EDGEMONT EXHIBIT 4

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO
STATE OF OHIO

In the Matter of the Application of
The Ohio Bell Telephone Company
for Approval of An Alternative
Form of Regulation

Case
No. 93-487-TP-ALT

DIRECT TESTIMONY AND EXHIBITS

OF

NANCY BROCKWAY

PRESENTED ON BEHALF OF:

Legal Aid Society of Cleveland, Inc.
Legal Aid Society of Dayton, Inc.

May 4, 1994

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Q. PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD.

A. My name is Nancy Brockway. My address is National Consumer Law Center, Eleven Beacon Street, Suite 821, Boston, Massachusetts 02108.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I have been a staff attorney with the National Consumer Law Center since 1991. As part of my work at NCLC, I provide technical and legal assistance to a variety of state agencies and consumer organizations on rate and customer service issues involving telephone, natural gas and electric utilities. I also provide legal and technical assistance to state agencies and consumer organizations on low-income energy issues.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony covers 4 major topic areas:

- o PART I: provides a definition of universal service, and identifies the elements of telephone service that should be included in the current concept of universal service for Ohio Bell;
- o PART II: provides an overview of telephone usage and penetration, with an emphasis on penetration in the low-income residential sector, draws conclusions about how far Ohio Bell is from achieving universal service, discusses the impacts

on the low-income community of lack of telephone service, discusses the relationship between universal service elements and affordability of service, and discusses the impact of alternative regulation on affordability and universal service;

- o PART III: proposes rates, programs and other approaches designed to achieve universal service in Ohio, including (A) a Universal Service Access program (USA), (B) a voluntary, crisis-response Universal Telephone Access Plan (UTAF) modeled after a similar program in Illinois, (C) a performance-based strategy to provide incentives for Ohio Bell to achieve universal service, (D) a community-based modernization education program, and (E) steps to ensure low-income customer participation in the process of reviewing and shaping any alternative regulation plan for Ohio Bell; and
- o PART IV: proposes that this Commission require Bell of Ohio to adopt "quality of service" criteria including indices of quality customer service, as one means of preserving and promoting universal telephone

service, and suggests certain specific improvements in Ohio Bell's customer service.

In sum, my testimony finds that universal service does not now exist in Ohio. It concludes that the move of Ohio Bell to its proposed alternative form of regulation will likely further hurt low-income households. It finally advances a number of proposals designed to achieve universal service, mitigate the harms to low-income customers threatened by alternative regulation, and ensure quality customer service.

Q. PLEASE STATE YOUR QUALIFICATIONS.

A. I have been working in the field of public utility regulation since 1983. I have been a staff attorney and utility analyst with National Consumer Law Center since July, 1991. In that capacity, I have testified before several utility regulatory commissions, on the topics of telecommunication modernization, telephone customer service issues (DNP of local for toll, etc.), low-income electric rates, and low-income demand-side management. I have also presented materials on low-income rates and demand-side management before commissions and industry conferences. I am a consultant on low-income demand-side

management issues to a member of the Centerior DSM collaborative, and to members of the Residential Energy Conservation Consortium in their collaborative with Ohio Edison and their intervention in the East Ohio Gas rate case. Together with my colleague Roger Colton, I recently filed testimony on the topics addressed in this docket in the Alternative Form of Regulation and Modernization case filed by Pennsylvania Bell. I have addressed the Advanced Studies Course of the National Association of Regulatory Utility Commissioners, the National Association of State Utility Consumer Advocates, and the Georgia Telecommunications Conference, on the topic of universal telecommunications service. Together with Mr. Colton, I am the author of four papers discussing issues in achieving universal service in light of technological and other developments of the modern age.

Before joining National Consumer Law Center, I was on the staff of the Massachusetts Department of Public Utilities (MDPU) from December 1986 through June 1991. From February 1988 through June 1991 I was General Counsel of the MDPU. During my tenure at the Department, I participated in numerous telecommunications matters, including dockets concerning such topics as introduction of enhanced services, payphone competition, collocation, shared tenant services, and revenue requirements. Most importantly for this docket,

while I was General Counsel of the Department, the commission was engaged in the implementation of its major rate structure redesign process, to implement a more competitive environment in the wake of divestiture.

Before joining the Massachusetts commission, I served on the staff of the Maine Public Utilities Commission from January 1983 until December 1986, first as staff counsel, and later as senior staff counsel. I was a hearing examiner on the first major New England Telephone rate case following divestiture.

Through my experience on the staffs of the Maine and Massachusetts commissions, I have developed an expertise in public utility regulation. My work required extensive knowledge of utility ratemaking, cost of service, cost allocation, marginal cost determination, accounting and rate design. I also acquired a familiarity with utility finance and engineering. I participated in the evaluation of numerous rate applications by electric, gas, telecommunications and water companies. I was responsible for analyzing and examining the rate and economics testimony before the Commission of witnesses such as William Baumol, Paul MacAvoy, William Melody, Alfred Kahn, and others, on topics such as marginal cost pricing, economic efficiency, and the like.

Before joining the Maine Commission staff, I represented low-income persons, elders, students and youth as a staff counsel in various legal services programs. In 1980-82, I was executive director of a statewide program of legal services to the elderly in Maine. I received my J.D. from Yale University in 1973, and my A.B. cum laude from Smith College in 1970.

PART I: DEFINITION OF UNIVERSAL SERVICE

Q. PLEASE DESCRIBE THE POLICY IN THE PUCO's RULES GOVERNING ALTERNATIVE REGULATION OF LARGE LOCAL EXCHANGE COMPANIES, WITH RESPECT TO UNIVERSAL SERVICE.

A. The PUCO's rules require an applicant to prove that its proposed alternative form of regulation is in the public interest, among other things. The specific requirements of the rule make it clear that ensuring universal service is an important element that the applicant must demonstrate before the PUCO will approve an alternative regulation plan. Among the items the applicant must specifically address is "how the plan...might impact the goal of universal service..." (Section III.C.12). In considering the application, the PUCO will consider, among other things, the "probable impact of the plan on the

goal of universal service." (Section X.B.2.e). The rules also reference the statutory standards, which permit alternative forms of regulation that, among other things, "maintain universal telephone service in the state," and high quality, technologically advanced and "universally available" telecommunications services. (Section 4927.04).

Q. WHAT IS THE DEFINITION OF UNIVERSAL SERVICE?

A. Universal service is the provision of a fundamental package of telecommunications services to every household that wishes to use those services.

Q. IS UNIVERSAL SERVICE A TERM OF ART?

A. In the sense of one rigid and unvarying definition, no. However, the concept of universal service has been a bedrock of telecommunications policy in the United States since before 1934, when the concept was enshrined in the Communications Act.

Q. HOW DOES THE 1934 COMMUNICATIONS ACT EXPRESS A POLICY SUPPORTING UNIVERSAL SERVICE?

A. In the words of a recent National Regulatory Research Institute Report, universal service "is the central goal of national communications policy." Specifically, the Communications Act of 1934, which created the Federal Communications Commission and modern regulation of

telecommunications, aimed to regulate interstate and international telecommunications:

> so as to make available, so far as possible, **to all the people of** the United States, a rapid, efficient, nationwide and worldwide ... communication service with adequate facilities at reasonable charges ... for the purpose of promoting safety of life and property through the use of ... communications.[1]

Thus, Congress was not intending to extend the reach of communications to some Americans, or to any particular type of American (for example, the well-educated, the well-to-do, the business executive, the Fortune 500 Corporation, the urban dweller, the telecommuter, the sophisticated dabbler, and so forth). Rather, it is the policy of the Congress that communications services be made available "to all the people of the United States..."

Q. HAS THE POLICY OF UNIVERSAL SERVICE BEEN SOLELY A FEDERAL POLICY?

A. No. Even before the enactment of Section 4927.04, it has been the policy of the state of Ohio, as all other states, to foster universal service. A survey of state commissions presented by the N.A.R.U.C. Staff Subcommittee on Communications, Universal Service Project, at the November 1993 meeting of the National Association of Regulatory

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[1] 47 U.S.C. Section 151 (emphasis supplied).

Utility Commissioners, found that over two thirds of the jurisdictions answering the survey provided by rule, or order, a specific, minimum level of service be provided. The survey also reported that without exception regulators consider the local exchange carrier to be the provider of last resort (obligated to provide the specified minimum level of service), and almost 80 percent believe that in the future there should be a carrier of last resort for interexchange service.

Q. WHY IS UNIVERSAL SERVICE SUCH AN IMPORTANT CONCEPT IN TELECOMMUNICATIONS?

A. It is axiomatic in the field of telecommunications that each subscriber, and society as a whole, is better off if another subscriber is connected to the network. The network is more valuable to the individual subscribers and to the entire society, if it is ubiquitous.

In addition, the concept of universal service resonates powerfully because human beings are social creatures. We do not thrive, as a rule, in isolation from one another. As much as we in America are proud of and rely on our individualism, we also share a strong tradition of interconnection. Indeed, in addition to using telecommunications for the fabric of our social and cultural networks, we rely on our communications network to provide the basis for trade and commerce. The Ohio legislature and the PUCO have recognized

this bedrock role of telecommunications in their statements of policy goals.

Q. HAS THE CONCEPT OF UNIVERSAL SERVICE CHANGED OVER TIME?

A. Yes. In the early days of telephony, the focus was on extending service to all households in the nation. The public network, a "seamless" network of Bell System companies and independents, provided an exclusive, end-to-end service, replacing the collage of redundant competing systems, and introducing averaged rate structures and low-cost residential service, in order to achieve universal service.

As late as 1949, however, fewer than 40 percent of the farm households in America had any telephone. In the 1930's, when the Federal Communications Act was passed, and the end of the 1940's, when the Rural Electrification Administration was mandated to fund extension of telecommunications to rural America, the first priority was providing dial tone to every household, often with multiple parties on the line, and certainly without direct dialing, whether local or long distance.

As dial tone penetration increased, and as technological innovations were developed and brought into the mainstream, the concept of minimum necessary service has expanded. Lee L. Selwyn

has neatly captured this evolution in a table reproduced in the 1991 National Regulatory Research Institute study "A Public Good/Private Good Framework for Identifying POTS Objectives for the Public Switched Network." A simplified version is presented below, with bracketed material showing additional items of note:

TABLE I:
EVOLUTION OF ELEMENTS OF TELECOMMUNICATIONS SERVICE

DATE	BASIC SERVICE COMPONENTS
1900s	Cord switchboards, party lines, [multiple providers without common subsribership, separate local and long-distance networks].
1920s	Limited local direct dialing, operators still required to place many metropolitan, and most rural, local calls [and all interexchange calls], [accellerated replacement of single wire connections, to created integrated local/long-distance network to long-distance specifications].
1940s	Direct dialing within metropolitan areas, increased number of dial exchanges in rural areas, operators still required for all long distance calls.
1960s	Indroduction of national Direct Distance Dialing (DDD) [upon upgrade of network to long-distance specifications][2], most manual switchboards eliminated, use of party lines all but gone except in rural areas, Touch Tone introduced as premium service option [with upgrading of switching technology].
1970s	Introduction of digital transmission and switching.
1980s	General availability of International Direct Distance Dialing, extensive deployment of digital carrier on interoffice and interexchange trunks, "Equal Access" to IXCs, basic and "enhanced" 911, extensive use of public "voice" network for data communications, [stored program control switching, permitting "enhanced services" (e.g. Call Waiting).]
1990s	Full deployment of common channel signalling at end office level, introduction of many new software-based network features, introduction of digital plant for business and residential subscriber access lines, adoption of Touch Tone as the "standard" offering, deployment of new ONA interconnection and network access arrangements, introduction of limited ISDN at subscriber level, implementation of TDD/voice relay systems.

[2]Such as paired wire loops. Other investmentsm such as mechanization of billing and accounting modification of the signalling equipment, improvement in switching equipment, and development of a uniform numbering system, were required as well, although they are not required for local POTS voice service. Richard Gabel, "The Impact of Premium Telephone Services on the Technical Design, Operation and Cost of Local Exchange Plant," A.A.R.P. Public Policy Institute, C-30 (Washington, D.C. 1992).

Q. IF UNIVERSAL SERVICE IS AN EVOLVING CONCEPT, HOW CAN WE DETERMINE THE CONTEMPORARY MEANING OF UNIVERSAL SERVICE?

A. Rather than seeing universal service as a concept frozen at any given moment, we should continue to find the meaning of universal service at any point in time by reference to criteria that are adaptable to the changes in telecommunications technology, and its place in our society.

Q. WHAT CRITERIA SHOULD BE USED TO IDENTIFY THE ELEMENTS OF UNIVERSAL SERVICE?

A. There are four primary criteria. I propose that the Ohio Public Utilities Commission adopt the use of the following criteria, to revise and determine the elements of Universal Service, as necessary from time to time:

1. How widespread is the use of the technology or service?
2. On an incremental basis, how costly is the extension of such technology or service to any given unserved household?
3. How important is such technology or service to the ability of a household to be integrated into the nation's social, cultural, and economic fabric?

4. To what extent is the ability to use the service dependent on its provision by the regulated utility, as opposed to by competitors in the open market?

Q. PLEASE GIVE SOME EXAMPLES TO ILLUSTRATE HOW THESE PRINCIPLES WOULD BE USED.

A. Surely. At the most obvious level, dial tone (the ability to receive calls, and to access the network, without implying the use of the network) is a fundamental component of universal service. It would clearly meet all four of the criteria. Indeed, the concept of telecommunications is nonsensical without the concept of dial tone, at least at the voice-grade level, and despite some inroads of competition in the local loop, dial tone cannot meaningfully be provided via the competitive market.

