A CECA FORUM

Universal Service:

Policy Issues for the 21st Century

CONSUMER ENERGY COUNCIL OF AMERICA

March 2001

2000 L Street, NW, Suite 802, Washington, DC 20036 ~ Tel (202) 659-0404 ~ Fax (202) 659-0407 ~ www.cecarf.org

Founded in 1973, CECA is the senior public interest organization in the U.S. focusing on the energy, telecommunications and other network industries that provide essential services to consumers. CECA is a leading national and international resource for information, analysis, and technical expertise on a wide variety of public policy initiatives. CECA works with government, industry and public interest organizations, and has become distinguished for building consensus between organizations with divergent interests. The result has been nearly three decades of policy development that has ensured reliable, sustainable and affordable essential services to consumers.

© COPYRIGHT 2001, CONSUMER ENERGY COUNCIL OF AMERICA. ALL RIGHTS RESERVED.

CECA is pleased to present its report on Universal Service. We could not have produced this report without the thoughtful input of consumer leaders, industry officials, and government agency experts who attended the Universal Service Forum meetings. CECA attempted to promote agreement on as many issues as possible, and this report reflects the diversity of views expressed in those meetings. This report does not purport to represent the official position of any agency, company or organization. CECA assumes full responsibility for the report and its contents.

Foreword

In the Fall of 2000, the Consumer Energy Council of America (CECA) launched a consensus-building forum to bring together a blue ribbon panel of national leaders to provide guidance for policymakers on the Federal Universal Service Program. The participants shared a vision of a vibrant and constantly evolving national telecommunications infrastructure. While ideas for improving the program varied widely, the prevailing theme of the many discussions was that the Universal Service Program is an essential component of one of America's most valuable social policies. To that end, participants in the Forum offered their expert advice and suggestions on how to make key aspects of the program most efficient, effective, and equitable.

The following report represents the combined input of the participants. It reflects, as well, background information provided by key administrators of the Universal Service Program. A report this rich in empirical detail and representative of such a variety of viewpoints could only result from the collective contributions of such an expert and involved group of stakeholders. This report reflects the most comprehensive information to date on the program's details, background, and stakeholder views on universal service.

This report is an essential guide for policy-makers. It provides recommendations that will contribute to the continued evolution and viability of important aspect of the Program. It serves as a valuable reference tool and roadmap for the Low-Income and High Cost components, and the strengths and weaknesses of the program in its current form.

I am most grateful to the project Chair, Kathleen Wallman, CEO of Wallman Strategic Consulting, former Deputy Assistant to the President for Economic Policy, and former Chief of the Common Carrier Bureau of the FCC, for her expert leadership in conducting meetings, reviewing drafts, and skillfully building bridges between stakeholders. I am grateful as well to the Vice Chairs, Elizabeth (Libby) Beaty, Executive Director of the National Association of Telecommunications Officers and Advisers (NATOA), and Nanette Thompson, Chair of the Regulatory Commission of Alaska and member of the Federal-State Joint Board on Universal Service, for their expert insights and leadership throughout the Universal Service Forum meetings. Chair Thompson guided the discussions but abstained from the decision process because of her appointment during this project to the Federal-State Joint Board on Universal Service.

The panoply of issues contained in the report could not have been elucidated or recommendations made without the skillful efforts of the three Subcommittee Chairs, Robert Blau of BellSouth, Russell Frisby of CompTel, and Earl Comstock of Sher & Blackwell. I appreciate their generous time and attention to the complexity of details and their sensitive guidance through issues often characterized by diverse views and interests. CECA Project Consultant Barry Johnson was invaluable in providing support and direction in the early stages of the project. The members of the Universal Service Administrative Corporation (USAC), especially Robert Haga, provided valuable contributions in synthesizing and compiling the vast amounts of data on universal service that are presented in this report. Brett Tarnutzer of Wallman Strategic Consulting did an outstanding job working with the CECA staff in writing and shaping the content of the report.

Finally, I am indebted to Davis Bookhart of CECA for his prodigious efforts as Project Manager of the Universal Service Forum. Davis was responsible for drafting background papers, orchestrating nearly 20 meetings of the Forum and the three subcommittees over a highly compressed timetable, facilitating conference calls to resolve contentious issues, and personally interacting with Forum participants on a daily basis.

Ellen Berman
President
March 2001

CECA UNIVERSAL SERVICE FORUM
Participants

Chair, CECA Universal Service Forum
Ms. Kathleen Wallman
Chief Executive Officer
Wallman Strategic Consulting
Washington, DC

Vice Chair, CECA Universal Service Forum
Ms. Libby Beaty
Executive Director
National Association of Telecommunications Officers and Advisors
McLean, VA

Vice Chair, CECA Universal Service Forum
Hon. Nanette Thompson
Chair, Regulatory Commission of Alaska
Anchorage, AK

Subcommittee Chair, CECA Universal Service Forum
Mr. Robert Blau
Vice President, Executive and Federal Regulatory Affairs
BellSouth
Washington, DC

Subcommittee Chair, CECA Universal Service Forum
Mr. Earl Comstock
Partner
Sher & Blackwell
Washington, DC

Subcommittee Chair, CECA Universal Service Forum
Mr. Russell Frisby
President
Competitive Telecommunications Association (CompTel)
Washington, DC

Ad Hoc Telecommunications Users Committee
Mr. Jim Blaszak
Representative
Levine, Blaszak, Block & Boothby, LLP
Washington, DC

ALTS
Teresa (Tiki) Gaugler
Regulatory Attorney
Washington, DC

AT&T
Mr. Joel Lubin
Vice President of Regulatory Policy
Washington, DC

Benton Foundation
Mr. Tony Wilhelm
Program Director
Washington, DC

Benton Foundation
Mr. Kade Twist
Policy Associate
Washington, DC

Carnegie Mellon University
Mr. Jon Peha
Professor
Pittsburgh, PA

Cellular Telecommunications Industry Association
Mr. Randy Coleman
Vice President, Regulatory Policy and Law *
Washington, DC
(*Until December 2000)

Cellular Telecommunications Industry Association
Mr. Bruce Cox
Vice President, Regulatory Policy and Law
Washington, DC

Cellular Telecommunications Industry Association
Sarah Leeper
Staff Counsel
Washington, DC

Communications Workers of America
Mr. Morton Bahr
President
Washington, DC

Communications Workers of America
Ms. Debbie Goldman
Research Economist
Washington, DC

Competition Policy Institute
Ms. Debra Berlyn
Executive Director
Washington, DC

Consumer Federation of America
Dr. Mark Cooper
Research Director
Washington, DC

FIBRE Internationale
Mr. Eric Stradford
General Partner
Landover, MD

Georgia Office of Consumer Affairs
Mr. Jim Hurt
Director
Consumer's Utility Counsel Division
Atlanta, GA

Information Technology Association of America
Mr. Mark Uncapher
Vice President & Counsel
Information Services and Electronic Commerce Division
Arlington, VA

Internet Access Coalition
Ms. Colleen Boothby
Representative
Levine, Blaszak, Block & Boothby, LLP
Washington, DC

Internet Access Coalition
Mr. Peter Pitsch
Director of Communications Policy
Intel
Washington, DC

Latino Issues Forum
Ms. Ana Montes
Telecommunications Director
San Francisco, CA

Montgomery County, Maryland
Ms. Jane Lawton
Cable Communications Administrator
Rockville, MD

National Association of State Utility Consumer Advocates
Mr. Charles Acquard
Executive Director
Washington, DC

National Cable Television Association
Mr. Rick Cimerman
Director, State Telecommunications Policy
Washington, DC

National Cable Television Association
Ms. Andrea Bruns
Assistant Director of State Telecommunications Policy
Washington, DC

National Exchange Carriers Association
Ms. Pat Chirico
Executive Director, Rates, Costs & Average Schedule
Whippany, NJ

