

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

Usage of the Public Switched )  
Network by Information Service )  
and Internet Access Providers )

CC Docket No. 96-263

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REPLY COMMENTS OF THE INTERNET USER COALITION

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American Association of Law Libraries  
American Association of Museums  
Association for Educational Communications and  
Technology  
The Benton Foundation  
Consortium for School Networking  
Consumer Federation of America  
Consumers Union*

*International Society for Technology and  
Education  
League of United Latin American Citizens  
National Association of Secondary School  
Principals  
National Association of State Boards of  
Education  
National Education Association  
OMB Watch  
Voters Telecommunications Watch  
Writers Guild of America East  
[membership in formation]*

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## SUMMARY

The Commission has been asked to take actions which could stifle the dynamic growth of the Internet as an egalitarian mode of expression and a commercial platform of boundless potential. It should decline to follow such a course.

Advocates of new time-based Internet access charges have yet to acknowledge the social consequences of their position. Such access charges would render the Internet *less valuable* as a tool of democratic discourse, and *less efficient* as an engine for economic growth.

The Internet Users Coalition and its member organizations<sup>1</sup> represent citizens who use, or may seek to use, the Internet. IUC argued in its initial comments that the Internet promises to change the very nature of cultural, social and political expression. Time-based or usage sensitive charges would have adverse consequences on the arts, on the economy, and on American self-governance. They would, quite literally, alter the nature of this rapidly evolving phenomenon.

*This is much more than a regulatory squabble among local telephone companies ("ILEC's), Internet service providers ("ISPs") and other major corporate interests.* What the record lacks is the recognition that *this is also a social policy debate*, the outcome of which will help determine how quickly the benefits of technology will be distributed throughout society.

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<sup>1</sup>The IUC is still in formation. On the date of the first round of comments, its member organizations were: Media Access Project, Center for Democracy and Technology, Association for Educational Communications and Technology, The Benton Foundation, Consortium for School Networking, Consumer Federation of America, Consumers Union, League of United Latin American Citizens, National Association of Secondary School Principals, National Association of State Boards of Education, OMB Watch, Voters Telecommunications Watch, and Writers Guild of America East. Additionally, the National Education Association, American Association of Law Libraries, American Association of Museums, and the International Society for Technology and Education have joined the IUC since the filing of the first round of comments.

*"Users" are also "citizens."* Since small business and residential customers would almost certainly bear the brunt of time-based access charges on Internet service, access fees are *anti-democratic and exclusionary*. For many users many more potential users, such charges will make the difference between whether to use, or not to use, the Internet. The First Amendment requires the FCC to give the highest priority to promoting the free flow of information, facilitating efficient modes of commerce, and creating a well-informed electorate. It can hardly be contested that the Internet is an avenue for advancing all these goals, yet the proposed access charges would strike at the heart of its effectiveness.

The Internet can enlighten and inspire all Americans:

- The University of Georgia's GALILEO data base project enables orchard owners use the Internet to check on weather information, pest damage or drought conditions, determine fruit and vegetable prices, and search for new markets.
- An Arlington, Virginia science teacher uses personal funds to pay for Internet access, Her students get ideas and encouragement on research projects and coursework from scientists at national research labs.
- A regional community network in Charlotte, NC, provides area residents with open, public access terminals in libraries, neighborhood and senior centers, shelters, health care facilities, classrooms, and school libraries. All community members can access information about town meetings, medical referral services, clinics and AIDS/HIV resources, volunteer clearinghouses, arts and entertainment calendars, traffic reports and public transportation schedules.

In all these projects, and hundreds more just like them, users benefit from low-cost information access, improving their community, economy, and quality of life. But the imposition of per-minute connection fees would increase program costs, curtailing this beneficial access and perhaps spelling the end of these initiatives.

Moreover, it is widely acknowledged that an essential step in the Internet's development is to embrace more efficient, high-bandwidth technologies for the transport of data traffic. Those supporting new charges, however, overlook the strong demand that already exists for greater

bandwidth. New charges are not necessary, therefore, and would stifle this competitive, innovative market. Indeed, the Commission has already been presented with much evidence that these solutions are just around the corner, and that users, and in turn ISPs, will demand them when they become available.

There is little agreement so far as to whether Internet traffic causes ILECs to suffer a net profit or loss. The IUC encourages the Commission to consider this traffic as a whole, including the considerable monthly revenues and installation fees derived from second residential lines, and to be wary of estimates of data traffic which do not actually increase costs to the network.