On the other hand, interactive videotext services are not widespread in 1993, and cannot be supplied today[3] without expensive infrastructure investments. They may be very important to individuals, as in the case of interactive medical imagery with voice and data

[3]Ohio, and other jurisdictions, are making those investments over time, but these are future investments, and as a result, there are few on a broadband network today with whom a Bell customer could interact using video, even if sufficient investment were made to connect one customer.

transmission, but it would not make sense to demand that such services be a component of universal service at this stage in the development of the infrastructure.

In between these two "extremes" lies a wealth of options, some more or less prevalent among today's average telecommunication subscribers, some more or less costly to the system on an incremental basis (depending largely on the extent to which the infrastructure is already in place), and some perceived as more or less crucial to functioning in the contemporary society of America.

Q. PLEASE IDENTIFY THE COMPONENTS OF UNIVERSAL SERVICE TODAY IN OHIO.

A. The following services should be determined by the Commission to be required elements of universal service, as of April 1994:

1. Single-party voice grade dial tone.
2. Touch tone.
3. Equal access to interLATA interexchange carriers.
4. Unlimited local calling to communities of local interest.
5. A basic package of toll call usage, at least within jurisdictional Ohio.
6. Call trace, and blocking of Caller-ID, Automatic Call Return and 900/976-type services.
7. 911 or E-911 services.

In addition, there are a variety of services that are commonly recognized as ancillary to the provision of basic service, such as operator service, directory assistance, directory distribution, ordering, installation, restoration and disconnection of service, and the like.

Q. WHY DO YOU QUALIFY THE LIST BY THE TIME-LIMITATION "AS OF APRIL, 1994?"

A. I wish to make explicit here that the list will evolve. This list represents what the average Ohio residential household "takes for granted" if you will, as services they not only have access to, but use in the ordinary way contemporary households use telecommunications.

Q. PEOPLE CANNOT MAKE TELEPHONE CALLS WITHOUT CUSTOMER-PREMISES EQUIPMENT. WHY IS CPE NOT ON YOUR LIST OF ESSENTIAL COMPONENTS OF UNIVERSAL SERVICE?

A. I would include customer premises equipment capable of supporting these functions, but it is well-settled that CPE is to be provided and priced via the forces of competition, and I do not propose to disturb that understanding. Bell should, however, be the provider of last resort. As telecommunications increasingly comes to rely on sophisticated terminal equipment, with the associated training and

experience in its use, the potential for customers to have to pull over to the side of the information superhighway will increase. The ability of the competitive marketplace to ensure that all subscribers have usable CPE will erode. I propose that the Commission direct Bell of Ohio to survey its low-income customers and others with disproportionately low penetration rates, to determine the extent to which inability to obtain functioning CPE, with the features necessary to maintain access to the telecommunications network and the knowledge to operate the equipment, is a barrier to achieving universal service. To the extent such surveys reveal that the competitive market does not now ensure such availability, even with regard to the elements of universal service I describe today, then the Commission should consider taking action to address this barrier.

Q. WHY SHOULD UNLIMITED USAGE IN A LOCAL CALLING AREA BE CONSIDERED PART OF UNIVERSAL SERVICE? ISN'T LOCAL MEASURED SERVICE (E.G. THE COMPANY'S CALL PLAN 30 or MINUTE-LINE) ADEQUATE TO PROVIDE MINIMAL INTERCONNECTION NEEDS?

A. No. The vast majority of the homes with dial tone in Ohio are able to make essentially unlimited local calls, and count on their right and

ability to do so in their everyday lives. Note that, even where a customer has optional local measured service, or in those few jurisdictions where there is mandatory local measured service, the vast majority of households are able to make whatever number of calls they need or want to make. Unlimited local area calls are not considered luxuries or frills by the American people. They are considered to be part and parcel of what we take for granted today.

It is inconceivable today for a modern household to function without a the ability to receive calls, and to make calls at will in its community of interest. Below I discuss the extensive reliance modern society places on integration into the network: the ability to be contacted by telephone, and the ability to use the telephone to make contacts.

While some point to optional local measured service (or the Call 30 and Minute Line plans offered by Ohio Bell, for example) as being the standard for minimum necessary interconnection and telecommunications, on closer look, so long as a customer is unable to make use of them as freely as customers on the flat rate service, these "degraded" forms of local access do not meet the criteria of telecommunications services to fulfill critical social, cultural and economic needs. As evidence that society rejects such degraded

offerings for everyday existence in the latter half of the century, we can look to the experience of the Maine Public Utilities Commission in the late 1980's, which introduced mandatory local measured service (in part to take pressure off the increasing costs of the local loop after divestiture). Every household served by New England Telephone had no choice but to receive their local service on a measured basis. Almost immediately upon the Commission's issuing the order instituting mandatory LMS, a statewide referendum initiative passed overturning the decision.

Indeed, the trend in the last decade has been to extend the "fixed monthly charge" concept ever further, to Extended Area Service, and, in one LATA in Massachusetts, to LATA-wide EAS. In Ohio, the Optional Local Area Plans are a manifestation of this trend. The public expects to be able to call a wider and wider local calling area without having to consider the incremental costs and benefits of each such telephone transaction. To those who chose a measured service option, the public is indifferent. But try to require the general public to take its local service on a measured basis, and you go against the received understanding of the meaning of local telephone service today.

With regard to the question of local measured service versus local unmeasured, flat-rate service, we have seen that for a local

community of interest, the ability to make a call when needed, for as long as needed, has become a cherished, and undeniable, foundation of the voice telecommunications network. Of course, if a person has sufficient disposable income, even a sharply graduated message unit rate for local service would be no deterrent to enjoyment of the contemporary expectation of unlimited local calling. Thus there is a relationship between the rate structure, universal service, and affordability questions. Later in my testimony I address the relationship between the concept of universal service and the concept of affordability.

Q. YOU ALSO PROPOSE TO INCLUDE A BASIC PACKAGE OF JURISDICTIONAL LONG-DISTANCE CALLS. PLEASE DESCRIBE THIS PROPOSAL IN MORE DETAIL, AND EXPLAIN WHY SUCH USAGE SHOULD BE INCLUDED IN THE DEFINITION OF UNIVERSAL SERVICE.

A. In the contemporary world, the boundary of everyday interaction does not stop at the artificially defined "local exchange" boundary. No household in America has only a single, easily bounded "community of interest." We are a society that has developed in part by transcending the limits of economic physical transportation by making connections

through telecommunications. Thus, the boundaries of local exchanges, extended service areas, "metropolitan" service areas, LATAs, and even states and nations, have become more important as boundaries for pricing purposes than as boundaries that identify a subscriber's community of interest. Indeed, American households tend to have a large number of different "communities of interest", and if one drew a VENN diagram, these areas would overlap.

Q. WHILE IT IS TRUE THAT THE AREAS OF INTEREST OVERLAP, DON'T THE LEGITIMATE EXPECTATIONS OF CONTACT DIMINISH WITH DISTANCE?

A. It is quite true that the immediate geographical surroundings still tend to be the locus of the most intense and frequent interaction for telecommunications users. However, a number of factors combine to render the immediate physical surroundings an inadequate measure of the basic, everyday reach of modern telecommunications. First, Americans are a mobile people. It is quite common for families to live separated by hundreds of miles, and yet we take for granted that we will be able to maintain contact via telecommunications. Second, low-income families are disproportionately more likely to be mobile than non-low-income families (typically by a factor of 2), making interconnection beyond the strictly local area the more important for

this group. Third, as I describe below, many of the basic services, economic opportunities, and organizations with whom a low-income family must needs interact are located in centralized areas, remote from a large portion of the low-income population that must be in contact with them. This is true, of course, for those not limited to a low level of income, but the need for interaction has a stronger impact on basic subsistence contacts in the case of low-income households.

Q. THIS IS ALL TRUE, BUT HISTORICALLY "LONG-DISTANCE" SERVICES HAVE NOT BEEN CONSIDERED A PART OF BASIC TELEPHONE SERVICE, CORRECT?

A. Not exactly. While it is true that regulators have focussed their attention on defining the fundamental package of local services, this has actually come about in response to the success of regulation and industry efforts to ensure the ubiquitous availability and increase use of the long-distance network. In fact regulatory policy has evolved with a view towards ensuring that telecommunications services are broadly available over long distances, from interexchange to international. Data on historical price trends for local and long distance telephone in the United States, compiled by Richard Gabel for

the American Association of Retired Persons,[4] show that local service costs have steadily climbed in this century, while interstate long distance costs have steadily dropped. Mr. Gabel persuasively discusses the investments in infrastructure needed to support longer distance telecommunications, and the changes in cost allocation and pricing, that have been made to ensure the rapid expansion of a unified national network capable of supporting long-distance service as a commonplace, bedrock service.

Q. WHAT IS THE RELEVANCE OF RELATIVE HISTORIC SERVICE COST TRENDS TO THE DEFINITION OF UNIVERSAL SERVICE?

A. The point I wish to emphasize is that the American regulatory policy to favor the expansion of long-distance services reflects an understanding that such services are part of our core concept of telecommunications. They are no longer a luxury. It is true that definitions of a basic package of telecommunications services tend to leave long-distance aside. But we can no longer ignore the elemental role that long-distance (interexchange, inter-LATA, interstate, and in the future, perhaps, international) telecommunication plays in our social fabric.

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[4]Cite to Gabel, op. cit., note 2, supra, Tables II-2, II-4, and III-5.

Families expect to be able to maintain contact as we are separated by huge distances, or move from place to place in our mobile society. We expect to be able to interact with businesses and services that are situated far from our local community. And with the spread of living situations in which there ar fewer "town" or "city" centers, this phenomenon will become more deeply entrenched. No average household in America today would consider a toll-blocked telephone adequate.

Q. WHAT LEVEL OF LONG-DISTANCE SERVICE SHOULD BE PROVIDED IN THE BASIC PACKAGE OF "UNIVERSAL SERVICE?"

A. As with other elements of universal service, all customers should be able to take advantage of the average level of use for that service. Thus, Bell should be required to determine the average toll use within its territory, and that level of use is the benchmark for whether universal service has been achieved. To the extent intrastate inter-company traffic is a function of Bell's tariffs, typical usage on such circuits should be identified as well, and included in the definition.

Q. WHY DO YOU INCLUDE CALL-TRACE AND THE VARIOUS BLOCKING OPTIONS IN YOUR DEFINITION OF UNIVERSAL SERVICE ELEMENTS?

A. First, all of these services are possible in most areas with current technology at very small incremental costs. According to the NRRI report, Table 9-1, 88% of Ohio Bell's switches can handle out-of-channel signalling and database manipulations needed for these services. Bell plans to complete its installation of Common Channel Signalling (CCS) by 1998, but by 1995, 98% of its Central Offices will be equipped with SS7.

With respect to the blocking options, I understand that 900/976-number blocking is available today. My definition merely seeks to memorialize this reality.

Call Trace is a basic, common sense approach to the problem of crank and harassing telephone calls. If you know anyone who has experienced sleepless nights after being awoken at 3 A.M. by a "breather" or someone making threats or perhaps someone calling to see if anyone is home before committing a burglary, you know the great sense of relief provided by the fact that it is possible for Company officials and law enforcement to locate those nuisance callers who are foolish enough to call from their own telephones. If Call

Trace is physically possible, it makes no sense not to ensure that it is universally available.

Automatic Call Return and Caller ID services used by some subscribers pose a threat to the privacy of others. There is no reason why some customers should be able to protect their privacy, while others cannot, when the system costs to extend these services are small.

Q. THERE ARE A NUMBER OF SERVICES THAT ARE AVAILABLE WITH TODAY'S TECHNOLOGY AND THAT ARE USEFUL TO CUSTOMERS, AND COULD BE MADE AVAILABLE AT A MODEST INCREMENTAL COST. WHY DO YOU NOT INCLUDE THEM?

A. A number of other "enhanced" or customer calling services could have been included, based merely on their cost characteristics. However, for non-essential services that are not broadly adopted by society, it still makes sense to price these services in such a way as to capture a contribution that can be applied to reduce the pressure on local exchange charges. Some services, such as call-waiting, are a nice convenience (or annoyance, depending on one's point of view) for most, and are necessary services in only a few situations. Penetration

data on enhanced services from a nearby state (proprietary) indicates that they do not dominate the market yet.

PART II: UNIVERSAL TELEPHONE SERVICE AND THE LOW-INCOME COMMUNITY

A. NATIONAL LOW-INCOME ACCESS TO TELEPHONE SERVICE

Q. WHAT IS THE STATUS OF TELEPHONE PENETRATION IN THE UNITED STATES?

A. Most of us believe that universal telephone service is the standard in the United States. Yet large portions of the low income population cannot afford telephone service in their homes, and this number has grown since divestiture, as the cost of basic service continues to rise. In 1991, while fewer than one out of 100 upper income families did not have a telephone, roughly 25 out of 100 low income families did not.

Q. ARE THERE PARTICULAR ASPECTS OF THIS DISPARATE PENETRATION THAT ARE DISTURBING?

A. Telephone penetration patterns are not racially neutral, regardless of income. While the national average penetration rate for telephone service is 94 percent, the penetration rate for black households (regardless of income) is only 86 percent. The penetration rate for Hispanic households (regardless of income) is only 86 percent. This racial inequality carries over into the elderly population. Among homeowners, only three percent of older whites are without telephones, compared to eight percent of their black and Hispanic counterparts. Likewise, only eight percent of older white renters do not have telephones, compared to 19 and 18 percent, respectively, of older blacks and Hispanics.