National Exchange Carriers Association
Ms. Gina Harrison
Director of Government Relations
Whippany, NJ

NetAction
Ms. Audrie Krause
Executive Director
San Francisco, CA

Qwest Communications
Mr. Andrew Fields
Executive Director, Congressional and Regulatory Affairs
Washington, DC

SBC
Ms. Priscilla Hill-Ardoin
Senior Vice President-FCC
Washington, DC

SBC
Mr. Jamie (Mike) Tan
Associate Director, Regulatory
Washington, DC

State of Kentucky Public Service Commission
Hon. Ed Holmes
Vice Chair
Frankfurt, KY

State of Maryland Office of People's Counsel
Mr. Michael Travieso
People's Counsel
Baltimore, MD

Maryland Public Service Commission
Dr. Nancy Zearfoss
Technical Advisor to the Commissioners
Baltimore, MD

State of Missouri Office of Public Counsel
Ms. Martha Hogerty
Public Counsel
Jefferson City, MO

State of Missouri Office of Public Counsel
Ms. Barbara Meisenheimer
Public Counsel
Chief Economist
Jefferson City, MO

State of New Jersey Office of the Ratepayer Advocate
Ms. Blossom Peretz
Ratepayer Advocate
Newark, NJ

State of New Jersey Office of the Ratepayer Advocate
Ms. Sarah Steindel
Assistant Ratepayer Advocate
Newark, NJ

State of Vermont Public Service Board
Mr. Peter Bluhm
Director of Regulatory Policy
Montpelier, VT

U.S. Department of Justice
Mr. Adam Golodner
Chief of Staff *
Antitrust Division
Washington, DC
(*Until January 2001)

United States Telecom Association
Mr. John Hunter
Senior Counsel, Legal & Regulatory Affairs
Washington, DC

University of California – Berkeley, Haas School of Business
Dr. Michael Katz
Professor of Business Administration
Berkeley, CA

University of Texas
LBJ School of Public Affairs
Dr. Lodis Rhodes
Professor
Austin, TX

U.S. House of Representatives
Office of Congressman Hoeffel
Mr. Lyle Ryter
Senior Legislative Assistant *
Washington, DC
(Until February 2001)

Verizon
Mr. Frank Gumper
Vice President, Public Policy Development
New York, NY

Verizon
Mr. Link Hoewing
Executive Director, Industry Analysis
Washington, DC

Virginia Polytechnical Institute
Mr. Chris McCollum
Economic Development Specialist
Blacksburg, VA

Wallman Strategic Consulting
Ms. Lisa Zaina
Vice President
Washington, DC

Wallman Strategic Consulting
Mr. Brett Tarnutzer
Senior Analyst
Washington, DC

Western Wireless Corporation
Mr. Gene DeJordy
Vice President, Regulatory Affairs
Bellevue, WA

WorldCom
Mr. Chuck Goldfarb
Director, Law and Public Policy
Washington, DC

WorldCom
Mr. Brad Stillman
Senior Policy Counsel
Washington, DC

WorldCom
Ms. Lori Wright
Senior Manager, Regulatory Affairs, Law and Public Policy
Washington, DC

CECA Project Staff

Ellen Berman
President

Davis Bookhart
Senior Project Director

Rema Iyer
Research Fellow

Tamara Lyons
Administrative Assistant

We gratefully acknowledge the following individuals who provided assistance to CECA in understanding the complexities of existing universal service programs and the dynamics affecting them. These individuals did not represent the official views or the positions of their respective government agencies, and this report does not purport to express the agreement of these individuals or their agencies with the views expressed herein.

Gary Allan and Ed Cameron, Rural Utilities Service, US Department of Agriculture
Carol Mattey, Federal Communications Commission
James McConnaughey, National Telecommunications and Information Administration, Department of Commerce

TABLE OF CONTENTS

EXECUTIVE SUMMARY I

PART ONE: THE CECA UNIVERSAL SERVICE FORUM 1

I. THE URGENCY OF A CONSENSUS ON UNIVERSAL SERVICE 1
A. Overview of Issues and Stakeholder Views 3
1. What Should the Fund Do? 3
2. What Services Should the Fund Support? 4
3. How Should the Fund Evolve? 5
4. How Should the Fund Be Managed? 6
B. The CECA Process 7
C. Structure of the Report 8
II. MILESTONES IN THE EVOLUTION OF UNIVERSAL SERVICE: A BRIEF HISTORY 9
A. Passage of the Communications Act of 1934 10
B. Break Up of AT&T 10
C. Passage of the Telecommunications Act of 1996 11
D. Recent Developments 12

PART TWO: UNIVERSAL SERVICE ISSUES 14

III. ISSUES AFFECTING THE FUNDING OF THE UNIVERSAL SERVICE PROGRAM 14
A. Sustainability: Challenges in Meeting the Obligations of the Program 15
1. Impact of New Technologies and Services on the Sustainability of the Program 17
2. Impact of Packages of Services on the Sustainability of the Program 19
B. Equity and Competitive Neutrality: Who Pays and Who Does Not 19
C. Efficiency: How Universal Service Goals Impact Phone Rates 21
IV. ALTERNATIVE FUNDING OPTIONS 23
1. Include All Interstate Revenues 23
2. Include Interstate and Intrastate Telecommunications Revenues 24
3. Include Support from All Services 24
4. General Tax Funds 25
5. Excise Tax 26
6. Flat Per-Line Assessment 26
7. Per-Number Charge 27
V. ELIGIBILITY ISSUES 28
A. Consumer Eligibility for Universal Service Funds: Lifeline and Link-up Programs 28
1. Lifeline and Link-up 29
2. Rates of Participation 32
3. Automatic Enrollment 35
B. Carrier Eligibility for Universal Service Funding 35
1. Case Study No. 1: State Commission Designation of a Competitive Carrier as an ETC 36
2. Case Study No. 2: FCC Designation of a Competitive Carrier as an ETC 38
C. Portability and Disaggregation 39
1. Portability 39

2. Disaggregation 41
VI. WHICH SERVICES MERIT SUPPORT? 42
A. Core Services 42
B. Universal Service and the Internet 44
C. An Evolving Definition of Universal Service 47
D. Looking Ahead 49
E. A Note of Caution 50

PART THREE: RECOMMENDATIONS AND OBSERVATIONS 51

VII. RECOMMENDATIONS 51
A. Supported Services 51
1. Create a Technological Task Force to Advise on Supported Services 51
VIII. FURTHER OBSERVATIONS 54
A. Potential Tension Between Net Payor and Net Payee States 54
B. The Importance of Avoiding Perverse Incentives in Universal Service Support 54
C. Disaggregation of Service Areas 55

PART FOUR: BACKGROUND AND TECHNICAL INFORMATION 56

IX. FLOW OF FUNDS IN AND OUT OF THE UNIVERSAL SERVICE PROGRAM 56
A. Key Institutions Involved in the Universal Service Program 56
1. National Exchange Carrier Association (NECA) 56
2. Universal Service Administrative Company (USAC) 56
B. Description of How the Revenues Are Collected 56
C. Description of How Funds Are Disbursed 58
1. The High Cost Support Mechanism 58
2. The Low Income Support Mechanism 60
3. The Rural Health Care Support Mechanism 62
4. The Schools and Libraries Support Mechanism 63
APPENDIX 1: PROJECTED DISBURSEMENTS TO SERVICE PROVIDER TYPE 1998 – 2000 64
APPENDIX 2: CONTRIBUTIONS BY SERVICE PROVIDER TYPE 1998 – 2000 66
APPENDIX 3: PER LINE USF RECOVERY ANALYSIS 70
APPENDIX 4: HOW CHANGE IN THE CONTRIBUTION BASE IMPACTS USF FACTORS 72
APPENDIX 5: SUPPORTED SERVICES FLOW CHART 73
APPENDIX 6: RELEVANT UNIVERSAL SERVICE STATUTES 78

EXECUTIVE SUMMARY

I. Introduction

The CECA Universal Service Forum grew out of a shared vision of the value of the national telecommunications infrastructure to society. The Universal Service Fund, created by mandate in the Telecommunications Act of 1996 and administered by the Federal Communications Commission, ensures access to this vibrant telecommunications network by many who otherwise might not be served.