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**REPLY COMMENTS OF THE INTERNET USER COALITION**

The Internet User Coalition ("IUC") and its member organizations,<sup>1</sup> respectfully submit these Reply Comments in the above captioned proceeding.

The IUC is dedicated to the future potential of the Internet - a high bandwidth, low cost, decentralized network that is widely accessible to citizens. The IUC believes that every participant in this proceeding shares that goal. However, as the IUC argued in its Comments, the proposals to impose additional access charges on Internet users will *not* achieve this goal, and in all likelihood will be counterproductive. The Commission should come away from this proceeding focusing its future efforts on promoting the high bandwidth access to data networks that users are increasingly demanding. Once users see significant progress toward competitive markets that provide high-bandwidth, low cost access, they will be willing to pay for it.

**INTRODUCTION**

Advocates of new charges for Internet access have yet to acknowledge the social conse-

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Additionally, the National Education Association, American Association of Law Libraries, American Association of Museums, and the International Society for Technology and Education have joined the IUC since the filing of the first round of comments.

quences of their position. This fatally undermines their demands for fees which would impede Internet usage. Such access charges would render the Internet *less valuable* as a mode of expression, and *less efficient* as an engine for economic growth.

As a representative of the citizens who use, or may seek to use, the Internet, the IUC argued in its initial comments that the Internet promises to change the very nature of cultural, social and political expression. Any decision to create new cost barriers to Internet access would have significant consequences on the arts, on the economy, and on American self-governance. Time-based or usage sensitive charges will restrict who can use the Internet, and how they use it. These costs would, quite literally, alter the nature of this rapidly evolving phenomenon.

Many comments filed in this docket thoroughly explore the economics of access charges, their impact on the architecture and technology of the nation's telephone networks, and the state of competition among Internet providers. The IUC addresses these questions below, because supporters of access charges ground their on insupportable allegations about Internet congestion and inflated claims on the cost of providing Internet service.

*But this is much more than a regulatory squabble among local telephone companies ("ILECs"), Internet service providers ("ISPs") and other major corporate interests.* What the record lacks is the recognition that *this is also a social policy debate*, the outcome of which will help determine how quickly the benefits of technology will be distributed throughout society. Although imposition new fees will diminish the social dividend of the Internet, advocates of such charges have remained silent on this aspect of the debate.

As IUC has pointed out, "users" are also "citizens." Since small business and residential customers would almost certainly bear the brunt of time-based access charges on Internet service,

access fees are *anti-democratic and exclusionary*. For these citizens, the impact of higher Internet charges will be devastating. Whether browsing through virtual libraries; learning about science, art, and literature; checking newsgroups or websites; or comparison shopping for large purchases, access charges will make users watch the clock. Therefore, they will be far less likely to conduct thorough research, to follow the digressions that sometimes lead to unanticipated insights, or to discover the joys of learning and of giving voice to opinions on important and controversial issues. Indeed, for many of them, and for many potential users, charges will make the difference between whether to use, or not to use, the Internet.

As a matter of social policy, imposing access charges would be doubly misguided. The First Amendment requires the FCC to give the highest priority to promoting the free flow of information, facilitating efficient modes of commerce, and creating of a well-informed electorate. It can hardly be contested that the Internet is an avenue for advancing all these goals, yet the proposed access charges would strike at the heart of its effectiveness.

Moreover, the Internet flattens the cost of information, and makes it more readily accessible to groups such as lower-income populations, nonprofits, schoolchildren, and library users. These are populations that society should least want to disenfranchise, yet *access charges would take a substantial step in the segregation into information haves and have-nots.*<sup>2</sup>

IUC offers the following examples to show the Commission just a few of the myriad ways

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<sup>2</sup>This risk is not trivial. One study found that between 1984 and 1993, children's access to computers in high income families increased from 25% to 51.4%, while in low income families it only rose from 2.5% to 4%. Center for Media Education, *Connecting Children to the Future*, November, 1996, at 6.

the Internet enriches these populations:

- The University of Georgia's GALILEO data base project enables orchard owners to use the Internet to check on weather information, discover pest damage or drought conditions, determine fruit and vegetable prices, and search for new markets. Reply Comments of American Library Association in CC Docket 96-45 at 11, *citing* Alan L. Kaye, Director, Rodenberry Memorial Library, Cairo, Georgia, *Rural Technology*.
- In Arlington, Virginia, an elementary school science teacher uses personal funds to pay for Internet access, so that her students can get ideas and encouragement on research projects and coursework from scientists at national research labs. U.S. Congress, Office of Technology Assessment, *Teachers and Technology: Making the Connection* (April, 1995) at 60.<sup>3</sup>
- The University of Oregon and the Office of Independent Study at Portland State University offer graduate-level classes over the Internet. Even in remote areas, educators now have access to world-class staff development and leadership training classes, and can work at their own pace to earn credits toward masters and doctoral degrees. "ISTE Distance Education" (downloaded from <http://ISTEonline.uoregon.edu/istehome/de/index.html>). Internet Distance Education Associates reports that over 100 colleges and universities now offer coursework over the Internet. See <http://www.ivu.com>.
- A regional community network in Charlotte, NC, provides area residents with open, public access terminals in libraries, neighborhood and senior centers, shelters, health care facilities, classrooms, and school libraries. All community members can access information about town meetings, medical referral services, clinics and AIDS/HIV resources, volunteer clearinghouses, arts and entertainment calendars, traffic reports and public transportation schedules.

In all these projects, and hundreds more just like them, users benefit from low-cost information access, improving their community, economy, and quality of life. But the imposition of per-minute connection fees would increase program costs, curtailing this beneficial access and perhaps

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<sup>3</sup>Sadly, this teacher's experience is not unique. One recent report found that even though half the nations schools had Internet access in the Fall of 1995, very few individual students had access, and only 9% of classrooms. National Center for Education Statistics, *Survey on Advanced Telecommunications in U.S. Public Elementary and Secondary Schools, 1995*, February, 1996, at 3. The same study found many barriers to improving these results, such as lack of funds, poor equipment, and lack of teacher awareness on ways to integrate connectivity into the classroom. *Id.*

spelling the end of these initiatives.

As the IUC has already demonstrated, it is incumbent upon the Commission to acknowledge the primacy of these goals, and, if necessary, to fashion new models that promote greater access to and speech upon this new medium.

**I. MARKET FORCES, NOT REGULATORY CHARGES, ARE THE MOST EFFECTIVE AND EFFICIENT WAY TO ENCOURAGE DEPLOYMENT AND MIGRATION TO DIGITAL, OPEN, AND COMPETITIVELY PRICED HIGH BANDWIDTH NETWORKS.**

The parties filing formal comments in this proceeding are of almost universal agreement that an essential step for the Internet to reach its full potential as a speech medium and commercial platform is the development of more efficient technologies for the transport of data traffic. There is greater divergence, however, as to what mechanisms will best encourage this. Specifically, advocates of imposing new use-based fees argue that they are necessary to provide the proper economic incentives for ISPs to migrate traffic from the PSTN. In so doing, they fail to account for the significant social benefit from Internet use and the dynamism of the information services market. It is precisely because these charges would stifle this competitive, innovative market that makes them a bad idea.

**A. The Considerable Benefits To Society Of Widespread Internet Participation Should Not Be Overlooked.**

Of the commenters advocating imposition of new fees, those few who even consider the effects of these charges on end users argue that it will encourage citizens to use the Internet more efficiently. They point to the rapid growth of dial-up users in recent months, *see, e.g.*, Comments by Pacific Telesis Group at 9-10 ("PacTel Comments"); Comments of US West, Inc. at 16 ("US West Comments"), and claim that without per-minute charges, there will be no

incentive for these individuals to limit their use. GTE, for example, concludes that "[a]s long as ISPs and their customers lack any incentive to limit their use of business and residential lines, they will continue to push the network...." Comments of GTE at 26 ("GTE Comments"). Thus, several ILECs appear to base their positions upon a notion that less use means more efficient use.<sup>4</sup>

This argument overlooks the considerable social benefits of Internet participation. The ILECs' market analysis does not even attempt to account for the value individuals - users and non-users alike - and society as a whole derive from the Internet. But the Internet produces a great and evolving social benefit, because it has become a tool for education, research, employment, entertainment, and communication. It is a new medium of expression and civic participation, and thus greatly enhances democratic values. Moreover, the Internet is a rapidly growing platform for economic transactions, because it permits the efficient use of resources, time, and money.