Q. HOW ABOUT TELEPHONE PENETRATION RATES, POVERTY AND RACE?

A. The racial inequality is a particular problem for the poor. While 75 percent of all households with incomes less than $5,000 had telephones, only 64 percent of black households and 65 percent of Hispanic households with incomes less than $5,000 had telephone service.

Q. CAN'T POOR PEOPLE USE PAY TELEPHONES?

A. The pay telephone has always been assumed to be the "poor person's response" to the lack of a telephone in the home. When all else fails, the low income person can simply make a trip to the local convenience store, or to the phone booth on the corner, to place a telephone call. Increasingly, however, access to affordable local pay telephone calls is becoming a thing of the past. Pay phones are being restricted or removed from many poorer neighborhoods, to discourage drug dealing,[5] and those that are available are frequently busy --and expensive. COCOT providers routinely charge more for a local call than do LECs.

Q. IS THIS LOW-INCOME PROBLEM SIMPLY ONE OF NOT HAVING ACCESS TO A TELEPHONE?

A. No. The problem of inaccessible or excessively costly local pay phone service is not simply one of lacking telephone contact altogether; ease of making contact is also a factor. To illustrate this point, one can examine the process for making inquiries of the Social Security Administration. According to a 1988 General Accounting Office (GAO)

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[5] Drug dealers generally prefer to use pay phones that allow them to remain anonymous and make calls difficult to trace. Many communities are targeting the restriction or elimination of pay phones as one means to curtail drug dealing. Pay phones are being restricted to outgoing calls only, and push button phones, a prerequisite for many call-routing systems, are being replaced by rotary phones.

study, fewer than 70 percent (66.5%) of all telephone calls to Social Security Telephone Service Centers and fewer than 60 percent (58.2%) of all telephone calls to Social Security offices designed to service a statewide region were done with easy accessibility. Busy signals, unanswered calls, disconnected calls, and calls placed on hold for longer than two (2) minutes were all difficulties experienced by households seeking to contact the Social Security Administration. Overall, more than one-in-seven phone calls to a Social Security office received a busy signal; a repeat call made within one minute generated a busy signal in 60 percent of the cases.

An informal survey of call-waiting use by public agencies and businesses, reported in the Boston Globe on May 2, 1994, revealed that the caller was put on hold for 61 minutes before a human operator answered at the Massachusetts Division of Insurance; put on hold 43 minutes (before being disconnected) at the Boston Better Business Bureau; had the call transferred 5 times, was disconnected once and had 4 minutes of holding time to reach a doctor at a local hospital; and had to wait 76 rings to get through to a downtown shopping mall.

For a household using a telephone in the home, these difficulties are a nuisance. For a household with measured local

service (and often few transportation alternatives), the holding time for these calls and the number of necessary repeat calls can create unaffordable extra expenses and worry concerning mounting message charges. For a household that lacks telephone service in the home, and lacks easy access to a pay telephone, the difficulties of gaining access to needed services and businesses can be a serious threat to health, safety and welfare.

B. OHIO LOW-INCOME ACCESS TO TELEPHONE SERVICE.

Q. UPON WHAT DATA DO YOU BASE YOUR DISCUSSION IN THIS SECTION?

A. The following discussion is based on data obtained from the 1990 Census.

Q. WHAT IS THE OVERALL PENETRATION RATE FOR TELEPHONE SERVICE IN OHIO?

A. If one looks at penetration rates for having a telephone in the home for the state of Ohio, one would conclude that telephone service is not universal, but that certain segments of the population enjoy nearly universal service, and others must be counted among the "telecommunications have-nots." While this discussion does not touch on availability and affordability of services other than POTS, the

presence of dial tone is so fundamental that failure to achieve universal dial tone demands regulatory action.

According to the most recent Census data, only 4.7 percent of all occupied housing units in the state do not have a telephone in the home. In the seven counties where 80% of Ohio Bell's customers live, only 3.9% of the households are without a telephone. These penetration rates, however, are not racially neutral. Of all Black-occupied units in Ohio, 9.4 percent do not have telephones. Of all Hispanic-occupied units in Ohio, on average 12 percent do not have telephones. See Exhibit NB-1, below. By contrast, only 4.1 percent of all white households in Ohio lack a telephone.

There is also a pronounced income disparity between POTS haves and have-nots. The percentage of all Ohio families with incomes below the "Federal Poverty Level" is 9.7 percent (12.5 percent for percentage of individuals without a telephone).

There is some disparity, albeit less pronounced, between urban and rural households overall, with the no-phone rate 4.5 in urban areas, and 5.4 in rural areas.

Thus, very low-income Ohioans, or Ohioans from minority racial and ethnic groups, are more than twice as likely as non-low-income Ohio households to be without a telephone.

Q. DO YOU FIND A DIFFERENCE BETWEEN RENTERS AND HOME OWNERS?

A. Absolutely. For the seven counties where most of Ohio Bell's customers live, the percent of very-low-income homeowners without a telephone ranges from 3.1% (below the statewide average) to 8.2 percent (just under twice the statewide average). Most of the counties experience rates of low-income homeowner lack of telephone between 4 and 6 percent, a bit above the statewide, all-income, average. By contrast, in one county, the very-low-income renters experience a no-phone rate of almost 25 percent.

The lack of phones in the homes of very low income renters in these seven counties ranges from 16.6 percent to 22.8 percent. A county-by-county disaggregation of renter and homeowner penetration rates, is set forth in Exhibit NB-2 below. The same data, with a breakdown by race and ethnic origin, is shown in Exhibit NB-3. Overall for the seven counties, 4.9 percent of the very-low-income homeowners are without telephones, but 19.5 percent of the very-low-income renters lack a telephone. To put this in perspective, in these seven counties there are about 60,000 homeowners with incomes below the FPL, but about 170,000 renters with incomes below the FPL, or almost three times as many customers.

Q. WHAT DO YOU CONCLUDE?

A. I conclude that the penetration rate of 95+ percent that may be cited for the proposition that universal service has been achieved in Ohio has little meaning. While some populations may have comfortably high penetration rates for having a telephone in the home, low-income households, particularly low-income renters, have extremely low penetration rates. Penetration rates for low-income Blacks and Hispanics are exceptionally low.

C. ADVERSE IMPACTS OF LACKING TELEPHONE SERVICE.

Q. WHAT ARE THE IMPACTS ARISING FROM A LACK OF ADEQUATE ACCESS TO TELEPHONE SERVICE?

A. Inability to obtain affordable, accessible telephone service can create life threatening situations for the poor. Frequently, the most important problem arising from the lack of access to telephone service is the denial of access to agencies and institutions that can provide help. For example, the most frequently cited danger that results from lack of telephone service involves access to timely medical attention. The elderly, in addition, suffer more acutely from problems compounded by their physical isolation. In a Connecticut study conducted by RPM Systems, three groups were found to be "at greater-than-normal risk" because of lack of telephone service, including "persons over 60 and living alone." The study found that of 59 "no-telephone households" with elderly members, 30 were senior citizens living alone, 23 had a disability or serious medical problem, and 10 of those disabled seniors lived alone. More than half of the seniors living alone (17 of 30) lived more than three minutes away from the telephone they would need to rely upon in an emergency.

Findings from a Michigan study on telephone usage among the elderly indicate that the elderly were far more likely to consider the reason for their telephone calls to be essential than were non-elderly callers. Medical calls were cited by 22 percent (compared to 1 percent of non-elderly); social service calls were mentioned first by 10 percent (as compared to zero percent of non-elderly).

Lack of access to a telephone jeopardizes access to public assistance programs as well. According to one study looking at why households do not participate in the Food Stamp program in Vermont, even for those households who knew who to contact for assistance in understanding the application and income reporting requirements, the inability to contact the agencies by phone was one of the most significant problems in obtaining such assistance.

Finally, in *Butte Community Union v. Lewis,*[6] the court found that lack of telephone service was a significant barrier to employment since the types of employment low-income households generally obtain involve jobs offered and accepted via telephone.

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[6] 745 P.2d 1128, 1131 (Mont. 1987).

Q. IS THERE ANY *ONE* IMPACT THAT YOU FIND TO BE A PARTICULAR PROBLEM?

A. Yes. While the lack of telephone access has ramifications for all aspects of a household's social and economic wellbeing, one of the most serious impacts is on the ability of a household to retain energy service. Lacking access to telephone service adversely affects the ability to retain energy service in a number of different ways:

1. <u>ACCESS TO THE UTILITY: DEFERRED PAYMENT PLANS</u>:

Whether the non-access to telephone serve does, in fact, restrict access to energy assistance has never been directly studied. However, prior NCLC research provides a basis to conclude that this result will be found. A 1988 study conducted by NCLC for the Maine Public Utilities Commission discovered that 80 percent of the Maine households whose energy service was disconnected during the winter months lacked telephone service. The lack of telephone service was found to jeopardize continuing energy service by denying the household an opportunity to contact the utility so as to enter into payment plans, make contact with social service agencies to receive public assistance and to otherwise respond to the household's inability to pay. The "no-

phone" population was statistically underrepresented in the payment plan population of Maine utilities.

2. ACCESS TO LIHEAP: The reliance of LIHEAP agencies, or their subgrantees on the telephone as a primary means of contact with their client populations may have the impact of introducing a systematic bias against low-income minorities. Because of changes in the way that social service providers are doing business, these phoneless consumers are being denied equal access to critical social services, such as fuel assistance. As budget cuts have eliminated staffs, and as technological developments have introduced new, less staff intensive methods of contact, social service providers across the country are depending more on the telephone in providing services. Outreach, consultation and, increasingly, intake and referral functions are being conducted over the phone for a host of essential services including energy assistance.

Q. WHY DO YOU CONCENTRATE YOUR ATTENTION ON THE IMPACTS WHICH LACKING TELEPHONE ACCESS HAS ON ENERGY ISSUES?

A. I have selected energy and utility services as the focus for articulating the adverse impacts of lacking telephone service because of the severity

with which utility terminations affect low income and minority Americans. Having a utility turned off is the legal problem most frequently reported by low income households, according to a 1989 study done for the American Bar Association (ABA). Utility shutoffs were the most frequently mentioned individual problem regardless of the availability of legal help, the ABA study found. Nearly one in eight (11.4 percent) of all low-income households surveyed had faced a shutoff.

Q. CAN YOU SUMMARIZE THE CONTEXT WITHIN WHICH YOU OFFER THE TESTIMONY BELOW?

A. Yes. Telephone service is an essential service in today's modern society. Nevertheless, it is a service that has been denied to nearly one of every four extremely-low-income (income less than $5,000) American households. Given the strong public policy in favor of universal service, I offer the recommendations below to protect Ohio Bell's interest in maintaining its financial viability while at the same time removing unreasonable barriers to maintenance of service.

I find that low-income households cannot afford even basic local telephone service and that special efforts must be made to ensure the maintenance of universal service.

D. UNIVERSAL SERVICE AND AFFORDABILITY.

Q. WHAT IS THE RELATIONSHIP BETWEEN THE CONCEPT OF UNIVERSAL SERVICE AND THE CONCEPT OF AFFORDABLE SERVICE?

A. Universal service and affordable service are not the same concept, but they are linked where the barrier to universality is unaffordability.

Q. PLEASE EXPLAIN.

A. Universal service refers to the package of services that has come to be taken for granted, or, put another way, that has become the fundamental standard of basic telecommunications services at any given point in time. It is defined in reference to the penetration of the service, the incremental cost of extending the service, the role the service plays in our lives, and the ability to provide the service adequately (universally) via the competitive market. Affordable service, on the other hand, refers to the ability to pay for any given set of services in question, given the prevailing price structure and the disposable income of the potential customers.

There is an obvious link between the two concepts where one or more element of universal service is available for a price (however "just and reasonable" on a cost basis), but at that price the service is not affordable to potential subscribers.

Each element of the universal service package must not only be available in practice (technologically, organizationally, etc., the Company must be prepared to meet all demand for the service), but such elements must also be affordable to all customers or potential customers.[7] Affordability includes the ability to make use of the service. For example, if a school is only 200' from a fiber extension, but cannot afford to complete the loop, has no staff trained in advanced telecommunications, has students who are unfamiliar with keyboards, much less computers, and has insufficient funds to maintain operating costs for CPE and the network use of a modernized system, the benefits of that system are unavailable to that school.

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[7]In the future, as computer data services and interactive voice/data/video services become ubiquitous, the question of customer premises equipment (computer/modem/video display) will return, as well as the related tools for use of the new networks, such as credit and debit cards. Low-income households today have very low penetrations (well under 25%) for these types of instrumentalities, in their 1994 forms. While the prices may continue to fall, and low-income households may gain access to slightly higher levels of credit, they will still require specific education in order not to fall into a permanent, unsalvageable condition of "telecommunication have-nots." For the moment, however, data services are not yet so ubiquitous as to be universal elements, and the broadband world, or its equivalent, is a few years in the future.

This of course does not require that all telecommunications services be made affordable to all potential subscribers. American society does not demand that all services be available to each American, on pain of being available to none should any be unable to afford them. But that set of services that is so pervasive, important, and reasonably costed that society expects their universal availability, must be priced affordably.

Q. SOME MEMBERS OF SOCIETY HAVE EXTREMELY LOW INCOMES AND CAN HARDLY AFFORD TO PAY THE PRICE FOR SOME SERVICES. DOES THIS MEAN THAT BELL MUST PRICE ITS SERVICES AT A VERY LOW RATE TO ALL SUBSCRIBERS?