The Universal Service program is uniquely situated to provide the assistance necessary to maintain this national asset. However, with the dramatically changing telecommunications landscape, the program must evolve accordingly to remain effective. Fortunately, the drafters of the Telecommunications Act of 1996 anticipated an environment that would be regularly changing, and embedded mechanisms in the text of the Act that allows the Universal Service program to evolve as necessary. The CECA Universal Service Forum was convened to determine just how that evolution should take place, and to provide the necessary input and recommendations to policymakers so that the program can continue to benefit future generations of Americans.

A. The CECA Universal Service Forum

In February 2001, CECA completed a six-month consensus-building forum to examine key aspects of the federal Universal Service program. The CECA Universal Service Forum was comprised of a blue-ribbon panel of over 50 national leaders, representing local and interexchange carriers, information technology companies, Internet service providers, local, state and federal regulators, legislators, and consumer organizations.

The CECA Universal Service Forum convened the major stakeholders in a constructive dialogue about universal service in order to facilitate sound policy-making. While many divergent views were represented, a goal of the Forum was to focus on areas of common interest among the stakeholders—universally available basic telecommunications and the continuation of universal service as a long-standing goal of U.S. telecommunications policy—and narrow the differences among the stakeholders on the various policy options. Forum members, through a series of day-long meetings in Washington, DC and through meetings of focused subcommittees, engaged in a variety of contentious topics through frank and open discussions. The process culminated in CECA's specific recommendations to the federal and state policymakers with responsibility for these programs.

B. The CECA Process

As in previous consensus-building projects, CECA convened a broad-based panel of stakeholders to serve in the Universal Service Forum. The objective of the process was to arrive at one of three outcomes for developing policy guidance on issues under discussion:

- Consensus on policy options;
- Agreement on which policy options are clearly not acceptable;
- Identification of policy options that participants in the Forum consider acceptable.

The report culminates with recommendations to policymakers made by CECA, based upon a careful analysis of the stakeholder perspectives and interests. CECA attempted to promote agreement on as many issues as possible, and this report reflects the diversity of views expressed by stakeholders. This report does not purport to represent the official position of any agency, company or organization. CECA assumes full responsibility for the report and its contents.

During the CECA Universal Service Forum meetings, subcommittees and working groups were appointed to focus on specific issues of funding, supported services, and eligibility. Each subcommittee met on numerous occasions and produced a series of findings that were later discussed in the full committee meetings, and which laid the foundation for this report.

While the conclusions and recommendations of this report do not necessarily represent the consensus of all the Forum members, CECA could not have reached its conclusions without the careful reflection and thoughtful insights of all those who participated. As the goals and principles of universal service tended to be the central point of agreement, the next step was to elucidate the issues that will enable the Universal Service program to be as effective, efficient, and equitable as possible. The main questions that arose were:

- As the program evolves, and as social and industry conditions change, is the program well situated to remain fiscally healthy and sustainable?
- How can the program better reach the intended recipients of support, both from the consumer and the industry perspectives?
- How can the program continue to evolve to support services that are important to maintaining the goals of universal service?

These broad themes were examined, and more specific issues were discussed in the three subcommittees described below:

1. Who Pays and How? Subcommittee

This subcommittee focused on the various pressures being exerted on the Fund and how these pressures affect the Fund's stability and sustainability. The subcommittee also developed a set of alternative options for revenue generation outside the scope of the current mechanism.

2. Eligibility Criteria Subcommittee

This subcommittee focused on principles of eligibility for support and affordability of services, both from the consumer perspective and from the carrier perspective. For consumers, the focus often centered on how to improve the system so that the low-income households that are eligible for support receive that support. For carriers, issues included the role of competition, how wireless carriers could be brought into the competitive mix, and how service and support can be disaggregated for greater competition and efficiency.

3. Supported Services Subcommittee

This subcommittee examined whether additional services – such as advanced services – should be included in the provision of universal service. The subcommittee discussed how to contribute to a system that places an emphasis on forward compatibility, i.e., being able to continue building on the platforms without being "locked in" to certain technology. The subcommittee also focused on digital divide issues, examining the relevant components of the digital divide and how well the universal service program is equipped to address these issues.

C. Overview of the Issues

The concept of universal service has evolved measurably over the past 100 years and every indication is that it will continue evolving well into the 21st Century. Several questions have endured at every stage, and some new questions have arisen:

- **Supported Services** – Does the existing level of supported services comply with the requirements of the Telecommunications Act of 1996? What services should be added to the definition of supported services and over what timetable? Would adding these services significantly increase the size of the Fund required to sustain these services? Is there any evidence that shows that the inclusion of these services now will have a positive effect on society and the economy?

- **Stability of the Fund** – Can the Fund sustain itself? Should the base of revenue be broadened? Are there better alternatives for funding this program?

- **Efficiency of the Fund** – Does the Fund deliver support in a manner that is most consistent with maximizing consumer welfare and avoiding economic distortions?

- **Competition** – Will the Fund help competition in the rural and insular areas, or is it structured in a way that discourages competition in these areas? Is the program creating barriers that prevent competition or protect the incumbents? Is the structure and funding consistent with the goal of all segments of the telecommunications industry becoming effectively competitive?

- **Low Income** – If the estimates are correct that the subsidies intended to assist the poor and impoverished are missing approximately 75 percent of households that could be deemed eligible, how can this be rectified?

- **The Digital Divide** – Is it appropriate for the Fund to be used to address concerns that a gulf exists between the information "haves" and "have-nots?" Is it reasonable to assume that the gulf will close on its own without intervention? Is it too early to know?

These issues were discussed at length and the various stakeholder perspectives are presented in the report.

II. Issues Affecting the Funding of the Universal Service Program

A successful universal service mechanism begins with a clear and sustainable source of funding. On this, most constituencies agree, even though they may not agree on how the fund should be collected or who should be required to contribute. For the time being, it is clear that the current funding mechanism is adequate to fulfill the mission of universal service. There are important issues concerning which telecommunications providers should contribute to the system and how the necessary funds should be collected. There are fundamental questions concerning which companies should be considered telecommunications providers, and therefore subject to funding requirements. There are arguments that since universal service is a national social and economic policy, perhaps even non-telecommunications industries should contribute. Some even suggest that the entire system should be removed from its current funding mechanism and that Congress should allocate funds through general tax revenues, as other social policy or public works programs are funded.

The changing face of the telecommunications industry – through both the introduction of new competitive players and technological innovations – has created a need to reassess the means by which the Universal Service Fund (USF) is supported. As once distinct industry segments and markets converge – and as providers offer bundles that include both interstate and intrastate telecommunications services as well as non-telecommunications services at a single flat rate – new questions arise as to how the current mechanism is able to handle the evolving marketplace. For example:

- Is the Fund sustainable in the future given the means by which it is currently funded?

- Are the contributions collected in an equitable manner with respect to both carriers and end users paying into the Fund?

- Are the contributions collected in a competitively neutral fashion so that no class of carrier is either aided or hindered competitively because of the means by which funds are collected?

- Is the current collection mechanism efficient in terms of the incentives it may create and how these incentives operate to allocate the resources?