**B. Market Forces Already Provide Sufficient Incentives To Stimulate User Demand To Upgrade To High-Bandwidth Data Networks.**

The commenters noted above seek to impose burdensome regulatory fees in the hope that it will eventually stimulate consumer demand for data services. GTE Comments at 25-26; Comments of the Alliance for Public Technology at 8-9 ("APT Comments"). Without new use-based fees, they claim, users will remain on the PSTN, because it will be less expensive than newer data networks. *Id.*

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<sup>4</sup>As the IUC has already observed, access charges would diminish Internet use. IUC Comments at 15-16.

But imposing these supposed incentives would be unwise for two reasons. First, they would kill the Internet in order to save it. As the IUC noted in its comments, imposing new access charges necessarily involves a great risk of reducing the Internet's value as a speech and commercial medium, stifling its growth, and limiting its potential to incorporate traditionally-underrepresented populations. IUC Comments at 15-17.

Second, new fees are not necessary to stimulate user demand for data technologies. User demand already exists, there is no need to stimulate it artificially through a new, onerous regulatory fee. A trend towards using the Internet for more intricate websites, multimedia communications, and collaborative activities has fueled demand for higher speeds and greater bandwidth, even at a premium price.<sup>5</sup> As evidence, the IUC has already noted the rapid spread and reduction in price of high speed modems. IUC Comments at 12. The Commission has, moreover received voluminous proof from user organizations that great demand exists for high bandwidth, open architecture, data friendly networks. *See, e.g.*, Kevin Werbach, Office of Plans and Policy Working Paper Series, "Digital Tornado: The Internet and Telecommunications Policy, March, 1997 at 24 ("OPP Working Paper")("There is a tremendous level of pent-up demand for bandwidth in the user community today"); Daniel J. Weitzner, "Expanding Access To the National Information Infrastructure For Individuals and Community Organizations: Open Architecture and Affordable, Digital Bandwidth," presentation at Federal Communications

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<sup>5</sup>For example, in a recent national survey, 20% of U.S. homes indicated that, when it becomes available, they would subscribe to high bandwidth Internet service and would pay at least \$40 a month, twice today's market price for dial up service. Strategis Group, "One in Five U.S. Homes Are Ready to Pay \$40 a Month For High-Speed Internet Access," in *P.R. Newswire*, April 13, 1997. Among current online users, the number who would pay \$40 a month for high bandwidth service jumps to over 40%. *Id.*

Commission Bandwidth Forum, January 23, 1997.

Furthermore, many of the industry commenters in this proceeding have used marketing and advertising to stimulate greater user demand for high bandwidth connections and better service quality. Claims of better reliability and speed are, indeed, central to the ILECs promotional materials for their own ISP business units. For example, PacTel tells users in its territory "if you are going to use your additional line to access the Internet, Pacific Bell Internet offers the fastest, easiest, and most reliable Internet access available." "Special Offers: Pacific BellSpringAdditionalLine" (downloaded from <http://www.pacbell.com/ideas-offers/offers/offer-add-line.html>); Comments of America Online at 42, n. 114 (quoting Bell Atlantic promotional materials that "Bell Atlantic.net will differ in the...speed and performance of our network"). As the IUC has already noted, ISP advertisements also tout superior speed and reliability of service. IUC Comments at 11.

This user demand will, in turn, stimulate ISPs to adopt more efficient transport technologies. The ISP industry is fiercely competitive, in terms of competition as well as price. As ISPs battle for market share among existing users, and for position and goodwill to attract new users, their advertisements prominently feature claims that their service provides higher bandwidth, or fewer busy signals. These are all indicia of an inherent consumer demand for better ISP services, one which exists even without the regulatory burden of use-based fees.

Indeed, it would be inequitable to impose fees on Internet users before they have any real choice. In most cases, even though local competition may be evolving, users presently do not

have the ability to choose among rival carriers - the PSTN is their only link to their ISP.<sup>6</sup> This is especially true for residential users, since many competitive LECs offer their services almost exclusively to business customers. In sum, it is highly unlikely that imposing charges will encourage users to move to data networks because those networks are not available. In this case, a fee is not an economic incentive, only a fee.

A few ILECs cite examples of users leaving connections open for several hours per day, or even all day. PacTel's funded study claims that 7.5% of the total minutes of use for Internet dial up traffic comes from calls lasting 24 hours or more. Pacific Telesis Group, "Surfing the Second Wave," March 24, 1997, at 6-7 ("PacTel Study II"). US West, with no factual support, claims that connections "often" stay open for 24 hour periods, and "many" for an entire week at a time. US West Comments at 15-16.