A. No. The point is that Bell must make sure that each market sector among the households in its service area is reasonably able to take and pay for service at the rates Bell charges. This naturally implies lower prices for lower-income customers, where necessary to ensure they can obtain the package of universal services. This in turn has led to the Link-Up and Life-Line rates, and leads to the affordability proposals I recommend below.

Q. ISN'T IT ENOUGH IF SERVICES ARE PRICED ON THE BASIS OF COST, AND DO NOT DISCRIMINATE BETWEEN THOSE WHO USE THE SAME TYPE AND AMOUNT OF SERVICE?

A. No. Affordable rates must be just and reasonable, but not all non-discriminatory cost-based rates are affordable.

Q. WHEN YOU INCLUDE A SERVICE ELEMENT IN YOUR LIST OF ITEMS INCLUDED IN UNIVERSAL SERVICE TODAY, WHAT IMPLICATIONS DOES THAT HAVE FOR PRICING OR RATE STRUCTURE?

A There is no absolute answer to that question. If a service is available and affordable to all under any given rate structure, no changes need to be made to achieve universal service. But where the pricing or rate structure renders the service element beyond the reach of some segment of the population, then it must be reviewed and revised to ensure universal service. To give an example, my inclusion of unlimited local calling does not necessarily imply that only a cut-rate flat-rate service must be offered to low-income customers. Indeed, I am proposing two variants on a measured service plan in my proposals below. However, if the combination of flat and measured charges produces a situation where the flat-rate service is out of reach and the

ordinary use of telephone by customers on the measured plan produces unacceptably high bills, then the structure and pricing of the flat service, measured service, or both, must be adjusted to enable low-income customers to use the telephone for the same range of uses and with the same convenience and relative affordability as non-low-income customers enjoy.

Q. DOES BELL'S FILING PROPOSE TO OFFER UNIVERSAL SERVICE AT AFFORDABLE RATES?

A. No. As I discuss above, large numbers of households, predominantly low-income, from racial and ethnic minorities, today do not possess even dial tone, the most primitive of connections to the network of telecommunications. A fortiori they do not yet enjoy the rudiments of universal service, contrary to Bell's claims. And Bell's proposed three year rate freeze and price cap mechanism will do nothing to correct this situation. After a three year "freeze" of the current situation, Bell merely proposes to cap future rate increases.

Q. OHIO HAS ADOPTED THE RATE DISCOUNTS ALLOWED UNDER THE FEDERALLY-SPONSORED LIFELINE AND LINK-UP

PROGRAMS. WHY IS ANY FURTHER EFFORT REQUIRED TO OBTAIN UNIVERSAL SERVICE?

A. As I discuss above, the present structure of rates, *including* the Federally-sponsored Lifeline and Link-up offerings, have not made universal POTS service available, much less universal service as I propose it be understood. Ohio need not, and should not, restrict its response to the challenge of universal service to those limited programs designed at the Federal level, and intended as a response merely to the increased intrastate cost responsibility and rising subscriber line charges dictated by federal telecommunications policy.

Further, low-income households have no room to absorb local exchange (or other) rate increases in either the short or the long-term.

E. Implications of Alternative Form of Regulation

Q. WHAT ARE THE IMPLICATIONS OF PRICING FLEXIBILITY ON UNIVERSAL SERVICE POLICIES?

A. Regulators must affirmatively take note of the impact which their policy decisions, including the review of proposed alternative form of regulation plans, have on the ability of low-income households to maintain telephone service. The Bell Plan, rather than seeking to

provide adequate protections for low-income customers, instead is moving in the opposite direction, leaving such protections, to the extent that they are provided at all, to arise out of a competitive environment. To abandon low-income households like this is wrong for at least two reasons. First, the trend in pricing structure today for telecommunications services indicates that low-income households will be harmed, not helped. Second, low-income households are not capable of helping themselves in obtaining adequate protections. I will briefly examine each of these reasons.

1. Impact of Long Run Incremental Pricing on Low-Income Households.

Q. PLEASE EXPLAIN THE CONTEXT WITHIN WHICH YOU PLACE LONG-RUN INCREMENTAL COSTS.

A. In order to understand the impacts on poor people arising from the use of LRSIC, one must understand the concepts of both LRSIC and stand-alone costs.

Q. PLEASE EXPLAIN STAND ALONE COSTS FOR YOUR PURPOSES HERE.

A. Stand-alone cost appears to be an average cost concept. It is the unit cost of providing a service if that service were produced independently, presumably in a facility of optimal scale. Stand-alone cost is a logical candidate for use as the maximum allowable price, on the grounds that a multi-product firm, even if it sells product *X* in a regulated monopoly market, should never be able to charge more than it would cost to produce *X* in a separate single-product enterprise. It would also define the upper bound on price for an unregulated competitive firm; it could never charge a price higher than the price that would cover all costs for an independent competitor just setting up production in an optimal single-product facility.

Q. PLEASE EXPLAIN INCREMENTAL COST FOR YOUR PURPOSES HERE.

A. The concept of incremental pricing for telecommunications services is close to the notion of "product incremental cost" introduced by Baumol in 1983. Even though I may refer to "products" in this analysis, I understand that we are speaking of telecommunications firms and thus that term is defined to include the notion of "services" as well.

Incremental cost for a particular output *A* is generally defined as the difference between total (including capital) costs for the facility that can produce all services together at lowest total cost, and the total cost for the facility that is least-cost if one were producing all goods except *A*. It is incremental in the sense that one is adding a service to one's production plant specifications (that is, you are looking at two different menus). But it is not a *marginal* cost concept in the sense of measuring the increase in total costs resulting from the production of one more *unit* of a given service. In fact, as the concept is generally used, it refers to average incremental cost (total incremental cost divided by the total units of output of the service). That the incremental cost for each service is generally less than its stand-alone cost is evidence of the economies of scope attainable by multi-product firms.

As the PUCO defines long run service incremental cost, the concept is quite similar to the broader concept of incremental cost I discuss. The PUCO eliminates overheads and joint costs, and seeks the cost equal to the per unit cost of increasing the volume of production from zero to a specified level, holding all other product and service volumes constant (except for any adjustment under Section XII(A)(5)). That per unit cost is presumably calculated by taking the increase to the production

cost absent the target service/product over the production cost given the specified level of service/product, and dividing this increment by the number of units of production or service.

It has been proposed that service incremental cost define the lower bound on price. Price under this rule, in other words, would cover at least the service incremental cost.

Q. WHAT IS THE SIGNIFICANCE OF THE COMBINATION OF INCREMENTAL PRICING AND STAND-ALONE PRICING?

A. If stand-alone defines the ceiling price and service incremental pricing the floor, this Commission might then only fix a total revenue requirement that yields a normal rate of return, and leave it to Ohio Bell to set prices within these bounds. To do so, however, would be to allow Ohio Bell complete latitude in allocating common costs amongst services (or, to put it another way, to allocate the gains from the economies of scope).

Q. IS THERE A PROBLEM WITH ALLOWING BELL THE LATITUDE TO REALLOCATE COSTS IN THIS WAY?

A. Yes. Customers purchasing services priced at stand-alone cost receive none of the gains from economies of scope; those purchasing services priced at service incremental cost bear none of the common costs or overheads. To the extent these common costs or overheads include the cost of defraying sunk investment incurred for the benefit of customers now taking service at the competitive rates, and this "ratebase overhang" is reallocated to the non-competitive and less-competitive cells, the result is that the customers whose prices are set predominantly at LRSIC are escaping the responsibility to pay for plant the embedded costs of which were partly incurred to serve them.

Q. DOES ECONOMIC THEORY OFFER AND ANSWER TO THE TENSION BETWEEN EQUITY AND "ECONOMIC EFFICIENCY?"

A. No. While giving freedom to Bell to reallocate costs may seem inequitable, economic theory appears unable to provide us with a principle for allocating common costs on an efficiency basis. After all, as Baumol states, "unattributable common costs are precisely what their name implies; they are simply unattributable to particular products on any sensible economic basis." Any allocation is arbitrary from an "efficiency" standpoint.

Q. HOW DOES A TELECOMMUNICATIONS FIRM ALLOCATE ITS COMMON COSTS THEN?

A. The telecommunications industry posits that improvements in social welfare would arise if common costs were allocated on the basis of what some economists call the "inverse elasticity rule," or Ramsey Pricing. The essence of this allocation principle is to allocate common costs to customer classes in proportion to the elasticity of demand of the various classes of service. Those classes with inelastic demands would bear the largest share of costs, while those classes with more elastic demands would be assigned a smaller share.

Q. WHAT DO YOU CONCLUDE AS TO THE IMPACTS ON POOR PEOPLE?

A. The effort to salvage efficiency rules based on a marginal concept of some sort (such as Ramsey Pricing) reveals that the determination of price is as much about economic power as it is about "efficiency." One is inexorably led by these principles to the conclusion that efficiency requires that captive consumers bear the brunt of common costs, including what has been called "ratebase overhang," while those with greater demand elasticity gain all the benefits of joint production.

Q. ARE YOU SAYING THAT THOSE WITH GREATER PRICE ELASTICITY BENEFIT DISPROPORTIONATELY FROM RAMSEY PRICING?

A. Yes. Elasticity of demand, after all, can be viewed as a measure of market power. Markets are nothing more than a process of regular exchange, and the bargaining power that parties bring to that exchange is a function of their options. Those with lots of options have bargaining power (market power), and economists define this antiseptically as "high elasticity." Those with few options are in a weak position to strike an advantageous exchange. Their demand or supply function is thus "inelastic." Thus, by couching the debate in terms of elasticities and efficiency, the essentially political nature of the problem is obscured. Marginal cost pricing in the telecommunications industry thus becomes a device for extracting a disproportionate share of the costs of production from those with the least economic power.

Q. YOU BEGAN BY STATING YOU WANTED TO PLACE THE INCREMENTAL PRICING INTO A CONTEXT. WHERE DO YOU END UP FROM THIS DISCUSSION?

A. In general, multi-product firms are encouraged to charge only marginal cost to those with elastic demand today; that is, they are encouraged to

charge marginal cost to those with the most choices. But they then must charge well above marginal cost to those with inelastic demand -- those with little or no choice. There is a systematic bias to this pricing strategy in favor of those who are more market-savvy, who have more income and education and information, and hence who have more choices regarding consumption, and against those whose income or social position leaves them with few alternatives and with large portions of their incomes going to basic goods and services.

In fact, the advocates of marginal cost pricing in the name of efficiency are serving a political movement to redistribute incomes upward. It is difficult to see, in fact, how one can make much headway on behalf of the interests of the captive consumers being asked to pay economic rent so that purchasers of toll and enhanced telephone services can benefit from competitive prices, as long as one accepts the basic premise that the debate is entirely about "efficiency."

Q. DOES REGULATION HAVE A ROLE TO PLAY IN ADDRESSING THE EFFICIENCY VS. EQUITY ISSUE?

Yes. Regulation often stands as a barrier between an industry and the oppression of particularly vulnerable customer classes. The vulnerability

of the class may arise because of attributes of the customers or the services they purchase, because of attributes of the industry, or because of market failures.

Residual markets are those markets for which little or no effective competition exists. In these markets, the demand for services by the residual class exceeds the supply available to them. In such circumstances, it is not possible for their market sector to control or "regulate" the supplier. Consumers take what is available. In the telecommunications industry, for example, the residual market is residential basic local service.

These residual markets need public protection. Even if competition exists, the members of the public may have neither the resources nor the ability to make competition work. More often, however, the markets are such that no sellers are engaged in active rivalry for the business of these households. Accordingly, the abuses which such power portends is controlled only by public regulation. As discussed in detail above, the Bell Plan instead creates a mechanism that prevents these concerns from ever being raised by the customers being adversely affected.

Q. WHAT SHOULD THE PUCO DO TO REDRESS THE INEQUITIES PRODUCED BY THE RELIANCE ON LONG-RUN INCREMENTAL PRICING?

A. The Ohio Commission should make particular efforts to protect the interests of residential ratepayers generally, and low-income ratepayers particularly, because of the reliance of Ohio on Long Run Service Incremental Pricing (LRSIC) for its competitive rate design. The thesis of this section is that because LRSIC systematically, and inherently, favors non-residential, non-low-income, consumers, special efforts must at a minimum be made to provide protections for those consumers. These special efforts would be necessary under traditional regulation, given the obvious failure of Ohio Bell to meet the goal of universal service to date. But reliance on LRSIC, rate deaveraging, and Ramsey pricing, put additional burdens on the affordability of POTS, much less the other universal service elements. Thus, a move to alternative forms of regulation requires further efforts.

The special efforts might include special rates (such as the ones proposed for the Universal Service Access program), crisis-response programs such as the proposed voluntary-contribution Universal Telephone Access Fund, and the outcome-based performance criteria

discussed below. The special efforts also support the adoption of new quality of service criteria.

What I conclude is that the very use of LRSIC in the design of rates should lead the Commission to a pre-dispensation to take active and aggressive efforts to engage in decisionmaking which will protect residential and low-income residential ratepayers and promote universal service in other ways.

2. Low-Income Consumers' Inability to Protect Themselves.

Q. WHY DO YOU CONCLUDE THAT LOW-INCOME CONSUMERS WILL NOT BE ABLE TO PROTECT THEMSELVES GIVEN THE ALTERNATIVE REGULATION ANTICIPATED BY OHIO BELL?