Some argue the answer to each of these questions is no – that competition and new technologies may undermine the foundation of the program; that some users of the network may not be paying into the program leaving others to shoulder more of the burden; and that the current payment scheme creates economic inefficiencies. There are also opposing viewpoints to these statements. Based on the analysis that follows, the Forum had sufficient concern regarding the vulnerability of the current funding mechanism to warrant an examination of several alternative funding mechanisms that potentially could better serve the public by being more sustainable, equitable, competitively-neutral, and efficient.

III. Alternative Funding Options

The CECA Universal Service Forum identified concerns about the sustainability and competitive neutrality of the fund. While the current system should be adequate to handle the current demands of universal service, there is potential for erosion of the interstate revenue base as well as the possibility for increased future demands on the system. CECA believes that the Universal Service Program, as a valuable social policy, needs to be strong and stable so that its mandate can be fulfilled. It must be flexible so that it can adapt to new demands that may arise in the evolving telecommunications environment. While the program is stable today, there are concerns that it might not be sustainable unless new funding sources are identified, if new services, including advanced services, are added, or even if the Low-Income program reaches its peak constituency. Universal service has benefited generations of Americans, and attention should be paid to make certain that it stays vibrant for generations to come.

The base from which revenue is currently generated is somewhat narrow, primarily collected by carriers from end users. This has led some to suggest that the higher rates associated with a narrow base is more inefficient than lower rates that would result from spreading the collections over a broader base. Consumer benefits come from raising funds in ways that minimize competitive, technological, and consumption distortions. With this in mind, some feel there is reason to be concerned about the current system having elements that are not competitively neutral, equitable and efficient, from both the consumer and the contributors' perspectives.

Based on these findings, it is prudent to examine options for modifying the universal service collection system to address the issues of sustainability, competitive neutrality,

equity, and efficiency. The Forum considered several options that are discussed below. In any decisions made regarding funding, policymakers must carefully consider the pros and cons of each option. Given the mandate of the Act regarding universal service and the authority granted to the FCC by Congress, some of these options would require Congressional action before they could be implemented. The options include:

1. Include All Interstate Revenues

This option maintains the general structure of the current funding mechanism, but modifies it to create a broader base of support from interstate service providers. Primarily this would mean including Internet service providers.

2. Include Interstate and Intrastate Telecommunications Revenues

This option includes all interstate telecommunications revenues similar to the previous option, but would include all intrastate telecommunications revenues as well (currently they are excluded). An impact analysis, provided in Appendix 4 of this report, shows that incorporating interstate and intrastate telecommunications revenues could result in considerably lower rates paid by contributors to the Fund.

3. Include Support from All Services

This option includes all interstate and intrastate telecommunications revenues, as in the previous option, but also includes the revenues from services and products that recover discounts under the schools and libraries fund. This option would include not only telecommunications service providers, but could also include companies that manufacture goods or provide other services that are clearly not telecommunications services.

4. Use Funding from the General Tax Revenues

Instead of relying on telecommunications revenues to fund universal service, support for the program could be drawn from general tax revenues appropriated through the normal federal legislative process. As a variation on this idea, general tax revenues could be used to supplement rather than replace telecommunications revenues. The supplement could be in the nature of a pure supplement to make up for funding shortfalls if they occasionally occur or, more boldly, to fund expansion of the program to underwrite broader access to advanced and enhanced network services as they become more essential tools for economic self-sufficiency. A further variation could be to use general tax revenues as a guarantee against shortfalls, much as existing federal facilities are available to guarantee borrowings or the solvency of financial institutions.

5. Use the Existing Excise Tax

A current excise tax on telecommunications services, originally created a century ago to fund the Spanish-American War, now funnels revenue into the general tax fund. The amount generated by this tax, at slightly less than three percent of all telephony revenues,

is the approximate size of the current Universal Service Fund, and could be directed instead into the Universal Service Fund.

6. Create a Flat Per-Line Assessment

One way to collect universal service funds from all users of the public switched telephone network is to make the assessment on a per-line basis. Since it is easier to identify lines than revenues, this would be an administratively efficient mechanism. Questions of equity could be addressed my setting the per-line rates higher for business lines than for residential lines, and the rate could be dropped to zero for low-income consumers. Analysis in Appendix 3 of the report hypothesizes three different levels of monthly per-line assessments (from $0.75 to $1.25) and the resulting impact on business assessments.

7. Assess a Per-Number Charge

Funding for universal service could be collected via a surcharge on every telephone number. This would apply to the actual numbers in use, as well as new phone numbers that are assigned in blocks. This option is similar to the Per Line Assessment, but would not cover any telephony that does not use traditional 10-digit telephone numbers, such as IP telephony.

IV. Eligibility Issues

The CECA Universal Service Forum undertook an analysis of issues regarding the eligibility qualification for two of the programs in the Universal Service program, the High-Cost and Low-Income programs. Because of time constraints, the Forum did not examine the eligibility requirements and issues associated with the Schools and Libraries Program (E-Rate) or the Rural Health Program. The eligibility processes are central to the dissemination of the monies in the program and therefore to the ultimate success of its programs. The topic of eligibility for support from the program was divided into two distinct areas of USF administration and policy for purposes of examination in the Forum:

- Consumer eligibility for Lifeline and Link-up services
- Carrier eligibility for subsidies to serve high cost areas

Some Universal Service Fund allocations go to states to support specific customer services offered at discounted prices, i.e., Lifeline and Link-up, while other funds support carriers for providing services to areas that are expensive to serve because of geography or terrain. In addition to issues that relate directly to standards of eligibility, the CECA Universal Service Forum also addressed issues regarding portability of support and disaggregating support areas.

V. Which Services Merit Support?

Judgments about which services merit support by the program are crucial because they may mark the dividing line between the "haves" and the "have-nots" in a society in which economic empowerment increasingly depends upon access to information and the technologies that deliver it. A significant portion of the population (some six percent of American households, representing more than six million households) for one reason or another does not have access to even "plain old telephone service" (POTS). This is evidenced by the data on telephone subscribership and the Lifeline and Link-up programs presented in the report.

More and more, Americans are taking part in the information age and the growth of the Internet shows that Americans are increasingly interested in more than just POTS. The 1996 Act provides some high-level and long-range guidance for the evolution of the Universal Service program, but leaves many of the details to the Federal-State Joint Board and the FCC to flesh out. As technology evolves and becomes vitally important to the social and economic well-being of all Americans, so too must universal service evolve. The services that are supported by the Universal Service program must be carefully examined to ensure that it is in touch with the needs of all Americans.

VI. Recommendations

The following recommendations have been developed by CECA based on the ideas generated during discussions and the exchange of views from the Forum participants.

A. Supported Services

CECA believes that the services supported by the Universal Service Program are vital to the social well-being of all Americans. CECA also asserts that advanced and enhanced services, as links for maintaining connectedness among Americans and as tools for economic viability, will continue to increase in importance. Therefore, **CECA recommends that all supported services be maintained and that steps be taken to determine when and how additional services, including advanced services, should be included in the definition of supported services**. CECA recommends taking the following steps:

1. Create a Technological Task Force to Advise Policymakers on the Evolution of Supported Services

CECA recommends that a Technological Task Force (TTF), in an advisory capacity to the FCC and the Federal-State Joint Board, be created to determine the optimal time for inclusion of additional services, including advanced services. The TTF would be a stakeholder group that would take a comprehensive examination of the social, political, economic, and technological landscape within which advanced services are

considered. The TTF will have several advantages as a supplement to the FCC review process:

- The TTF would be comprised of a broad balance of stakeholders, much like the Rural Task Force, so that a variety of viewpoints on advanced services could be considered. Ensuring that the key stakeholders are represented is essential to the success and credibility of the TTF;

- The TTF could monitor progress on a more continuous basis than the regular review mandated by the Act;

- The TTF would have the flexibility to examine issues outside the boundaries of jurisdiction of the FCC, and if appropriate, could present observations and recommendations to other governmental and non-governmental agencies.

