mirror the structure of IP network costs, which bear no
resemblance to historical telephone rate structures. Costs will be recovered as costs are incurred.

CALLS Promotes Traditional Public Interest Values and Those in the 1996 Act

In addition to the foregoing advantages expressed in terms not usually found in public utility rate cases, the CALLS proposal melds well with the Commission's commitment and obligation to continue pursuit of traditional goals and those spelled out in the Telecommunications Act of 1996 – universal service, rate stability, equity, efficiency, infrastructure development, rationalization of rate structures, and making subsidy mechanisms explicit. CALLS serves each and all of these objectives well.

The CALLS proposal increases short- and long-term aggregate consumer welfare. Notwithstanding the claims of consumer advocates, the CALLS proposal is pro-consumer in essential respects. Considering that no change in the way access costs are recovered is going to benefit all consumers, the real test is whether aggregate economic welfare is increased, and on that count there is no doubt.

Increased aggregate welfare is assured by the fact that changes in consumer welfare depend on the size of the market, relative price changes, and the responsiveness of consumers to those price changes. Granted that the increased monthly line charges under the CALLS proposal represent a loss in consumer welfare, but that loss will be more than offset by the windfall to be enjoyed when vigorously competing long-distance carriers pass along the resulting cost savings to the consumers. In the aggregate, therefore, consumers will fare better under CALLS, experiencing a net increase in well being, even in the short run.

Those consumer gains have been quantified in a recent analysis done for the Alliance for Public Technology. That analysis found that the CALLS proposal would increase consumer welfare by over $5.0 billion per year. Moreover, the study also found that: businesses would benefit by over $4.0 billion annually, rural customers would be better off, and low-income families would tend to fare better under the plan than wealthier families. (Joel Popkin & Co., Restructuring FCC Regulated Phone Rates, at http://www.jpecon.com/phone_rates.html, p.2.)

G3Notwithstanding the immediate gains from the rate restructuring itself, the real payoff to consumers, and the major source of increased welfare, will emerge in the longer run. The long-term benefits will result from increased operating efficiencies enjoyed by telecom firms and those they serve; from intensified competition that lowers costs and increases quality and diversity of services; from added technological alternatives; and more generally, from the myriad influences throughout all sectors of the economy of rationalizing the pricing of an important and ubiquitous input – telecommunications network services – that accounts for a substantial part of the cost of doing business.

All consumers will benefit in some measure from the CALLS proposal, some more and some less, but all to the good eventually. Some will experience a temporary
disadvantage, but even those who wind up paying more in the short run will benefit from the investment in economic efficiency, growth and development of new services, features and innovations. Given a choice between two futures – one shaped by the CALLS proposal and one without CALLS – those who fully understand the short- and long-term implications should be overwhelming in favor of the CALLS alternative.

The CALLS proposal promotes competition. Implicit subsidies that hold rates for local service below cost will discourage entry. The present rate structure would very likely be deemed predatory and in violation of the antitrust laws were it privately established as a marketing strategy by firms not compelled by regulatory policy.

The reallocation of non-traffic-sensitive costs under CALLS will raise incumbent rates with which entrants must compete. The result will be to increase both the incentive and the opportunity for new entry and will intensify competitive pressures in the future. Spokespersons for recent entrants – competitive local-exchange companies – have stated that the CALLS proposal will help develop local competition. The proposal will bring regulated rate structures into conformance with rate structures being adopted by incumbent local-exchange companies to price their networks consistent with evolving market forces – that is, according to the structure of network costs and patterns of user preferences, rather than by regulatory fiat and custom.

The CALLS proposal extends forward-looking rate making. As a basis for their rate regulatory schemes, the FCC has long maintained that historic, book costs are misleading as a guide to investment and rate-making in this technologically and economically dynamic marketplace. CALLS extends and broadens the application of that perspective. The CALLS proposal is congruent with the FCC rationale in adopting forward-looking cost models for pricing incumbent local-exchange facilities provided to local competitors. CALLS proposes forward-looking rates that reflect the cost structure of facilities that are being built and that will soon dominate local network infrastructures.