A. Setting aside any industrial organization or monopoly theory for the moment, let us look at the need for the PUCO-mandated proposals advanced below simply from the consumer perspective. Debate over whether regulation should be continued, abandoned or relaxed often has an over-emphasis on factors that consider only the firm. From the perspective of the consumer, the need for regulation often is predicated upon five factors. These include:

- The essential nature of the service to the individual consumers and the community;
- The presence of significant degrees of market segmentation;
- The presence of a substantial residual class;
- The presence of significant degrees of information failure; and
- The presence of highly price-inelastic consumer demand.

This list is not exclusive, but it provides a solid basis for understanding the proper role of regulation. In short, regulation affixes itself to an industry at that point where industry fails or refuses to conduct its affairs in a fashion which will protect the individual and social interests. Regulatory standards are seldom formulated until there is a dominant need for protection which the industry is unable or unwilling to provide; which society is unable to provide for itself; and which it insists that government provide.

Q. IS THE FIRST FACTOR (REGARDING THE ESSENTIAL NATURE OF SERVICE) EVIDENT IN THE RESIDENTIAL LOCAL EXCHANGE TELEPHONE MARKET?

A. Yes. As discussed above, telephone service is essential to obtain medical service, to retain energy service, to obtain employment, to obtain public benefits, and for a variety of other reasons. Telephone service is particularly important for the elderly.

Q. IS THE SECOND FACTOR (REGARDING MARKET SEGMENTATION) EVIDENT IN THE RESIDENTIAL LOCAL EXCHANGE TELEPHONE MARKET?

A. Yes. As discussed above, there is significant market segmentation along income lines. There is also significant market segmentation along racial and ethnic lines.

Q. IS THE THIRD FACTOR (REGARDING RESIDUAL MARKETS) EVIDENT IN THE RESIDENTIAL LOCAL EXCHANGE TELEPHONE MARKET?

A. Yes. The residential local exchange market is the residual market in the telecommunications industry.

Q. IS THE FOURTH FACTOR (REGARDING INFORMATION FAILURES) EVIDENT IN THE RESIDENTIAL INTEREXCHANGE AND LOCAL EXCHANGE MARKETS?

A. Yes. Information failure is generally thought of as occurring in the residential interexchange markets. The complexity of pricing and the vast array of packages contributes to this failure. There is still substantial confusion, if not outright ignorance, in the residential community regarding the differences between intraLATA, intrastate interLATA, and interstate telephone calling and the significance that those differences hold for carrier choice.

But this information failure is by no means limited to the interexchange market. Residential customers really know very little about their local telephone bill or what they might find affordable. A West Virginia study of local service found that residential customers have little idea of what type of service they use. Three-quarters of the customers in West Virginia who were surveyed reported that they were not aware of their own local usage plan. While unlimited or flat service of some form was the most commonly cited form of usage plan, even these were mentioned infrequently. Moreover, only one in five of the customers surveyed were aware that their local phone company offered more than one usage plan. Even when provided with descriptions of various local usage plans and then asked if any of them were offered by their local telephone company, "the majority of West Virginia residents recognized that different usage plans exist[ed]. . .[but] without

prompting, nearly eight in ten customers (78%) did *not* know other plans were available."

The response in Connecticut was not quite as dramatic. Nonetheless, researchers concluded that nearly one quarter (23 percent) of the households surveyed did not know what type of local service they were using. When queried about whether specific service options might be available, the percentage of households who were either "unsure" or who said that the option "maybe" was available ranged from 22 percent to 36 percent.

In a Michigan survey of public assistance recipients where roughly half of the customers surveyed (46 percent) said they knew which type of service they had, the residential customers did not reveal a reasoned or sophisticated search process for that service. Fewer than one in five households said that they had shopped for the least expensive service provided by the local telephone company. More disturbing for those who argue that residential customers will shop for telephone service based on price, the Michigan research found that "those on flat rate service are much more likely to have said that they don't know why they chose their service." Moreover, the elderly (54+ years old) are three times as likely as the nonelderly to say they chose their service because they've "always had it." Finally, the Michigan

research reported that many customers do not know who their long distance carrier is either. "On average, about two-thirds of the respondents correctly identified their long distance carrier."

A recent study of low-income residential telephone consumers in Boston found that "many of those who subscribed to measured service probably made too many phone calls each month to benefit by this service, and those who could benefit most, people who made few phone calls, did not subscribe to measured service." Indeed, of the 11 percent of the survey respondents who reported using measured service, the Boston study found that the mean number of phone calls per week was 16 (64 a month), "which is probably too many phone calls to benefit from [measured service]." Moreover, the Boston study found that "only 8 percent of those making five or fewer calls per week had measured service."

The Boston study found that those households making few phone calls tended to be elderly. For those households that made 10 phone calls or fewer per week, the average age was 59; and for those that made five or fewer calls a week, the average age was 60. The study concluded:

> It is obvious that elderly telephone users need to be better educated on the benefits of measured service. It is logical to conclude that these

individuals may have had the same type of service for years even though their telephone usage patterns have changed. Therefore, people who are already customers need to be educated or re-educated about the costs for and benefits of various types of telephone services.

Q. WHAT DO THESE RESULTS IMPLY FOR OHIO BELL'S PROPOSAL?

A. Flat rate service, measured service and extended area calling service are all examples of the local exchange telephone company presenting a need for consumers to make sophisticated financial decisions about what service will provide the "best buy." Even within services, it is not at all clear what decision results in least-cost services on a month-to-month basis. Combinations of fixed charges and per call charges present a bewildering array of choices. Ohio Bell now offers at least four plans (more, in those areas where wide-area calling plans have been introduced). It is likely that Ohio Bell's low-income customers are unable to make meaningful market choices among these varied options.

Q. IS THE FIFTH FACTOR (REGARDING PRICE INELASTICITY) EVIDENT IN THE RESIDENTIAL LOCAL EXCHANGE MARKET?

A. Yes. John Haring and Kenneth Gordon reviewed the elasticity of consumer demand for telephone service in their 1984 report *The Effects of Higher Telephone Prices on Universal Service* (OPP Working Paper 10). Haring and Gordon observed that there "are a large number of studies which attempt to estimate the parameters of telephone demand relation empirically." (providing study citations). Those studies, the authors continued, "vary widely in quality, type and source of data utilized, theoretical model specification and statistical estimation technique. Significantly, despite these differences, the studies indicate almost uniformly that demand for access to the telephone network is highly insensitive to price changes." Moreover, Haring and Gordon concluded, "there is evidence that demand has been becoming progressively more inelastic over time."

Q. WHAT DO YOU CONCLUDE?

A. Historically, regulation has followed from the presence of five different factors. All five of those factors are present with regard to residential local telephone service. Accordingly, it would follow that what is necessary for this service is strong public oversight (*i.e.*, "regulation"), not the relaxation of regulation that Ohio Bell is seeking through the Bell Plan. Based upon the presence of each of these factors

individually, and particularly based upon the presence of the factors in combination, I conclude that the alternative regulation proposed through the Bell Plan will result in substantial harms to the local residential ratepayers.

However, accepting the notion that some form of the Bell Plan will be adopted in this proceeding, there is then a need to adopt some type of low-income protections. The protections outlined below take four forms:

1. Proposed Universal Service Access (USA) rates and related provisions;
2. A proposed crisis-oriented voluntary-contribution UTAF program;
3. Proposed outcome-based performance criteria by which to measure progress toward achieving and maintaining universal service; and
4. New quality of service criteria directed toward each aspect of the product acquisition cycle of basic local telephone service.

It is to these four mitigation measures that we now turn our attention.

PART III: IMPLEMENTING MEASURES TO ACHIEVE UNIVERSAL SERVICE FOR OHIO BELL LOW-INCOME CUSTOMERS.

Q. WHAT IS THE PURPOSE OF THIS PART OF YOUR TESTIMONY?

A. My testimony in this section proposes that the Ohio Public Utilities Commission adopt strong measures to assist the Company in obtaining universal telephone service, primarily within the low-income community. I propose the adoption of a Universal Service Access package (USA) of reduced rates and related protections for low-income customers of Ohio Bell. I further propose adoption of a voluntary-contribution, crisis-response Universal Telephone Access Fund (UTAF) for low-income consumers. I also propose outcome-based performance criteria by which to measure the Company's progress toward attaining and maintaining universal service.

I propose that Ohio Bell be required to implement a community-based Modernization Education Program, as a condition of any permission to move to price cap regulation. I also propose that, to the extent possible in this docket, the Commission move access charges for "other common carriers" to a level that would produce the equivalent contribution from such carriers to the local loop that Ohio Bell now contributes in the

form of so-called "subsidies" of the loop by its other services. Finally, I recommend significant strengthening of low-income participation in the process of reviewing Bell's implementation of any plan approved by the PUCO in this docket.

I proposed related "quality of service" remedies in Part IV of this testimony.

A. AN OHIO BELL UNIVERSAL SERVICE ACCESS (USA) PROGRAM.

Q. WHAT TYPE OF UNIVERSAL SERVICE ACCESS PROGRAM DO YOU PROPOSE THAT OHIO BELL ADOPT.

A. I propose that the Ohio Public Utilities Commission adopt a Universal Service Access Program, the "USA Program," whereby rates for the major service categories of local service will be set at a level designed to make them affordable for those customers who are unable to obtain or maintain telephone service. Customers will be able to choose from 3 of the four local service offerings that Bell has traditionally offered, but the rates for qualifying customers will be reduced from the rates that would be in effect otherwise. Rates would be frozen for five years, not three, and thereafter rates for customers on the USA program will not

increase at a rate greater than one half the rate of increase for the comparable non-USA rate. Customers with outstanding bills would be invited to make reasonable payment arrangements as a basis for becoming a USA customer. Toll restrictions would be offered to USA customers desiring such a usage-control tool, free of charge. USA customers would receive free, automatic blocking of caller-ID, call-trace, 900 and 975 calls and other similar special NXX services (with free unblocking as requested). USA customers would not be subject to shut-off for failure to pay any non-basic, toll, or enhanced service charge.

Q. PLEASE EXPLAIN THE YOUR PROPOSED USA RATES IN MORE DETAIL.

A. Certainly. I propose that USA customers be able to choose from one of the following three options:

1. FLAT RATE. $8.00 per month, including touchtone service, unlimited calls within the local calling area (same calling area as customers on regular Flat Rate service).
2. CALL PLAN 30. $5.00 per month, including touchtone service, with: (a) 30 calls included, (b) 8 cents per call after the first 30, and (c) monthly cap of $11.87, including touchtone service.

3. MINUTE LINE. $2.00 per month, including touchtone service, with: (a) the same cost for each outgoing call as regular Minute Line, and (c) a monthly cap of $11.87, including touchtone service.

In all cases, 911 charges and charges for the allowed blocking options, and for voluntary toll restriction, are waived.

Q. **IN EACH CASE YOU PROPOSE A MONTHLY CAP OF $11.87. PLEASE EXPLAIN THIS PROPOSAL.**

A. To make telephone service affordable, rates should be held to a level that is manageable. The present Lifeline (Telephone Service Assistance) rate for the flat rate option amounts to a monthly bill for unlimited local calling of $11.87 (a $18.87 regular charge, not including blocking and other similar options, less $7.00 combined state and FCC reduction under Telephone Service Assistance for those customers now eligible).

While Bell has not as of this writing provided usage data by income, data from other jurisdictions suggests that low-income households tend to be among the lower users of local calling. Thus, it is likely that the

caps for the measured offerings will not result in drastic revenue differences between billed amounts and amounts that would have been billed at non-USA rates. However, for this small "shortfall," USA customers will receive incalculable peace of mind. And those few customers requiring a larger number of calls will not find their ability to make needed calls barred on the basis of their limited incomes.

A. YOU DO NOT PROPOSE A USA RATE EQUIVALENT FOR ALL THE LOCAL OPTIONS OFFERED BY BELL. PLEASE EXPLAIN.

A. It would be possible to fashion an "affordable" equivalent to all the regular rate offerings of Ohio Bell, including the various Optional Local Area Service offerings and the Flexible Call Plan. The Flexible Call Plan is a little-used service that is complicated in that it charges for calls on a measured basis with a great many variables controlling the ultimate cost to the customer.

The Optional Local Area Service Offerings ideally would be included with a USA rate equivalent, and this would be one way to ensure that part of the package of "long-distance" calls in the universal service element list were made affordable. However, I propose that the PUCO

order Ohio Bell to start its USA program with the more limited POTS-equivalent local offerings, and review the suitability of extending the USA concept to the EAS-type services at a later time.

Q. HOW DO YOU PROPOSE TO DETERMINE ELIGIBILITY FOR THE OHIO BELL USA PROGRAM?

A. I propose, both to maximize coverage and to minimize administrative expenses, that a Ohio Bell USA program be a categorical eligibility program. This proposal should come as no surprise to Ohio regulators. This is *exactly* what I have consistently proposed for utility-based low-income energy programs before this Commission.

Q. WHY DO YOU SUPPORT CATEGORICAL ELIGIBILITY?

A. At least three reasons support a categorical eligibility determination:

1. I believe that there is no reason for a utility to engage in the time and expense of certifying income for a population whose income is already certified by existing public benefits programs;
2. I believe that requiring low-income households to apply to their local utility, and lay out their household income, to an institution that has historically been viewed by the low-income population as adversarial will make the program inherently self-limiting; and

3. I believe that the mere act of requiring a "sign-up process" limits program participation, irrespective of the type of program offered (and by whom). To the extent that such processes can be minimized, therefore, participation rates will be maximized.

Q. WHO WOULD BE ELIGIBLE FOR YOUR OHIO BELL USA PROGRAM?

A. I propose that low-income households who participate in the following public benefit programs be permitted to participate in the USA program as well: Ohio Energy Credits (OEC); Food Stamps; Aid to Families with Dependent Children (AFDC); the Low-Income Home Energy Assistance Program (LIHEAP); Emergency Home Energy Assistance (E-HEAP); General Assistance; Disability Assistance; and Supplement Security Income (SSI).