CECA recommends that a TTF consisting of approximately 20 members be established to advise the Commission. The TTF should include a balance of key representatives of stakeholder interests, including:

- Industry and business representatives;
- Consumer leaders;
- Payer states and payee states;
- Academics and technical experts;
- Low income advocates and ratepayer advocates.

2. Utilize a Deliberative Approach for Determining Essential Services

The 1996 Act mandates that universal service be "an evolving level of telecommunications." As such, the Federal-State Joint Board and the FCC must determine precisely *how* universal service should evolve and *what* it should evolve into. **CECA recommends that decision-makers take a deliberative approach to determining such issues as whether to include advanced services in the definition of supported services.** To guide the process of reaching a decision, CECA has developed a series of questions for the FCC and the Joint Board to explore. Those are included in Appendix 5 of the report.

3. Coordinate the National Development of Advanced Services through the USF

CECA recommends that federal, state, and local governments should engage in an effort, nationally coordinated through the Universal Service Program, to encourage deployment of advanced services in all possible venues, specifically including economic development agencies. The Universal Service Program is a valuable asset in the provision of telecommunications services to Americans, and is also excellently

positioned to oversee, plan, and synchronize governmental efforts to create the conditions under which advanced services are deployed.

B. The Low-Income Program

CECA believes that efforts should be made to ensure that the maximum number of low-income individuals are served by the Low-Income program. The recommendations below are intended to enhance the operational effectiveness of the program and encourage broader outreach efforts.

4. Use "Star" States as Benchmarks for Low Income Policies

The less than optimal penetrations rates suggest that most states could work more efficiently to ensure that Low Income support goes to all those who are in need. While state officials acknowledge that the Lifeline and Link-up programs are not benefiting a great number of eligible low income households, some states have policies that result in better targeting and support for households that are in need of assistance. **CECA recommends that the FCC examine the various state programs and determine which state policies can be held up as models for other states to adopt or replicate.**

A nationwide benchmark, such as the standard used in Vermont—where a flat threshold of 175 percent of the poverty line is used to determine who is eligible and then all eligible households are automatically enrolled into the system—can reduce the guesswork and produce clear numbers for state regulators.

5. Create a Compendium of Successful Outreach Tools

Even when states can determine more precise numbers of eligible households for Low Income support, a problem remains that many of those households may not realize that support is available. Publicizing this support is a requirement for Eligible Telecommunications Carrier (ETC) status, but it is not clear what the best means of publicizing might be. Currently, efforts to inform eligible individuals takes the form of:

- Bill stuffers from carriers;
- Television, radio, and print commercials;
- Information detailed on tax returns;
- Door to door, literally extending the message by word of mouth;
- Through web pages, such as the CALLS website;
- Information distributed through educational and social service agencies;

- Direct mailing to qualified customers.

This list gives examples of the variety of techniques available for making the program known to those hardest to reach. **CECA recommends that the FCC create a compendium of public education and outreach methods currently being used, along with an objective summary of the merits and limitations of each method.** This compendium can then be available to state regulators who wish to compare the methods used in their states with other demographically similar states.

C. Streamline ETC Certification Procedures

CECA believes that the goal of the Act—to introduce competition—will be enhanced if the ETC certification process is made most efficient, if undue delays are avoided, and if ease of certification is improved, thereby better enabling new entrants to compete. CECA acknowledges that many states have gained sufficient experience with the process over the past four years so as to have substantially accomplished streamlining. **CECA recommends that federal and state regulators, with the input of interested small carriers, continue to oversee progress in this area to ensure a technology-neutral and carrier-neutral approach to competition.**

PART ONE: THE CECA UNIVERSAL SERVICE FORUM

I. The Urgency of a Consensus on Universal Service

In February 2001, CECA completed a six-month consensus-building forum to examine key aspects of the federal Universal Service programs. The CECA Universal Service Forum was comprised of a blue-ribbon panel of over 50 national leaders, drawn from local and interexchange carriers, information technology companies, Internet service providers, local, state and federal regulators, legislators, and consumer organizations.

The CECA Universal Service Forum took as a point of departure a shared vision of the value of the national telecommunications infrastructure to society. A ubiquitous communications network benefits all Americans. Without federal Universal Service programs, many people would not be able to afford access to this vibrant telecommunications network. Many have low incomes and cannot afford even basic service. Others would pay much higher rates because they live in areas of the country that are costly to serve.

Without the programs, many of America's schools and libraries would not have the funds for the internal wiring and equipment necessary to connect to the Internet, leaving millions of children without a means of access to the information gateway to the world. Without the Fund many rural hospitals and health care facilities would not have the high-tech connections that transmit critical health information essential to remote diagnosis and treatment of patients. Simply put, without the assistance of a program such as the Universal Service Fund,[1] a portion of our society would be left behind.

CECA fully supports the idea that America's telecommunications and information network is critically important to our society, and that the social goals of the Universal Service program[2] are valuable to the strength and integrity of the Nation. Using this premise as the foundation for discussion, the CECA Universal Service Forum focused on the strengths and weaknesses of the program, and how the program could operate most effectively.

This examination is essential and timely. While the Fund in its present form was established by the 1996 Act, key parts of the program were implemented many decades earlier when the telecommunications industry (1) was characterized by the monopoly provision of service, and (2) was not experiencing convergence from other industries. In light of competitive market developments and the explicit decision of Congress in the Telecommunications Act of 1996 to foster the competitive provision of telecommunications services, some aspects of the existing Universal Service mechanisms need to be revised to better conform to current national policy. Determining how to do this has been a source of contention.

---

[1] The term *Universal Service Fund*, as used in this report, refers to the existing Federal universal service programs, rather than simply to the high-cost support fund, as the term has been used in the past.

[2] The Universal Service Fund is actually comprised of four different programs, the High Cost, the Low-Income, the Schools and Libraries, and the Rural Health Care. Further descriptions of these programs are offered throughout the report, especially in Part Four.

CECA convened the Forum because an exchange of ideas on universal service is urgently needed. Changes to universal service affect the interests of diverse constituencies whose positions can be difficult for decision-makers to reconcile. That difficulty in the decision-making process, combined with the large amounts of money at stake, can make change hard to accomplish and can prolong the process.

Such a decision-making process is continuing to evolve. Thus, the timing of the CECA Universal Service Forum is driven by a desire to provide useful input to state and federal policymakers as they make decisions affecting the universal service mandate of the Telecommunications Act of 1996. Much of that work has been done, but some important decisions about universal service have yet to be finalized. Among other things, the Federal-State Joint Board created a Rural Task Force to advise it on its recommendation to the Federal Communications Commission (FCC) regarding its treatment of rural carriers under the high cost mechanism. Further, the FCC has formally referred to the Federal-State Joint Board the periodic examination of the definition of which services should be supported by universal service, as well as an examination of the Lifeline and Link-up programs. Moreover, irreversible market forces for convergence are rendering old regulatory boundaries uncertain.

The CECA Universal Service Forum convened the major stakeholders in a constructive dialogue about universal service in order to facilitate sound policy-making. Because of the time limitations, the Forum focused its attention on two of the four components of the Universal Service Fund: the High-Cost and the Low-Income programs. The Forum did not address issues associated with the Schools and Libraries (E-Rate) Program or the Rural Health Care Support Mechanism.

While many divergent views exist, a goal of the Forum was to focus on areas of common interest among the stakeholders—universally available basic telecommunications and the continuation of universal service as a long-standing goal of U.S. telecommunications policy—and narrow the differences among the stakeholders on the various policy options. Forum members, through a series of day-long meetings in Washington, DC, and through meetings of focused subcommittees, engaged in a variety of contentious topics through frank and open discussions. The process culminated in a series of specific recommendations to federal and state policymakers with responsibility for these programs.