These claims focus on extreme cases rather than the average Internet user. To be sure, there are some individuals who keep connections open for very long times, but they are on the very end of the continuum.<sup>7</sup> It is important to note the ambiguity of PacTel's statistic, because its study fails to state whether it is a weighted average. The 7.5% appears to refer to *minutes*

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<sup>6</sup>See, Comments of the Commercial Internet Exchange Association at 6 (94% residential users and 66% of institutional users rely on PSTN). Although some alternative connection technologies exist, such as Internet service provision on MMDS or LMDS systems or various test markets for cable modems, their market share is minuscule and it is presently impossible to predict with certainty their eventual market penetration and geographic distribution.

<sup>7</sup>This characteristic, a distribution of individuals from most intense use of the network to least intense use, is hardly unique to the Internet. There are individuals who stay on the PSTN for hours at a time, or who make a disproportionate number of calls per day. Similarly, there are some who leave electric appliances running all day, or fail to moderate their water use. Significantly, however, these few intense users generally do not justify imposition of use-based fees to the entire user population.

*of use*, not numbers of callers. Thus, suppose that one user makes a 24 hour (1440 minute) call, and 960 users make an average 20 minute call. That one user, *only 0.1% of the population surveyed*, would still cause 7.5% of all minutes of use. Thus, the ILECs advocate a regulatory policy which risks stifling the viability of a growing medium because one user in a thousand shows heavy use.

Moreover, it is virtually certain that these individuals who do leave their connections open for a day at a time have purchased a second residential line. Otherwise, they would be left without any voice service at all. Therefore, these users already pay rates which help offset the costs of such intensive use.

**C. Market Forces Already Provide ISPs With Sufficient Incentives To Migrate To Data Networks, And Imposing New Use-based Fees Would Be Unnecessary And Would Reduce Competition.**

Several commenters supporting the imposition of new charges on ISPs argue that such charges are necessary to provide ISPs with economic incentives to migrate from using the PSTN to terminate user traffic to more efficient data networks. Once again, these claims suffer the flaw that they fail to consider the effects of the competitive market for information services. Driven by user demand for faster, decentralized, and reasonably priced services, this dynamic market already shows indications of great pressures on ISPs to evolve. Not only would regulatory fees distort these marketplace forces, but they would risk destroying the competitive, open nature of Internet service provision, and could force users to pay for transitional network technologies that are not viable over the long term.

**1. ILECs Do Not Need To Cover Their Costs Before Making Investments In Data Networks.**

Many commenters say that LECs need up-front infusions of capital to cover their costs of research, development, and deployment of new data networks. For example, Pacific Telesis notes that it "takes time to design, engineer, and deploy new services" in addition to the costs it claims result from Internet use, and that "without the receipt of ESP's access charges, we will have to do so without receiving compensation to cover the costs." PacTel Comments at 34. GTE laments that there will "be no sources of additional revenue to compensate for Internet access network augmentation costs in the future." GTE Comments at 28. APT has noted that the lack of access charges "is a disincentive to investment and innovation in the local network. APT Comments at 2. *See also* Christensen Associates Comments at 2; Comments of Cincinnati Bell Telephone Company at 6 ("Cincinnati Bell Comments").

These commenters seek to absolve ILECs from competitive, risk-taking behavior, and permit them to obtain a regulatory guarantee of cost recovery. In contrast, deploying new technology in a competitive communications market necessarily involves some risk of "stranded capital," balanced against the possibility of a large payoff. Indeed, encouraging parties to deploy technologies that could not be supported by sufficient consumer demand in an open market will lead to the inefficient allocation of scarce economic resources. With their proposal to impose new fees, however, ILECs seek to pass along the risk of stranded capital by requiring ISPs, and ultimately users, to finance their development costs.

This is unfair to users. As noted above, in most markets, the local loop is not open to CLECs or other competitive access providers. *See* n. 6, above. Thus, there is no incentive for

ILECs to moderate these new charges or to maintain quality of service. Users would have little choice but to pay charges to finance the ILECs deployment of new networks. Moreover, users will be stuck with "installed base" - they will already have financed the ILEC's data networks and switching to a competitive provider would require them to pay again.