Q. HOW MANY HOUSEHOLDS WOULD THIS CATEGORICAL ELIGIBILITY MAKE ELIGIBLE FOR USA?

A. Public benefit program participation rates for most of these programs can be taken from the most recently available *Green Book*, an annual federal publication that sets out statistics on various federally-funded public benefit programs. According to the *Green Book*, or sources

within Ohio state agencies administering the various programs, the following numbers of households participated in those programs in the most recent years for which the data is available:

	HOUSEHOLDS
LIHEAP	328,884
SSI	190,352
Food Stamps	481,154[8]
AFDC	264,300
Ohio Energy Credits	n/a
General Assistance	67,001
Disability Assistance	44,576
E-HEAP	135,312
TOTAL	1,182,695

Q. DO YOU MAKE ANY ADJUSTMENTS TO THESE NUMBERS?

A. Yes. One major question is the extent to which the numbers above are unduplicated. Since the Food Stamp program is the most ubiquitous of the various programs, it will serve as the standard.

- o We find that according to the Green Book, as of 1991, 92.5 percent of all Ohio AFDC households also participated in Food Stamps.

[8] 1,251,000 individuals divided by national average Food Stamp household size of 2.6 persons per household. Green Book, pp. 852, 1620.

- According to HHS, roughly two-thirds of all LIHEAP households also participate in Food Stamps.
- Data is not available regarding the extent to which SSI, Disability Assistance, General Assistance, and E-HEAP households also participate in Food Stamps. Accordingly, I will leave the full extent of each of those program participants in to avoid any potential that I have artificially lowered the cost of the Ohio Bell USA endeavor. To some extent, the inclusion of a duplicated count for these categories offsets the lack of data concerning numbers of OEC recipient households.

Q. WHAT ARE THE ADJUSTED UNDUPLICATED FIGURES?

A. The adjusted, unduplicated numbers of participants thus would look like this:

UNDUPLICATED BENEFIT PARTICIPANTS	
	HOUSEHOLDS
LIHEAP	108,532
SSI	190,352
FOOD STAMPS	481,154
AFDC	19,823
GENERAL ASSISTANCE	67,001
DISABILITY ASSISTANCE	44,576
E-HEAP	135,312
OEC	?
TOTAL	1,046,750

As you can see, we would see a maximum potential participation rate of roughly 1 million households in Ohio.

Q. IS THERE ANOTHER ADJUSTMENT THAT MUST BE MADE?

A. Yes. The figures above are statewide figures, and would be reduced if Bell-territory data were developed. Bell provides about 60 percent of the access lines in Ohio (some households and many businesses have more than one access line, so Bell's percentage of total Ohio households is less).

Q. **HOW DOES THE USA PROGRAM FIT WITH THE EXISTING LIFELINE PROGRAM?**

A. The USA program builds on and expands the value of the existing Lifeline Program administered by Ohio Bell (the so-called Telephone Service Assistance, or TSA, program). USA expands the discounts, and introduces an overall cap on the measured options, to make the rates more affordable for low-income customers. It extends the availability of an affordability-based rate to flat rate service. It eliminates incremental charges for certain core elements of universal service such as touchtone, 911, and blocking options.

It expands the eligibility groups to include the working poor, parents with young children, and others at risk for inability to maintain telephone service. It adds a free toll restriction option to assist parents and guardians control unwanted toll use in the household. It adds a protection from shut-off for non-payment of other than the USA charges. Thus, the program retains the positive features of the existing TSA, but strengthens them with the intention of obtaining universal service.

Q. **ARE THERE OTHER STEPS BELL SHOULD TAKE TO IMPLEMENT USA?**

A. Yes. Bell should be required to step up its outreach. It should work with social service and public welfare agencies to arrange for automatic joint application for whatever the needs-based service or grant is, plus the USA telephone plan. Such cooperation in similar programs is being done in New York State and Massachusetts, and obviously produces a higher penetration among the eligible population. As it is now, Bell had only 25,000 customers on the TSA rate as of January, 1994, out of a potential population of probably several hundred thousand, even at current eligibility restrictions.

B. AN OHIO BELL UNIVERSAL TELEPHONE ACCESS FUND.

Q. PLEASE EXPLAIN YOUR UNIVERSAL TELEPHONE ACCESS FUND.

A. I propose that in addition to the USA, the PUCO create a Universal Telephone Access Fund (UTAF) consisting of voluntary check-off deductions contributed through the monthly telephone bill. UTAF, in effect, will be the telephone equivalent to "fuel funds" operated by the state's energy utilities. UTAF will be made available to LIHEAP sub-grantees and existing energy "fuel funds" around the state to be distributed on a crisis basis.

Q. IS THERE PRECEDENT FOR SUCH A CRISIS INTERVENTION FUND?

A. Yes. An estimated $250,000 in voluntary contributions will be available annually to help offset the costs of phone service for low-income families, senior citizens and individuals through the newly crafted Universal Telephone Access Corporation in Illinois.

The funding will be available through the new Illinois Telephone Assistance Program, which was created by state law and is based on voluntary contributions to fund assistance to low-income families who

need basic local phone service. UTAC is the non-profit organization comprised of phone company and consumer, and low-income representatives and created under direction of the Illinois State Commerce Commission to administer the new telephone assistance program.

Estimated annual contributions to the Illinois program will be about $290,000, with estimated annual expenses of about $40,000. Expenses for the program include the costs of notifying eligible households, verifying eligibility for those who apply, and tracking and reporting financial information for the program. Each local exchange telephone company is responsible for administering the program for its customers.

According to rules set forth by the Illinois Commerce Commission, the UTAC board of directors is to consist of nine members with three classes of directors: one class consisting of five directors elected from nominations made by Local Exchange Companies; one class consisting of two directors elected from nominations made by the Office of Public Counsel and the Citizens Utility Board (CUB); and one class consisting of two directors elected from nominations made by the National

People's Action, the Community Action for Fair Utility Practice, and the South Austin Coalition Community Council. Directors will serve one year terms, and will be elected by the members of UTAC (which are the Local Exchange Companies).

Funding for UTAF comes strictly from voluntary donations. Beginning February 1, 1993, inserts were included in phone bills soliciting contributions. Residential customers were asked to select $0.50, $1.00, $2.00 or $5.00 to be added to their bill each month. Business customers were asked to select $1.00, $5.00, $10.00 or $25.00. The selected amount is then added to the customer's bill each month until the customer requests to be removed from the program.

After the first nine months of the program (September 1993), and every six months thereafter, UTAC will file a petition with the Illinois Commerce Commission asking the Commission to determine the type and amount of assistance, if any, that can be provided to eligible consumers. Depending on the amount of the fund, the Commission, after hearings, will order that the fund be used to provide additional assistance on installation, assistance on the customer's monthly bill, or both.

Q. WHAT DIFFERENCES DO YOU PROPOSE FROM THE ILLINOIS PROGRAM?

A. Rather than creating a new not-for-profit corporation, I propose that the Ohio UTAF funds be distributed through existing LIHEAP sub-grantees and existing energy fuel funds. Given the strength of Ohio's energy intervention network, there is no need to create a new administrative structure.

Q. WHY DO YOU PROPOSE A VOLUNTARY CHECKOFF IN ADDITION TO THE USA PROGRAM OUTLINED ABOVE?

A. Several reasons support such a program. The USA program is designed as the core effort to ensure the achievement of universal service in Ohio, together with the other rate and regulatory initiatives described in this Part of my testimony. On a day-in-day-out basis, together with the existing Service Connection Assistance plan, which eliminates the service connection costs for selected low-income households, it is intended to bring rates for the key services within the reach of those low-income customers who have been unable to maintain service. But the monthly charges for telephone service are not the only barrier to service. Household crises, unforeseen needs for unusual amounts of toll calling, calling by minors and now-departed guests to information service lines

(at least up through the time of discovery by the customer of record), and other events beyond the immediate control of the customer, can place low-income households in a crisis situation. The fund would be available to help with these crisis events.

The USAF would also permit those customers with more disposable income to voluntarily assist their neighbors in achieving access to the telephone system. The proliferation of checkoffs suggests that checkoffs are a highly successful method of fundraising in a time when other fundraising methods seem to have run dry. The federal and state governments have utilized the tax checkoff to allow taxpayers to designate part of their tax liability for one of the two major political parties or to make voluntary contributions to designated funds listed on the state's tax form. Local governments have used tax checkoffs to fund local scholarship funds. Local natural gas and electric utilities use checkoffs to fund "fuel funds," crisis funds to provide assistance to low-income households facing the loss of home heating due to an inability-to-pay.

In addition, Working Assets, a "socially responsible" privately owned corporation offering credit card services and money funds, recently

invested several million dollars to become a long distance telephone company so that the company could generate donations through a checkoff on telephone bills.

Q. WHAT TYPE OF SUPPORT WOULD YOU EXPECT TO GENERATE FROM A UTAF CHECKOFF IN OHIO?

A. Participation rates for public utility "fuel funds" vary widely. A recent survey of 24 of the nation's largest fuel funds found participation rates ranging from roughly one to four percent. Moreover, these participation rates were obtained with relatively modest investments in outreach.

Q. WHAT TYPE OF ADMINISTRATIVE COSTS WOULD YOU EXPECT TO FIND?

A. Many energy utilities do not separately track outreach expenses.[9] Those that do, report expenses ranging from $10,000 up to $25,000 per year. Of the eleven utilities reporting outreach expenses, nine fell in the $10 - $25,000 range.

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[9] One might conclude from this fact alone that such expenses thus represent a relatively minor expense.

Moreover, since Working Assets Long Distance was founded specifically to make use of the checkoff system, the costs for the roundup are not separated out from general billing costs. The procedure utilized by Working Assets is to apply any amount the customer pays which exceeds the bill amount to the donation program. At the end of each day, a computer report is run to determine the difference between bill payments and what was actually received. This total is then deposited in a segregated bank account controlled by a non-profit organization, where the donations maintain their tax deductible status.[10] Occasionally, there is the problem of a customer inadvertently overpaying their bill and the overpayment is considered to be a donation. When this occurs, both the customer account and the donation account must be reconciled. According to Working Assets, this is not a frequent problem. The costs involved for this reconciliation were not available.

The advertising techniques employed by Working Assets to gain more customers are direct mail and telemarketing. The only distinct advertising used to increase roundup donations are inserts in the bills

[10] Letter from Tim Rands, Senior Operations Analyst, Working Assets, May 10, 1993.

describing what the donation money is being used for and why donations are important. Secondly, each year Working Assets customers vote on what organizations will receive donation dollars. This effort makes customers part of the process, and raises their awareness of the roundup program.

Though few cost estimates are available on the administration of checkoffs, the general consensus seems to be that the administrative process is fairly simple and not labor intensive. This would account for the willingness of many tax offices to administer checkoff programs. Moreover, a 1993 report by the Colorado Energy Foundation found that the administrative costs of each of the fundraising efforts by local fuel funds were paid by the participating local utilities.[11] The Colorado study received responses from 41 fuel funds around the nation on this question.

Q. WHAT FACTORS SHOULD WE LOOK AT IN ESTIMATING THE REVENUE WOULD YOU EXPECT TO GENERATE THROUGH UTAF?

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[11] Brown, Colorado Fuel Fund Survey, at 7 (1993).

A. Projecting revenue generation from a Ohio Bell checkoff is a risky business at best. Among the factors that go into the success of a checkoff program include the visibility of the program to be supported, the intuitive appeal of the services provided, the perception of direct local benefits, and the perception of need. Despite its "soft" nature, however, it is possible to review other checkoff programs to determine the types of revenue returns that have been experienced in other contexts. Based on this review, best estimates will be made of the revenue that UTAF could reasonably expect from a Ohio Bell checkoff system.

Working Assets Annual Report to Members stated that the long distance checkoff encouraging customers to roundup their bill raised approximately $165,000 in donations in 1992.[12] Although Working Assets did not disclose the number of customers who roundup their bills, to put this figure in perspective it should be noted that Working Assets Long Distance has approximately 175,000 customers.[13] If the estimate that five to ten percent of Working Assets Long Distance

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[12] Working Assets, Working Assets Annual Report to Members, 1992, 2.

[13] Working Assets, Working Assets Annual Report to Members, 1992, 2.

customers roundup their bills are correct, average donations would fall between $9 and $19 yearly.

Q. HOW ARE FUNDS SOLICITED?

A. Working Asset's roundup checkoff is almost a hybrid of an open-ended and limited checkoffs. The company suggests a donation depending on the size of the bill.[14] For example, if a customer's bill is $10 or under, the company suggests that a dollar be added. If the bill were $53, the suggested roundup would be $55. And if the bill were $106, the suggested roundup would be $110.

Most utility fuel fund solicitations combine a closed-ended solicitation with an open-ended opportunity to contribute. A recent survey of the largest fuel funds in the nation found that all but four have "suggested" contributions, with an opportunity to mark "other" and make a larger contribution. Few companies allow only open-ended contributions. Most company solicitations provide three or four suggested contribution options ranging from $2 to $10.

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[14] Letter from Tim Rands, Senior Operations Analyst, Working Assets, May 10, 1993.