A. Overview of Issues and Stakeholder Views

The concept of universal service has evolved measurably over the past 100 years and every indication is that it will continue evolving well into the 21st century. Several questions have endured at every stage, and some new questions have arisen:

- **Supported Services** – Does the existing level of supported services comply with the requirements of the Telecommunications Act of 1996? What services should be added to the definition of supported services and over what timetable? Would adding these services significantly increase the size of the Fund required to sustain these services? Is there any evidence that shows that the inclusion of these services now will have a positive effect on society and the economy?

- **Stability of the Fund** – Can the Fund sustain itself? Should the base of revenue be broadened? Are there better alternatives for funding this program?

- **Efficiency of the Fund** – Does the Fund deliver support in a manner that is most consistent with maximizing consumer welfare and avoiding economic distortions?

- **Competition** – Will the Fund help competition in the rural and insular areas, or is it structured in a way that discourages competition in these areas? Is the program creating barriers that prevent competition or protect the incumbents? Is the structure and funding consistent with the goal of all segments of the telecommunications industry becoming effectively competitive?

- **Low Income** – If the estimates are correct that the subsidies intended to assist the poor and impoverished are missing approximately 75 percent of households that could be deemed eligible, how can this be rectified?

- **The Digital Divide** – Is it appropriate for the Fund to be used to address concerns that a gulf exists between the information "haves" and "have-nots?" Is it reasonable to assume that the gulf will close on its own without intervention? Is it too early to know?

1. What Should the Fund Do?

From its origins as a vague expression of an ideal national communications system to the much more specific statutory and regulatory delineation of the Universal Service program as it exists today, the goals and practical applications have been under constant pressures to keep pace. The last few years of the 20th Century may have seen the beginnings of an even more fluid and unpredictable landscape than has ever before been experienced. As the range of commercially available telecommunications services has expanded, two kinds of pressures have been exerted on the system.

First, there is an inclination in some quarters to explore whether the system should do more to support the availability of these new telecommunications services. There is a natural reaction in other quarters that the system is already doing all it should; expanding the responsibilities would be too expensive. Second, not all of the new services can be clearly or fairly classified as telecommunications services within the statutory and regulatory definitions, even though consumers may view them as substitutable products, which may create opportunities for arbitrage that reduce payments into universal service programs and favor one provider over another.

On the first point, despite the broader and more clearly defined Universal Service program that emerged from the Telecommunications Act of 1996, some experts argue that the services defined as being eligible for universal service funding are still not adequate to deal with the needs of today's society. While the definition includes basic services used for telephony, some have argued that the definition is already out of date and should be further expanded to include advanced services[3] (such as broadband connections to an Internet access provider) that are rapidly being utilized by significant numbers of Americans.

2. What Services Should the Fund Support?

On a fundamental level, some claim that the Fund is not accomplishing even the most elementary portion of its mandate, which is to provide basic service to all Americans. Recent data shows that 94 percent of U.S. households have wireline telephone service,[4] but in a country that is approaching 300 million people, the remaining six percent without telephone service equates to many millions of Americans without basic service. Perhaps even more egregious is that this population lacking basic telephone service is disproportionately composed of ethnic minorities. Thus, some experts argue that, in terms of deployment, even the current program is far from "universal."[5]

Some criticize the Fund for setting the floor for basic services too low. With changing technology, some equipment can be deployed today that satisfies the requirements for basic services, but may not be suitable for upgrading or supporting advanced services at a later date. For example, it is possible to deploy plant that provides voice-grade service, but will not support even the slowest of dial-up modems. The Fund, these critics contend, needs to be more far-sighted so that it can subsidize carriers for providing basic services today without compromising the ability to add more services later. Even worse, the Fund

---

[3] The FCC's definition of advanced services (often referred to as broadband) is "having the capability of supporting, in both the provider-to-consumer (downstream) and the consumer-to-provider (upstream) directions, a speed (in technical terms, 'bandwidth') in excess of 200 kilobits per second (kbps) in the last mile." From Inquiry Concerning the Deployment of Advanced Telecommunications Capabilities, cc Docket No. 98-146, Report, 14FCCRcd 2398,2406 (1999).

[4] Bureau of the Census, March 1997.

[5] See Cooper, Mark, "Ensuring Telephone Access in the Digital Age," February 25, 1998, (http://www.cme.org/access/universal/telephoneaccess). The 6 percent figure also includes people who may, for a variety of reasons, simply not want telephone service.

could actually be providing incentives for the deployment of substandard "plant"[6] by creating an environment whereby carriers deploy the most inexpensive equipment but are still rewarded by gaining universal service subsidies.

Others point out that the Universal Service program is still not the right mechanism for policing carrier plant investment decisions since the program has never had a mechanism for auditing how recipients spend funds and whether the funds are used to build quality network facilities. The fund is intended to keep subscriber rates low, regardless of the quality of the plant used to provide the service. They maintain that there are a variety of other government programs, such as the subsidized loan programs of the Rural Utilities Service (RUS), that include auditing and enforcement mechanisms that provide a better mechanism for policing broadband investment.

3. How Should the Fund Evolve?

While advanced services are becoming more a part of the daily lives of a significant number of Americans, some consumer groups and other stakeholders argue that the Internet and the emerging digital economy are exacerbating societal inequalities and there is a danger that rural and low-income Americans will be left out of the economic, social and political benefits of the IT revolution. Many consumer and public advocacy groups warn that there is growing evidence that a "digital divide" between information and technology "haves" and "have-nots" is emerging and have called for direct government regulatory action to address this divide. More specifically, these stakeholders feel that the Universal Service program should be the means for addressing this divide, and that the program should be expanded to include advanced telecommunications services. Others point out that recent surveys show some of these gaps closing, and that the gaps are a function of a variety of factors, including the lack of computer equipment and skill training or education, factors that are outside the purview of the current Universal Service Program.

Some groups have taken a different approach to the issue of advanced services. They contend that if the Universal Service Fund is going to support telecommunications carriers that deploy new lines and equipment, then the Fund should be used for new lines and equipment that are broadband capable. While addressing the digital divide may be an important consequence of the action, the real issue, they contend, is in investing in the future. Economic development is evolving from the traditional bricks and mortar establishments and industrial zones to a greater reliance on information services and e-commerce. It is true that the current universal service program is front-loaded to assisting the low income and rural households gain telephone service, but the real issue, some insist, is building the high-speed data infrastructure that is capable of bringing economic development into even the most remote and impoverished areas.

Other experts have opposed this call for expanding the Universal Service program, arguing that it is too soon to tell whether funding is necessary. At this point, the market is

[6] Here the term "plant" refers to all facilities used, including lines, buildings, and physical equipment, by telecommunications carriers to provide services to end users.

delivering broadband service without the market-distorting effects of a subsidy. Moreover, if regulation supercedes market forces in bringing advanced services to all customers – as in the case of essential services such as the telephone system and electricity – there could be a premature technological "lock-in" and increased prices for many users. While recognizing the well-intentioned effort to address equity concerns, opponents of including advanced services argue that universal service subsidies for advanced services would distort investment patterns and lead to inefficient resource allocation, raising overall costs.

They add that there is no real evidence that market forces will not prevail as the most economically efficient means of deploying telecommunications and information services. They contend that advanced services – broadband – are being deployed at a rate that is as rapid as capital and human resources will allow. They believe that increasing the size of the Fund will not increase the rate of deployment, and may even slow the progress since it could result in the distortion of business plans, stress fragile supply chains, and scare off potential investors. The bottom line, they insist, is that the industry is just getting started in building a ubiquitous high-speed data infrastructure, and that given more time, the market will bring advanced services to all areas. This will happen not necessarily because it is good policy, but rather because it is simply good business.