The CALLS proposal will improve investment incentives by reducing uncertainty. By rationalizing the rate structure and locking in rates for an extended period of time, the CALLS plan will reduce regulatory risk and increase investment incentives for local and long distance, incumbents and entrants alike, by: (a) reducing regulatory rate churn from frequent represcriptions; (b) reducing uncertainties about sources of revenue for local-exchange companies, sources of costs for interexchange companies, and competitive-rate standards for entrants; as well as (c) eliminating uneconomic, unsustainable rate structures that analysts concede will be eliminated by either market forces or the application of new regulation in furtherance of the 1996 Act’s requirements.

Further, by reducing the burdensome chunk of unmanageable costs of services occasioned by carrier line charges for interexchange companies, the CALLS proposal will reduce operating leverage and risk in an increasingly competitive environment, thereby lowering the cost of capital and encouraging capital formation in the sector.
Several Wall Street analysts have supported implementation of the CALLS proposal, citing the reduction of uncertainty, the reduction of risk, and the reduction of capital costs. The value to the economy should not be underestimated, in light of the substantial contributions, discussed above, that investment in this sector creates in the macroeconomy.

The CALLS proposal bears little consequence for the low-income user. Notwithstanding persistent assertions to the contrary, recent and authoritative analysis indicates that shifting line cost recovery from usage-based charges on long-distance users to direct, flat charges on all subscribers will have an inconsequential net impact on low-income users.

Income distribution among high-volume toll users and low-volume toll users is almost identical, so that shifting responsibility for cost recovery, as CALLS does, has no substantial income distribution effects. Welfare losses from increases in effective per-minute charges for low-income, low-volume users will be almost precisely offset by welfare increases enjoyed by low-income, high-volume users. Fixed-cost obligations imposed on supplying carriers by guaranteeing access and usage options to low-volume users of long-distance services can reasonably and efficiently be recovered through the direct, fixed monthly charges provided in the CALLS proposal. The impact of CALLS on low-income users is beneficial, as measured by the Alliance for Public Technology study cited above.
Conclusion

If implemented as proposed, the CALLS plan for rationalizing telephone rate structures and funding universal service with direct assessments on users is consistent with traditional public utility regulatory goals, while also providing a transitional mechanism and path to Internet-driven telecommunications markets of the futures.

Clearly, no plan for implementing Congress’ mandate to rationalize rate structures and universal service support mechanisms is going to satisfy all the constituencies that have a stake in rates for services provided over national, switched, telecommunications networks. Nevertheless, the CALLS plan satisfies the major demands on a policy change as fundamental as this one. It will make most consumers better off in the short run, while contributing to our broader, longer-term interests and promoting increases in the national welfare by stimulating investment and innovation in telecommunications and information technologies.

The very substantial and diverse benefits of the CALLS proposal, many of which are delineated above, should not be sacrificed on the grounds that the proposal does not do enough, or on the grounds that it is not tailored to serve some particular group of special interests.
About the Author

Larry Darby is a Visiting Fellow at the Economic Strategy Institute, where he focuses on issues of information technology, telecommunications, and industrial organization. Specifically, he concentrates on policy implications of developments in broadcasting, cable television, domestic and foreign telephony, trade and technology, and domestic common carrier regulation. Darby is also President of Darby Associates Communications Consultants, a firm he founded in 1988. Additionally, he lectures on telecommunications at The George Washington University. Previously, he served as Senior Economist in the White House Office of Telecommunications Policy, and as Chief Economist and Chief of the Federal Communications Commission’s (FCC) Common Carrier Bureau, where he was the architect of FCC orders directing reorganization and deregulation of the telephone industry. Darby received a Ph.D. in economics from Indiana University.

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