In contrast to these examples of fundraising through checkoff systems, public utilities raising dollars for state and local "fuel funds" do *not* generally use a "round-up" method of raising dollars.[15] Instead, these utility fuel funds rely upon a variety of methods through which customers can contribute through checkoffs. According to a recent study by the Colorado Energy Assistance Foundation (CEAF), of Denver, of the 45 fuel funds studied, none use a "round-up" method of soliciting fuel fund contributions.[16] Instead, the primary methods of checkoff fundraising include solicitations through bill inserts and a checkoff system on the bill.

According to CEAF, "bill inserts acquaint utility customers with the purpose of the fuel fund and explain() how it operates."[17] Reasons why bill inserts are "very attractive," CEAF found, include: (1) their low administrative cost; and (2) the fact that inserts "are well suited to

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[15] Fuel funds are state and local organizations that provide emergency heating assistance to income-eligible households who face disconnection of service (or some other similar loss of service).

[16] Brown, CEAF Fuel Fund Survey, at 10 (1993). However, three utilities are exploring this fundraising option. Id.

[17] Id., at 6.

deliver [the charitable donation] message succinctly and at a time when customers have their checkbooks out."[18]

The primary use of bill inserts involves inserts which accompany the utility bill. Of the 45 fuel funds surveyed, 41 include bill inserts with utility mailings. Three of the remaining four fuel funds use a utility bill checkoff system. Bill inserts are sent to both residential and non-residential customers.[19]

Bill inserts are generally sent between one and three times a year (29 of the 41 fuel funds using inserts sent from 1-3 times a year). Utilities who included inserts more than three times a year were those who routinely enclosed a company "newsletter" with their billings, on either a monthly or quarterly basis.[20]

Finally, roughly 40 percent of the fuel funds soliciting donations through bill inserts included a return envelope with the solicitation. Of the 37 fuel funds responding to this question, 14 replied that they use return

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[18] Id.

[19] Id.

[20] Id., at 7.

envelopes.[21] One "problem" with return envelopes, however, particularly those envelopes returned to some agency other than the utility, is that it is not possible to track the success of particular solicitations. The company, in this situation, will not be able to compile data either on how many customers contribute or what level of contribution is obtained.

In contrast to the reliance on bill inserts are those energy fuel funds that rely upon a checkoff system of fundraising. A checkoff provides the customer with an opportunity to add a sum of money to their monthly utility bill as a contribution to a fuel fund. According to CEAF, "this approach involves the modification of the utility bill format to include a message and instructions, which can then remain an integral part of the billing process over an extended period of time."[22]

Checkoffs are generally used in conjunction with bill inserts. While less than half of the fuel funds responding to the survey use checkoffs as a fundraising strategy (18 did, 27 did not), 15 of those funds using

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[21] Id.

[22] Id., at 8.

checkoffs did so in association with bill insert solicitations. Only three funds relied solely on the checkoff as a means of raising dollars.[23]

Q. WHAT IS THE BOTTOM LINE AS TO POTENTIAL REVENUE?

A. Given the discussion above, the assumption made here is that a Ohio Bell checkoff will attract contributions from two percent of the Company's customer base. The average revenue per customer is assumed to be $10 per year. Given these two assumptions, along with total switched access lines (residential) of 2,436,654 (Time-Warner RFI No. 4, Q. 155) million (in 1993), the contribution base of 48,473 customers would donate roughly $484,730 (48,473 x $10) per year to UTAF. This estimate ignores the potential of contributions from business customers. Those funds would be distributed through LIHEAP subgrantees and existing fuel funds.

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[23] Id., at 9.

C. AN OHIO BELL PERFORMANCE-BASED UNIVERSAL SERVICE STRATEGY.

Q. WILL THE USA AND UTAF PROGRAMS BE SUFFICIENT TO IMPROVE TELEPHONE ACCESS IN OHIO AND TO ENSURE UNIVERSAL SERVICE?

A. The proposed USA and UTAF programs should help move Ohio toward the goal of achieving universal service. However, I do not propose that these programs, standing alone, be the sole means of ensuring universal service. I propose that the PUCO adopt an outcome-based strategy as well with USA and UTAF serving only as the foundation for this strategy.

Q. PLEASE EXPLAIN YOUR "OUTCOME-BASED STRATEGY."

A. Ohio Bell is ultimately responsible for whether or not it moves toward ensuring universal service in its service territory. While USA and UTAF can help Ohio Bell obtain that goal, it should be the Company who bears the ultimate responsibility. The Company has (or should have) the knowledge, the incentive, the marketing capability, and the technical capability to move telephone access toward universal service.

Accordingly, I propose that the PUCO adopt outcome-based performance criteria on universal telephone service and incorporate

those outcome-based criteria into the review of Ohio Bell's Price Change Opportunity in future years. More specifically, the outcome-based criteria will recognize that universal telephone service does *not* exist for households at or below 100 percent of Poverty, but that the Company can take affirmative steps --of which UTAF and USA are but two-- toward achieving that goal. The Company would then be judged not on what steps it took to improve its goal of meeting universal service, but on what actual progress it has made toward that goal. Outside the basic programs of USA and UTAF, which the Company will be required to implement, the Company will be free to implement whatever programs it deems reasonably necessary to achieve the goal of universal service.

Q. WHAT OUTCOME-BASED CRITERIA DO YOU PROPOSE?

A. The average penetration rate in Ohio for households at or below 100 percent of Poverty today is 90.3 percent. Bell of Ohio should increase the penetration of basic telephone service, as defined in my testimony above, so that these households have a penetration rate no less than the current statewide average, or 95.3 percent. The current statewide average residential penetration rate will be called the "base penetration rate."

Clearly, it will take time to achieve this goal. Accordingly, I propose that Bell of Ohio achieve a two percent increase in telephone penetration for rental households at or below 100 percent of Poverty by the end of three years. Thereafter, Bell should achieve *and additional* two percent increase in low-income telephone penetration each year, until the percentage of Ohio households with incomes below 100% of the FPL who have a telephone in the home is equal to the statewide average, at that time. At this rate, Bell should reach the goal of universal service equivalence at the end of five years, assuming the overall average remains where it is today.

Each year thereafter, Bell will be required to maintain telephone penetration rates for the below-100 percent of Poverty population at the residential average. If the low-income penetration rates fall below the residential average, the outcome-based performance criteria will be deemed to have been breached.

Q. WHAT IS THE SANCTION IN THE EVENT THAT BELL OF OHIO DOES *NOT* ACHIEVE THE OUTCOME-BASED PERFORMANCE CRITERIA?

A. In the same manner as proposed for other objectives, Bell should be penalized for falling short of this outcome-based criteria. I propose that the penalty be a one percent reduction in the price cap adjustment factors over and above the adjustment factors finally approved in this proceeding (whether it be Bell's or some other proposal). This would, in other words, deduct an additional one percent from the adjustment for a failure to meet this criterion.

Q. WHAT IS THE EFFECT OF THIS ONGOING DUTY TO MEET THE OUTCOME-BASED PERFORMANCE CRITERIA BY BELL?

A. The intent is to have several outcomes. First, it will impose upon Bell an ongoing obligation to devote resources to ensuring universal service to the same extent as it devotes resources and marketing to introducing new unregulated services and technology that generates new profits. Second, it will impose upon Bell an ongoing obligation to assess whether its new services and technology do not drive basic services beyond the financial means of low-income households. If service becomes unaffordable due to the introduction of new technology and the implementation of the infrastructure needed to support that technology, and low-income penetration accordingly begins to fall, Bell will be required to develop a scheme to offset the impacts on the poor,

or to pay the penalty for failing to do so.[24] Finally, it frees up Bell's management to address the ongoing failure to provide universal service in the same fashion as Bell's request for alternative regulation is intended to free up Bell in the competitive marketplace. Rather than micromanaging Bell's efforts to promote universal service, the PUCO is --again consistent with other policy decisions-- saying that Bell will be judged by the outcome, rather than by the effort.

Q. IS THERE A SIMPLE THESIS UNDERLYING YOUR PROPOSED OUTCOME-BASED PERFORMANCE CRITERIA?

A. Absolutely. There are three. The first thesis is that given Bell's expertise in technology, marketing, service and so forth, there is no reason that Bell should not be devoting significant attention to the fact that a substantial portion of the low-income community today cannot afford basic telecommunications service. This attention does not occur today. The second thesis is that given Bell's commitment of resources to introducing new service, developing new technologies, and otherwise seeking new ways to generate profits, a corresponding effort should be

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[24] In contrast, if the introduction of new technology and the implementation of new infrastructure has no impact on low-income penetration rates for basic telecommunications services, Bell would have no need for action to mitigate those adverse impacts.

made to ensure that there is not created, as a result, a permanent class of "telecommunications have-nots." The third thesis is that given Bell's demonstrated ability in marketing new services and technology, it is not unreasonable to judge Bell by its efforts, but by its results, in ensuring that universal service is attained and maintained.

Q. DO REGULATORS GENERALLY AGREE WITH THE TYPE OF UNIVERSAL SERVICE APPROACH THAT YOU PROPOSE WITH THIS PERFORMANCE-BASED CRITERION?

A. Yes. A similar issue was addressed in the *UNIVERSAL SERVICE QUESTIONNAIRE RESULTS OF THE UNIVERSAL SERVICE PROJECT OF THE STAFF SUBCOMMITTEE ON COMMUNICATIONS OF NARUC*, presented at the NARUC annual meeting in New York on November 14, 1993. Question 12(a) of that questionnaire asked "In the future, should penalties be considered by regulators for companies who are remiss in the provision of universal service?" Regulators approved of penalties by an 88 percent yes/12 percent no margin.

D. A COMMUNITY BASED MODERNIZATION EDUCATION STRATEGY

Q. WHY DO YOU PROPOSE A COMMUNITY-BASED MODERNIZATION EDUCATION PROPOSAL?

A. To the extent the costs of modernization do not outweigh their benefits, the information superhighway has the potential of opening up grand new possibilities for information sharing and use. It is likely that some segments of society will obtain access to these functions sooner than others, because of greater need, interest, knowledge, and of course, funds. We are in danger of becoming a society of telecommunication haves and have-nots, as Vice President Gore warned, if we do not take steps to ensure that all Americans have the wherewithall to ride the information superhighway.

Bell has announced its commitment to modernization of the system, and as part of its proposed plan, it states that it will extend fiber to within 200' of all the schools in Ohio, so that educational institutions may participate in the information superhighway. As the NRRI and staff reports point out, this commitment is inadequate to bring educational institutions within reach of these valuable information resources. And the emphasis on system hardware (or one should say, "hardwire"), to the exclusion of education of system users and affordability of ongoing costs,

means Bell's proposal is likely to fail in its purpose. Additional steps are necessary.

Q. PLEASE DESCRIBE YOUR PROPOSED MODERNIZATION EDUCATION PROGRAM.

A. Gladly. My Modernization Education Program would combine (a) rate reductions to enable educational institutions to make use of new information technologies, (b) support for in-school hardware and software purchasing and maintenance, (c) a telecommunications needs assessment for educational institutions to be completed before massive investments which might be misguided and ignore other related needs, (d) an extension of the offerings to primary schools, (e) a fund for the establishment of pilot "free-net" networks in selected inner cities, and (f) the development of pilot "Neighborhood Computer Centers" in low-income neighborhoods through a fund for the purchase of equipment and services, to allow low-income students access to computer technology after school.

My proposal focuses on several of the shortcomings of the Bell approach, and proposes ways to overcome the gaps left by Bell's emphasis on fiberoptics. As NRRI points out, fiber in the loop is not necessarily the least costly way to make interactive, high-bit services

available. And it is not sufficient. The Company has proposed unspecified discounts and some forms of technical assistance to some educators. I support the concept, but urge that the Company be required to propose and justify specific rates and training/technical assistance projects before the plan may be approved. I also include proposals to address problems not acknowledged by the Company. And the needs assessment, Free-Net and Neighborhood Computer Center proposals deserve funding regardless of the disposition of the plan filing.

Q. PLEASE DESCRIBE YOUR NEIGHBORHOOD COMPUTER CENTER PROPOSAL IN MORE DETAIL.

A. It is well known today, in light of the equity issues in local school funding that have arisen all around the country, that schools in low-income neighborhoods lack the equipment and the trained teachers necessary to give low-income youth exposure to modern technology. I am writing this testimony at a 486 DOS computer with spreadsheet, notebook and e-mail capabilities, connected to a LAN. Most of these words would be complete gobbledy-gook to many students at school in low-income neighborhoods. However, the children at school in Shaker Heights are probably using more advanced equipment, and riding the InterNET, today.

Without an understanding of how the technology works, and what uses there are for communications-based software and hardware, the youth from low-income neighborhoods will be permanently banished to a "primitive" grade of existence in our increasingly technology-based society. They will not be able to use the technology of advanced telecommunications, even if they could afford the CPE. Some pioneers and students with a hacker mentality will overcome the barriers facing them, but the vast majority of disadvantaged youth will be left behind. They need exposure and they need training.

The Neighborhood Computer Centers would provide this needed aspect of modernization. They would also serve as local access nodes for use of the emerging telecommunications superhighway. As in the case of modernizing links to the schools, modernizing links to Neighborhood Computer Centers would bring the benefits of many of the new options to the community, as is the case with CATV today.

E. LOW INCOME PARTICIPATION IN PROCESS

Q. PLEASE DESCRIBE YOUR PROPOSALS FOR LOW-INCOME PARTICIPATION IN THE REVIEW OF ALTERNATIVE REGULATION.

A. Under the regulations, Ohio Bell has filed its plan for how it will solicit public input regarding alternative regulation. Bell's plan falls short. Bell relies on its Consumer Advisory Panel as its primary source of information concerning customer needs and concerns. However broadly based the panel is, it does not give the company the opportunity to learn in depth of the special concerns of those market segments, such as low-income and elderly residential customers, who are particularly at risk in the alternative regulation arena. Bell should develop a low-income consumer panel, and consult regularly with this panel on issues of particular concern, as it does with its Relay customers.