4. How Should the Fund Be Managed?

Some stakeholders question how the program is currently managed and criticize the process by which telecommunications providers qualify for access to the Universal Service program. If the program is not managed well now and is not providing a level playing field for competition, these critics argue, then there is no basis for expanding the program's scope until reforms are made.

This argument is shared by a variety of stakeholders for a variety of different reasons. Some low-income advocates criticize the management of the Fund for not efficiently directing the resources to those the Fund is intended to help. While one component of the Fund is the Low-Income Fund, aimed at partially subsidizing the basic costs of local service for Americans at or below the poverty line, some estimate that these subsidies are only reaching one-quarter of those eligible. Most will admit that there are many obstacles to reaching all eligible households, and there is evidence that suggests that a small portion of members in some households may not in fact want telephone service, but reaching only one-quarter of the eligible participants is simply unacceptable public policy.

Some state consumer advocates are also becoming disillusioned with the Fund. In high-population density states, the costs of providing telecommunications services are lower and therefore these states have less need for High-Cost universal service support. Therefore, groups from these states are increasingly unhappy about contributing to a mechanism from which they essentially do not benefit. While contributing to the viability of the network is acceptable, the way the high cost program is implemented is not. Carriers in rural areas, they contend, receive universal service funding based on the costs of providing basic services, but they can then make high profits on vertical or "premium" services, like voice

mail, call waiting, and call forwarding. These groups are unhappy because they believe that consumers from their states are in effect contributing to carriers who leverage the funds to make high rates of return.

Others point out that the universal service support goes to those carriers that have costs above a certain percentage above the national average, and that cost for these carriers remains the same, regardless of whether or not the carrier is receiving revenue from vertical services. They also maintain that even though some high-population states contribute more to the low-population density states for the High-Cost fund, they receive more funds from the other programs. Since those states are more highly populated, they generally have more schools and libraries that receive support, as well as a larger total number of people eligible for the Low-Income program. In the end, they maintain, the low and high-population density states more or less equal each other out as far as contributions and support.

Businesses, especially those who are heavy telecommunications users, are also unhappy with the amount of revenue they are forced to pay into the Fund. For identical services, rates for business users are generally set substantially higher than those for residential users. This inequity, they claim, is exacerbated if the businesses are located in urban areas, since the local rates in urban areas are generally set slightly higher than cost so that rates in rural areas can be priced slightly lower than cost. This system may undermine competition in the rural markets, because competitors cannot match a price that is below cost. They assert, therefore, that government decision-makers should assess whether the current system properly considers affordability, economic efficiency and consumer welfare.

There is a genuine need for a deeper understanding of the unique viewpoints of the various stakeholders involved in the universal service debate. While some of these views appear to be far apart, there is ample opportunity for consensus.

B. The CECA Process

As in previous consensus-building projects, CECA convened a broad-based panel of stakeholders to serve in the Universal Service Forum. Participants included local and interexchange telecommunications carriers, information technology companies, Internet service providers, local, state and federal regulators, legislators, and consumer organizations. The objective of the process was to arrive at one of three outcomes for developing policy guidance on issues under discussion:

- Consensus on policy options;
- Agreement on which policy options are clearly not acceptable;
- Identification of policy options that participants in the Forum consider acceptable.

The report culminates with recommendations to policymakers made by CECA, based upon a careful analysis of the stakeholder perspectives and interests. CECA attempted to promote agreement on as many issues as possible, and this report reflects the diversity of views expressed by stakeholders. This report does not purport to represent the official position of any agency, company or organization. CECA assumes full responsibility for the report and its contents.

During the CECA Universal Service Forum meetings, subcommittees and working groups were appointed to focus on specific issues of funding, supported services, and eligibility. Each subcommittee met on numerous occasions and produced a series of findings that were later discussed in the full committee meetings, and which laid the foundation for this report.

C. Structure of the Report

The report is structured into four Parts, each of which was shaped by the participation and discussions generated by Forum participants.

Part One provides an introduction to the federal Universal Service program, its mandate, its accomplishments, and the areas that are still in need of attention. This Part provides a brief overview of the main issues that overshadow the effectiveness of the program, and the various stakeholder perspectives. Part One concludes with a historical review of the program, how the program has changed, and how recent developments are once again altering the course of the program.

Part Two provides a more detailed examination of the issues. The concerns of the Forum participants generally fell into one of three main categories. These categories of issues were examined further by discrete subcommittees, in which many of the Forum's conclusions and recommendations were formulated.

Part Three contains the recommendations and observations of the CECA Universal Service Forum. Based on the discussions and issues raised throughout the Forum, CECA developed a series of recommendations. On issues that proved too complex to develop a recommendation in the limited time of the Forum, CECA expresses observations that are important to highlight.

Part Four, which includes the Appendices, contains technical information relating to the Fund, including a detailed depiction of the flow of funds. The sources and uses analysis describes how the funds are collected, how they are dispersed, and which institutions are relevant in the process. The Appendices include a flowchart that can be used by policymakers as a tool for determining the appropriate timing for including additional services into the Fund, the text of the relevant Universal Service provisions in the Telecommunications Act of 1996, and explanatory charts for various alternative funding options.

II. Milestones in the Evolution of Universal Service: A Brief History

The roots of the universal service concept may be found in the turn-of-the-century business strategy of Theodore Vail, then President of AT&T. Faced with a telecommunications system comprised of numerous independent phone companies competing for customers, and utilizing separate networks and equipment, Vail envisioned a unified network in which callers could reach anyone using any telephone. Vail's concept was "one system, one policy, universal service." Vail's hope for a single system and a single policy likely had more to do with creating a monopoly for his company than working toward a broader social goal of nationwide access to a telecommunications network, but by the time of the passage of the Communications Act of 1934, the concept of connecting the nation, and indeed the world, through a telecommunications network had evolved to encompass a broad social policy statement embodied in the preamble to the Act:

> …to make available, so far as possible, to all people of the United States a rapid, efficient, Nation-wide, and worldwide wire and radio communication service with adequate facilities at reasonable charges.

Lacking any accompanying specific regulatory mechanisms, and devoid of the term universal service, the statement contained in the Act nevertheless became the impetus and regulatory authority for subsequent action on universal service to foster ubiquitous (universal) telephone service to all Americans – recognizing affordability as a fundamental element of service – regardless of geographic location or income.[7]

In the context of the monopoly telephone model, in which one company was obligated to serve all customers in a given geographic region absent competition, policymakers focused on increasing telephone penetration, rather than interconnection, which was less relevant in a monopoly provider context. Most Americans came to view the telephone as a necessary condition for participation in the economic, political, and social aspects of modern society. It soon became evident, however, that millions of rural and low-income Americans lacked basic telephone service. At the time of the passage of the Communications Act of 1934, for example, just 40 percent of U.S. households had telephone service.[8] It was later established that among the leading predictors of telephone penetration were income and the cost of building in sparsely populated and geographically large areas, and so the ubiquity (and, later, affordability) of basic telephone service was a goal that came to be pursued by many policymakers in the mid-twentieth century.

To address the needs of rural Americans, for example, Congress established the Rural Electrification Administration (REA, and later renamed the Rural Utilities Service RUS)

---

[7] Cooper, Mark, "Universal Service: A Historical Perspective and Policies for the 21st Century," Benton Foundation & Consumer Federation of America, 1996; L. Gasman, "Universal Service: The New Entitlements and Taxes," Cato Institute, June 1998; Sharon Gillett, "Technological Change, Market Structure, and Universal Service," Massachusetts Institute of Technology, 1994.