**2. Market Forces And Competitive Pressures Will Provide Sufficient Incentives For ISPs To Migrate To Data Networks, But An Access Charges Regime Would Deter ILECs From Making The Upgrade.**

Many ILEC commenters say that under the current system, ISPs have no incentives to migrate their traffic to data networks. *See, e.g.*, PacTel Comments at 16-17, 34-35; Joint Comments of Bell Atlantic and NYNEX at 12-13 ("BA/NYNEX Comments"); Comments of US West at 22. Bell Atlantic, for example, claims that, because ISPs pay only the local business line rate for each terminating line, they will not purchase new services when they are available. BA/NYNEX Comments at 12-13. As proof, it offers the example of its packet-switched overlay service, Internet Protocol Routing Service ("IPRS"), and bemoans the fact that no large ISPs has yet subscribed to it. *Id.*<sup>8</sup>

These arguments take a far too narrow view of ISPs' incentives. In fact, as noted above, ISPs already face strong incentive to upgrade their services. Moreover, this incentive is market driven - by Internet users - instead of being created by regulatory command as the ILECs urge.

Indeed, with ILECs collecting charges in excess of costs as long as data traffic remains

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<sup>8</sup>This so-called "proof" is anecdotal and dubious, at best. As noted below, pages 13-14, IPRS offers end users no improvement in bandwidth, and thus is not a viable long-term solution. Additionally, Bell Atlantic does not include information about the pricing of this service, whether it requires ISPs to purchase unnecessary equipment, when it was made available, or the manner in which it was marketed to these large ISPs.

on their PSTN facilities, as noted below at 21-25, it will be they who lack incentives to move to efficient networks.

**3. Use-based Charges Risk Placing ILECs In Exclusive Control Over Bottleneck Facilities, While Failing To Provide A Long-term Solution To Users' Need For Bandwidth.**

Although many commenters offered solutions to the problem of migrating Internet traffic to packet-switched data networks, only a few of these are readily available today. Most of the solutions offered by the ILECs are not yet widely deployed, except for certain "overlay technologies." For example, Bell Atlantic offers its IPRS service. IPRS would determine which user calls were directed towards an ISP, intercept them (either at the user's CO switch or on the interoffice trunk), and route them to the ISP *via* a packet network. BA/NYNEX Comments at 11, Attachment E. Other ILEC commenters discuss similar service offerings. PacTel Comments at 36 (Data Access Gateway service); PacTel Study II at 23-24; Comments of Southwestern Bell at 6-7 (IITS service).

But these so-called solutions are deeply flawed for several reasons. First, overlay networks run the risk of placing ILECs in gatekeeper positions instead of leading to open, accessible, and competitive local networks. This is because, as America Online has noted, overlay networks will deploy modem concentrators and packet-based trunk connectors in each ILEC central office, thus "effectively putting the cost structure of [ISPs'] transmission and aggregation function almost entirely into the hands of the ILECs," and placing ILECs in a position with the ability to harm competition "by providing competing ISPs with transmission functionality that is inferior or slow. AOL Comments at 41-42. This would destroy the open architecture and competitive market that has been an essential factor in the Internet's success,

and introduces a significant risk of anticompetitive use of this gatekeeper power.

Indeed, the negative impact on Internet service provision that can be caused by an entity in a bottleneck position has already been demonstrated. Some ISPs have complained that, even in servicing PSTN access lines, ILEC service quality has not been satisfactory, including "installation delays, repair delays, and interruption of service." CIX Comments at 7. Even though some ISPs have expressed interest in adopting data-friendly network technologies, *see, e.g.*, Jeff Caruso, "ISPs Drive ADSL Ahead," *Communications Week*, March 17, 1997, many have found that some ILECs are slow to deploy them, seek to charge unreasonable rates, or require the purchase of unnecessary service elements. CIX Comments at 9-10.<sup>9</sup>

The risk of placing ILECs in gatekeeper positions over Internet traffic flow would not be the only way in which access charges could greatly diminish the vigorous, robust competition now seen in the Internet services market. As the several parties have already noted, access charges could allow ILECs to conduct predatory pricing, and thereby to leverage considerable market power in the local exchange so as to foreclose competition in the ISP market. AOL Comments at 36-40 ("already there are signs that the ILECs will use their local exchange monopoly power to obtain gain [sic] unfair advantages in the Internet online services business"); CIX Comments at 19 ("[t]his problem is especially acute prior to the introduction of actual local