And, as the staff points out, Bell does not provide for a flow of information *to* its customer advisory panels. Such an educational process is crucial where Bell has the lion's share of the information necessary to make informed comments.

Bell should make sure that its demonstration projects include low-income neighborhoods, and secure feedback on their viability in those neighborhoods. This recommendation ties in with my recommended Free-NET funding and Neighborhood Computer Center funding proposals, above.

Finally, as I note above in my discussion of universal service elements, Bell should conduct regular surveys of its customers, *and potential customers*, with especial focus on subsegments such as low-income individuals and elders, to learn of their current use of the network, barriers to more effective use, and the like.

PART IV: DEFINING "QUALITY OF SERVICE"

Q. WHAT IS THE PURPOSE OF THIS PART OF YOUR TESTIMONY?

A. My testimony in this section proposes that the Ohio Public Utilities Commission adopt particular "quality of service" requirements for Ohio Bell to implement. If Ohio Bell is to seek deregulation of an array of services, and relaxed regulation of the pricing of others, the Commission has a right to expect the Company to provide the highest quality service possible. I also propose that the "quality of service" standards applied to Bell include the quality of the customer service interactions with customers, around such issues as hard-sell marketing, misleading information on options and prices, and service withdrawal, for example.

Q. CAN YOU DEFINE WHAT YOU MEAN BY THE TERM "QUALITY OF SERVICE"?

A. The term "quality of service" must be broken down into its two component parts for definition. The first component is to define what constitutes the "service" which Ohio Bell provides. The second involves what determinations of "quality" should be used in evaluating that service.

Q. PLEASE BEGIN WITH THE FIRST COMPONENT. WHAT CONSTITUTES THE "SERVICE" WHICH OHIO BELL PROVIDES?

A. First, while the analysis I present below can be generalized, let me limit my analysis to the provision of basic telephone service to residential customers. This helps focus the discussion on the issues at hand.

Given that limitation, it might be easiest to begin by saying that the "service" provided by Ohio Bell is the wire service to the consumer. Moreover, one might say that the "service" provided by the Company is the act of serving as the intermediary through which two parties communicate by wire. Both of these approaches have some merit. Either of these approaches standing alone, however, is too narrow.

Q. CAN YOU SUMMARIZE YOUR DEFINITION OF "SERVICE" FOR PURPOSES OF THIS TESTIMONY?

A. Yes. More comprehensively defined, the "service" rendered by Ohio Bell includes any jurisdictional activity engaged in by Ohio Bell that is either part of the product acquisition cycle associated with the provision of the wire service, or is inextricably related to the provision of wire service, to residential ratepayers.

Q. **LET'S TURN TO THE DEFINITION OF "QUALITY" NEXT. CAN YOU EXPLAIN WHAT YOU MEAN BY "QUALITY" OF SERVICE?**

A. The term "quality" in the phrase "quality of service" cannot be generically defined to fit all aspects of the product acquisition cycle. Instead, "quality" must be defined in terms of indicia that are specific to each individual part of the cycle. It is thus necessary to define the individual segments of the product acquisition cycle and to develop indicia of "quality" associated with each of those segments. Applying the criteria of "quality" must take into consideration the character of the population at issue.

Q. **CAN YOU GIVE AN EXAMPLE OF HOW SUCH QUALITY CRITERIA MIGHT BE DEVELOPED?**

A. Yes. The most obvious example involves the engineering criteria developed to measure the "quality" of wire service provided by the Company. It is easy to see the segment of the product acquisition cycle, the aspect of "service" rendered by Ohio Bell, to which these criteria relate. Moreover, it is easy to see that these criteria must take into consideration the character of the population at issue. The engineering quality necessary for data transmission, for example, substantially differs from the engineering quality necessary for voice grade communication.

Q. WHAT SEGMENTS OF THE PRODUCT ACQUISITION CYCLE HAVE YOU IDENTIFIED?

A. There are seven basic segments to the product acquisition cycle: (1) the provision of information (whether in company solicitations or in response to customer inquiry); (2) sales; (3) service installation; (4) wire service; (5) billing; (6) payment; and (7) collection.

Q. HAVE YOU DEVELOPED "QUALITY" OF SERVICE CRITERIA FOR EACH SEGMENT OF "SERVICE" OFFERED BY OHIO Bell?

A. No. However, there are criteria that can be applied to specific segments. I have set forth examples of these criteria in Exhibit NB-4 below.

Q. HOW DOES THE REQUIREMENT THAT THE COMPANY PROVIDE AN ADEQUATE QUALITY OF SERVICE IN ALL ASPECTS OF THE PRODUCT ACQUISITION CYCLE FIT WITHIN A REGULATORY CONTEXT?

A. There are at least three regulatory principles involved. The first is that rates and services be nondiscriminatory. If two ratepayers pay the same rate, they should reasonably receive the same quality of service. After all, the essence of discrimination is treating two similarly situated

ratepayers differently. The second principle is that service be "reasonably adequate." "Reasonably adequate" means that the service, at a minimum, must provide minimum levels of opportunity for the customer to accomplish the task which the customer has sought to accomplish in that phase of the product acquisition cycle. Hence, for example, within the "information" segment of the service provided by Ohio Bell, information should be adequate to allow consumers to make the correct decision. The final principle is that the service *actually* provided by Ohio Bell does not diverge from the service *promised* to be provided by Ohio Bell.

Q. WHAT QUALITY OF SERVICE ISSUES DO YOU STRESS IN THIS PROCEEDING?

A. The term "quality of service" goes far beyond the issues that are addressed in traditional engineering "Quality of Service Reports." In particular, the quality of service issues that I recommend the Commission to adopt in this proceeding relate to whether Ohio Bell:

(1) adequately informs customers of the least-cost service available to them;

(2) adequately informs low-income customers of their right to subscribe to the company's Link-up program, and the USA program rate options;

(3) adequately avoids "overreaching" and misleading information in the sales and solicitation of services;

(4) protects customers from disconnection for non-payment of non-local-exchange basic services.

Q. PLEASE DISCUSS THE REASON FOR THESE PROPOSALS.

A. With respect to the proposal that quality of service include meeting the requirement of advising customers of the least cost option, there is evidence from the Bell territory, and from other Baby Bells, that this ubiquitous rule is often honored in the breach. As the staff report identified, under current TSA rules customers are not being adequately informed of exceptions to the TSA limitations. The very low number of TSA participants (about 25,000) suggests that Ohio Bell, like its counterparts in other areas of the country, is not adequately informing its customers of the current lifeline option, and that without specific requirements, will not adequately inform customers of the USA plan proposed here.

With respect to overreaching in the sales of enhanced services, information from other Baby Bells (data requests of Ohio Bell on penetration of enhanced services by income has not yet been provided) reveals that low-income customers may disproportionately subscribe to enhanced services, and that service reps may push these services to fulfill marketing objectives. To the extent this is the case for Ohio Bell, it will only become more likely if Ohio Bell is allowed or required to move towards a more entrepreneurial approach. It is known that low-income customers are at risk for disconnection as the result of unaffordable toll and enhanced services charges, so the overselling of costly options to such customers should be scrupulously avoided. Bell should be held to a standard of care in its sales practices.

Likewise, the misleading information provided to staff investigators by service reps of Bell suggests that better training and supervision of customer service information is required.

Finally, in a competitive model of telecommunications services, there is no reason why the local exchange service of Ohio Bell customers, of any income, should be at risk to force payment of enhanced, custom-calling, and any competitive services, including interexchange service, regardless

of provider. To give an analogy, allowing Bell to hold the threat of local exchange disconnection over a customer's head to force priority payment of a competitive service is like letting Bell do billing and collecting for Sears, and threatening local phone DNP for non-payment of the Sears bill. Put another way, if the Bell billing and access services function like a mall in which the mall landlord also has a retail outlet, to disconnect a customer for non-payment of a competitive service is to deny access to the entire mall because of a default in one of the stores.

Q. WHAT DO YOU CONCLUDE REGARDING QUALITY OF SERVICE CRITERIA?

A. My conclusion is that adoption of quality of service criteria including standards for customer service is essential for universal service to be achieved for residential customers. Particularly if the Commission is to experience the alternative form of relaxed regulation Ohio Bell proposes, these quality of service criteria are necessary to overcome the problems I have identified throughout my testimony above.

Part V: CONCLUSION

Q. WHAT DO YOU CONCLUDE AS TO COMPANY'S PROPOSAL TO IMPLEMENT ITS PLAN FOR ALTERNATIVE REGULATION?

A. The Company's proposal should be approved only if its provides adequate protections to the public. No-one seriously asserts that the public should be subjected to oppression in order to permit Ohio Bell to better compete in those markets which are even arguably workably competitive. Given this observation, and given my discussion above, I conclude that the Bell Plan does not adequately provide the level of consumer protections which regulation would provide. Neither will customers be able to protect themselves in the absence of the historic level of regulation. Because of these failures, customers in general, and low-income residential customers in particular, will suffer harm. Accordingly, if the Company's proposal is not rejected in its entirety, at a minimum, the proposals in mitigation, as set forth in Section III and Section IV above, should be adopted.

Q. ARE YOUR PROPOSALS NECESSARILY LINKED TO ADOPTION OF THE ALTERNATIVE REGULATION PLAN BELL HAS PROPOSED?

A. No. The universal service proposals, in particular, should be considered and adopted regardless of the disposition of Bell's alternative regulation plan, given the great distance Bell must go to achieve a minimal definition of universal service. The modernization proposals will be needed regardless of the form of regulation, as will service quality improvements.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

EXHIBIT ___ NB – 1

PERCENT OF BLACK AND HISPANIC POPULATION (ALL INCOMES) WITHOUT TELEPHONE SERVICE: MAJOR CITIES IN OHIO BELL SERVICE TERRITORY (1990 CENSUS)

CITY	PERCENT OF BLACKS WITH NO PHONE IN HOME		CITY	PERCENT OF HISPANICS WITH NO PHONE IN HOME
Cleveland	10.6%		Cleveland	20.5%
Columbus	8.3%		Columbus	5.4%
Dayton	11.4%		Dayton	12.0%
Akron	8.6%		Akron	15.2%
Toledo	12.2%		Toledo	14%
Youngstown	12.3%		Youngstown	12.6%

All units in these areas with no telephone in unit: 3.9%

EXHIBIT ___ NB – 2

PERCENT OF POOR (BELOW FPL) HOMEOWNERS & RENTERS

WITHOUT TELEPHONE SERVICE

OHIO BELL COUNTY SERVICE TERRITORY

(1990 CENSUS)

COUNTY	PERCENT OF POOR HOMEOWNERS WITH NO PHONE IN HOME		COUNTY	PERCENT OF POOR RENTERS WITH NO PHONE IN HOME
Cuyahoga	4.7%		Cuyahoga	20.1%
Franklin	3.1%		Franklin	16.6%
Lucas	5.4%		Lucas	20.3%
Mahoning	4.3%		Mahoning	22.8%
Montgomery	6.0%		Montgomery	22.1%
Summit	4.8%		Summit	17.6%
Trumbull	8.2%		Trumbull	19.7%

EXHIBIT ___ NB – 3

PERCENT OF POOR (BELOW FPL) HOMEOWNERS & RENTERS

WITHOUT TELEPHONE SERVICE

OHIO BELL COUNTY SERVICE TERRITORY

(1990 CENSUS)

COUNTY	PERCENT OF POOR HOMEOWNERS WITH NO PHONE IN HOME		COUNTY	PERCENT OF POOR RENTERS WITH NO PHONE IN HOME
Cuyahoga	4.7%		Cuyahoga	20.1%
– White	3.5%		– White	18%
– Black	6.6%		– Black	20.5%
– Hisp.	18.9%		– Hisp.	35.8%
Franklin	3.1%		Franklin	16.6%
– White	20.7%		– White	14.9%
– Black	32.4%		– Black	20.7%
Lucas	5.4%		Lucas	20.3%
– White	4.8%		– White	16.6%
– Black	7.4%		– Black	26.2%
– Hisp.	8.1%		– Hisp.	35.2%
Mahoning	4.3%		Mahoning	22.8%
– White	3.3%		– White	18.4%
– Black	6%		– Black	26.7%
– Hisp.	6.6%		– Hisp.	44.9%
Montgomery	6.0%		Montgomery	22.1%
– White	5.5%		– White	20.3%
– Black	7%		– Black	25%
– Hisp.	–		– Hisp.	13.5%
Summit	4.8%		Summit	17.6%
– White	4.8%		– White	16.9%
– Black	3.5%		– Black	19%
– Hisp.	3.5%		– Hisp.	41.6%
Trumbull	8.2%		Trumbull	19.7%
– White	8.9%		– White	17%
– Black	2.2%		– Black	30.2%
– Hisp.	25%		– Hisp.	–

EXHIBIT _____ (NB-4

QUALITY OF SERVICE CRITERIA

FOR SELECTED SEGMENTS OF OHIO BELL RESIDENTIAL TELEPHONE SERVICE

INFORMATION PROVISION

Complete
Correct
Neutral
Objective
Sufficient
Nondiscriminatory

BILLING

Timely
Accurate
Complete
Informative

SALES

Avoid "overreaching"
Nondiscriminatory

COLLECTIONS

Cost-effective
Effective
Fair
Regulatory compliance

PAYMENT

Accessible
Timely
Nondiscriminatory