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<sup>9</sup>For example, the use of one high-speed Internet access technology, ISDN, "has been frustrated by the ILECs' complex service-ordering process. Service pricing has also been an impediment." Comments of the Internet Access Coalition at 24 ("IAC Comments"). America Online found that "Long experience dictates that...the ILECs will seek to bundle value-added and other extraneous services with the services customers desire. Similarly, delaying tactics in provisioning network services and elements to competing ISPs can also have anticompetitive effects." AOL Comments at 43 (footnotes omitted).

exchange competition"); IUC Comments at 15-16. These two anticompetitive forces taken together could redound to the detriment of all current and future users.

More importantly, and even more alarmingly, in the long run, these overlay network "solutions" provide no solution at all to Internet users. Communication networks, like a chain, are only as strong as their weakest link. In this case, the weak link is that overlay networks still require data to travel over the PSTN, and therefore limit data to current, low-bandwidth speeds. For example, PacTel admits that its Access Gateway service will only support current 28.8 Kbps analog connections and, only if the user pays a premium rate, 64-128 Kbps ISDN connections. PacTel Study II at 23. *See also*, BA/NYNEX Comments at Attachment E; Comments of MCI Communications Corporation at 9 ("MCI Comments"). This approach is simply not viable as a long term solution, because it overlooks the larger goal of promoting an open, high-bandwidth, data-friendly network.

Moreover, the ILECs' comments feature no indication whether they would devote revenue derived from the proposed new Internet use fees either to financing or reducing the price of these overlay technologies. They are silent about what they would do with any revenues that exceed their alleged costs of upgrading their COs and interoffice facilities. Their proposals would enable them to profit *thrice* - from their current charges and second line revenues, from their proposed new use-based charges, and from the profit margins built into IPRS fees.

**D. Technological Solutions Are Already Developing In The Open, Competitive Market.**

The Commission has already received much evidence in this proceeding concerning technologies which will supplement or compete with the PSTN for delivery of data traffic. *See*,

*e.g.*, Comments of Internet Access Coalition at 17-22, 31-34; PacTel Study II at 23-26; MCI Comments at 10-13. These new methods of data transport will not only reduce Internet user traffic on the PSTN, but will allow more efficient switching of data packets, greater bandwidth, and future technical evolution.

There is no need for the Commission to adopt regulatory measures which follow a monopoly, command-driven model, because a competitive market is already providing solutions. The ILECs' solution asks the Commission to interpose a regulatory command in what has been a largely regulation-free market. See, *e.g.*, OPP Working Paper at 3 ("the Internet has thus far not been regulated to the same extent as other media"). This same dynamic, competitive market has brought users faster modems, higher computer processing speeds, and interactive, multimedia communications. As noted above, at 6-10, there is already strong user demand for data-friendly, higher bandwidth networks, and alternative technologies are already in development.

On the other hand, a regulated system, with local exchange carriers controlling the pace of technology, has not yet provided solutions. Indeed, concentrated markets are known for their frequently slow pace of technical evolution. For example, in the customer premises equipment ("CPE") market, with decades of telephone service under a monopoly system, users could only choose leased, black rotary phones. Only after the Commission opened the CPE market to competition did product differentiation expand beyond alternative colors and "Princess" phones.

**II. THE CLAIMS THAT INTERNET TRAFFIC CAUSES AN UNRECOVERED COST TO THE PSTN BOTH OVERSTATE THE COSTS AND UNDERESTIMATE THE REVENUES DERIVED FROM INTERNET TRAFFIC.**

In this proceeding, as well as the *NPRM*, many ILEC commenters have provided the Commission with evidence attempting to show that Internet traffic causes unrecovered costs.

The IUC's Comments address the ILEC studies, demonstrating that they have overstated any problem that exists. IUC Comments at 22-36. While the ILECs have provided some additional details to support their claims, nothing they have submitted repairs the fundamental shortcomings of anecdotal evidence, unrepresentative sample selection, and overestimated cost predictions. In addition, the ILECs' comments contained several erroneous conclusions that merit further discussion.

**A. ILEC Estimates Overstate The Volume Of Internet Traffic Because They Assume That Every User Is Performing Time-Intensive Web Browsing.**

One manner in which the ILECs' cost studies exaggerate the impact of Internet traffic has not yet been discussed. It is apparent from the studies submitted with their NOI comments, that several ILECs consider all Internet traffic to be created equal. For example, PacTel's study assumes that every new Internet user will connect to their ISP for 45 minutes of use per day. PacTel Study II at 8.

These estimates erroneously suppose that all Internet users only access the Internet for long periods of time and for data-intensive purposes, like the World Wide Web or voice-on-the-net. This ignores what is perhaps the most prevalent form of Internet speech today: E-mail. Many users who currently access the Internet for E-mail never use other services, or only occasionally use them. Yet by counting these individuals together with early-adaptor or web-intensive users, the ILECs significantly overestimate the total volume of data traffic. Many of these users download E-mail in order to answer it offline, which requires mere seconds of online time. This omission illustrates the lack of precision in the ILECs estimates of the amount and

costs of Internet uses.<sup>10</sup> Basing new fees on the presumption that every user performs web-intensive browsing discriminates against those who do not necessarily follow this model.

**B. The ILECs Draw Uneven Comparisons Between Internet Traffic And Voice Traffic.**

Several ILEC commenters have presented statistics purporting to show that Internet call lengths are up to 10 times longer than PSTN traffic. For example, PacTel claims that business voice calls last 5 minutes, and residential voice customers calls last 3 to 4 minutes, while an Internet user call lasts 45 minutes per day. PacTel Study II at 6, 9. *See also*, BA/NYNEX Comments, Attachment B at 4, *but see*, US West Comments at 14 (14 minutes per ESP call); GTE Comments at 11-12 (16 to 17 minutes per ESP call).

This compares apples to oranges; when examined in their proper light, these statistics prove that there is much less cause for concern. First, the measure used for Internet calls, minutes per day, encompasses activity across an entire 24 hour period, not during the peak hour when costs to the network are actually incurred. Indeed, these studies are silent on the proportion of traffic that occurs during peak hour, and have even admitted that much Internet traffic occurs off peak. Thus, much of the traffic cited does not cause ILECs to incur costs.<sup>11</sup>

Bell Atlantic's study tries to prove that Internet traffic causes a "second daily peak

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<sup>10</sup>Indeed, E-mail may also replace the need for users to make certain local calls, thereby causing an even greater reduction in the estimates of traffic on the PSTN. Frequently, E-mail is used because it is quicker and more convenient than placing multiple local calls. With a few seconds of online time, the user can avoid placing several, perhaps dozens, of minutes-long voice calls. For example, users may E-mail game reminders to their softball teams, arrange meetings among large groups of people, or contact friends who might be hard to reach by phone.

<sup>11</sup>As the IUC noted in its Comments, at 26-27, off-peak traffic causes little incremental cost. See also, ETI Study at 11.

period." BA/NYNEX Comments, Attachment B at 4. This is a flawed argument. Because networks are engineered to accommodate maximum traffic levels, there can be only one peak hour, and ILECs will incur costs to expand capacity for that peak hour. The "peak" Bell Atlantic seems to be referring to is just an increase in use during off-peak hours, *i.e.* a "peak" in the sense of a bump or a ridge in the use curve, but not a new peak hour. Similarly, US West's claim that "busy hours are turning into busy days with very little relief from 9:00 AM until midnight," US West Comments at 17, is equally without meaning, absent a discussion of its maximum traffic loads.

Moreover, and in any event, PacTel and Bell Atlantic/NYNEX compare *minutes per day* for Internet traffic to *minutes per call* for voice traffic. It is unreasonable to assume that the typical residential user makes only one call in an entire day; and even less reasonable for the typical business user. Assuming *arguendo* that PacTel's statistics are correct, if a business user makes only 9 calls in a day, he or she will cause the *same load* to the network as the average Internet user. 9 calls for an entire business day is not an extreme case, but even if the business user makes fewer calls, the discrepancy is still nowhere near as great as PacTel suggests.

While US West and GTE seem to use more parallel comparisons between Internet calls and voice calls, they still do not specify the number of each type of call that an average user places per day. Again assuming *arguendo* the validity of their statistics, if a voice user makes 3 times the number of calls an Internet user does, they will cause the same total minutes of use. This is a very likely occurrence, because the typical Internet user dials in only once or twice a day, perhaps with the purpose of downloading E-mail, or retrieving a specific piece of information from the World Wide Web. Thus, if the typical voice user places *just 3 to 6 calls* in an