[8] "Historical Statistics of the United States: Colonial Times to 1970," U.S. Department of Commerce, Bureau of the Census, 1975.

loan program, which was started in 1949 and began to target loans to telephone companies serving rural areas. The percentage of farm households with telephone service rose from 35 percent in 1949 to 96 percent in 1983.[9]

A. Passage of the Communications Act of 1934

Following the passage of the Communications Act in 1934, regulators utilized various cost allocation and recovery approaches in an effort to increase telephone penetration rates nationwide. Because the cost of providing service to some customers exceeded the cost of providing service to others, a system of "high cost support" was developed that included a series of cross subsidies and geographic rate averaging to make telephone service affordable for those in high cost areas.[10] There was not yet a universal service "fund" as we know it. Instead, urban and business customers implicitly supported rural customers through a system of embedded rate levels and rate structures for the various services. Long distance rates were kept artificially high to support contributions to the mecahnism to offset high-cost local calling. By 1980, 94 percent of U.S. households had telephone service.[11] As long as this process functioned in the context of a monopoly market, it amounted to little more than a complex subsidization process embedded in an internal accounting mechanism for the monopoly provider. The subsidy system would become much more complex after the divestiture of AT&T.

B. Break Up of AT&T

Once policy changed, first to allow, and then to foster competition, the approach to funding universal service had to be altered. In 1982 AT&T agreed to settle the antitrust suit that had been brought against it by the U.S. government in 1974. The settlement divested AT&T of its local phone service on January 1, 1984, and created seven regional holding companies (Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, Southwestern Bell, and U.S. West) to handle bcal operations. The holding companies, also known as the Regional Bell Operating Companies (RBOCs) were to provide local exchange service and were barred from the long distance market and from manufacturing telecommunications equipment.

---

[9] Federal Communications Commission, Preparation for Addressing Universal Service Issues: A Review of Current Interstate Support Mechanisms, February 23, 1996.

[10] Geographic rate averaging is the process of creating uniform rates for toll calls despite the variation in costs (i.e. the cost of calls on routes with high traffic may be lower than the cost of calls on routes with less traffic).

[11] Some analysts have questioned the attribution of increased telephone penetration in the U.S. to these regulatory mechanisms, arguing that the cross-subsidies between high and low cost, residential and business customers did not really begin in earnest until 1970, when a majority (85 percent) of U.S. households already had telephone service. (M. Mueller, "Universal Service in Telephone History: A Reconstruction," *Telecommunications Policy*, Vol. 17, Issue 5, p. 355). Since that period, and with the benefit of a subsidy system, the penetration rate has risen to more than 94 percent. See FCC, "Trends in Telephone Service," 12/2000, Table 12.1.

Following the breakup of AT&T in 1984 and the subsequent wave of deregulation, it became evident that long-standing practices of rate averaging and implicit subsidies which had historically distorted the true costs of the telephone network, were increasingly untenable. State and federal regulators decided to continue to allow long distance rates to support local rates in high cost areas, and the mechanism for doing so was to require all interexchange carriers (AT&T as well as new entrants, such as MCI and Sprint) to pay access charges for interconnecting with local exchange carriers in order to reach end users.

C. Passage of the Telecommunications Act of 1996

The Telecommunications Act of 1996 (the 1996 Act) sought to reform the regulation of telecommunications to foster competition and innovation.[12] It was the first major rewrite of the Telecommunications Act since its inception in 1934. The 1996 Act touched upon all elements of telecommunications regulation, from telephone services to broadcast television to cable television to the emerging Internet market.

With the passage of the 1996 Act, the universal service program was dramatically altered to address the inadequacies of the old mechanisms that were causing competitive distortions in a newly deregulated marketplace. Also significant was that the 1996 Act codified the concept of universal service in Section 254. In it, the Act called for the creation of a Federal-State Joint Board on Universal Service (Joint Board) to review and make recommendations on matters involving universal service. The funding mechanism became more explicit and the scope of the program was expanded to include services not previously covered and ensure the program's continuation in the new economy. In Section 254, Congress set out six principles to guide universal service policies:[13]

- *QUALITY AND RATES.--Quality services should be available at just, reasonable, and affordable rates.*

- *ACCESS TO ADVANCED SERVICES.--Access to advanced telecommunications and information services should be provided in all regions of the Nation.*

- *ACCESS IN RURAL AND HIGH COST AREAS.--Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in*

[12] In the Joint Explanatory Statement of the Committee of Conference, 1996 Act is designed "to provide for a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly the private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition. . . ." Joint Explanatory Statement of the Committee of Conference, H.R. Conf. Rep. No. 458, 104th Cong., 2d Sess. at 113.

[13] 47 U.S.C. § 254(b). This section also allows the Joint Board and the FCC to create additional principles that they deem "necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act." 47 U.S.C. § 254(b)(7).

urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.

- *EQUITABLE AND NONDISCRIMINATORY CONTRIBUTIONS.--All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service.*

- *SPECIFIC AND PREDICTABLE SUPPORT MECHANISMS.--There should be specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service.*

- *ACCESS TO ADVANCED TELECOMMUNICATIONS SERVICES FOR SCHOOLS, HEALTH CARE, AND LIBRARIES.--Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services as described in subsection (h).*

The FCC and the Joint-Board have taken a number of steps to implement the mandate of the 1996 Act. The resulting universal service mechanism is detailed in Part Four of this report.

D. Recent Developments

During 1999, the FCC encouraged the industry, both the access users (the long distance carriers) and access sellers (the price cap local exchange carriers) to make a joint proposal to revise the existing access charge rules and universal service funding implicit in access charges.[14] This joint effort was called the Coalition for Affordable Local and Long Distance Service proposal, or CALLS. The members of the Coalition included four of the five largest local exchange companies (Bell Atlantic, BellSouth, GTE, and SBC)[15] and two of the three largest long distance companies (AT&T and Sprint).

The CALLS decision adopted by the FCC in May 2000 included an integrated universal service and interstate access reform plan covering price cap incumbent local exchange carriers. Of importance to the discussion of universal service is the establishment of explicit interstate universal service funding that will provide support to replace approximately $650 million of implicit support collected through interstate access charges and the simplification of the patchwork of common line charges into one subscriber line charge (SLC),[16] providing for deaveraging of those rates without undermining universal

[14] For purposes of its regulatory proposals, often the FCC divides the local exchange carriers into two groups. One group is those carriers under price cap regulation; the other is those under rate-of-return regulation. These two groups are drawn roughly between the large Bell operating companies for whom price cap regulation was mandatory (along with some of the larger incumbent local exchange carriers that adopted the price cap mechanism) and the small incumbent local exchange carriers that have chosen to remain on rate-of-return regulation.

[15] The fifth, U.S. West, also participated in discussions, but did not become a part of the CALLS.

[16] The once unified residential subscriber line charge (SLC) may rise from $3.50 to $6.50 per month in future years.

service. The CALLS Order is currently on appeal in the United States Court of Appeals for the Fifth Circuit where it is being criticized for having a SLC that some maintain would over-recover network costs. The CALLS Order and its subsequent petition for review have raised questions about how high the SLC may be set consistent with maintaining affordable universal service and sharing network costs between different services.

At the time of this writing, the FCC also has before it a proposal by the Rural Task Force (RTF) addressing the need for reforms for rural high cost universal service support mechanisms as a foundation for implementing a rural universal service plan. The FCC is also considering a proposal by the Multi-Association Group (MAG) that addresses interstate access and universal service support reform for incumbent local exchange carriers subject to rate of return regulation.[17]

[17] Information on both plans can be found at http://www.fcc.gov/ccb/universal_service.

PART TWO: UNIVERSAL SERVICE ISSUES

III. Issues Affecting the Funding of the Universal Service Program

A successful universal service mechanism begins with a clear and sustainable source of funding. On this, most constituencies agree, even though they may not agree on how the Fund should be collected or who should be required to contribute. For the time being, it is clear that the current funding mechanism is adequate to fulfill the mission of universal service. There are important issues concerning which telecommunications providers should contribute to the system and how the necessary funds should be collected. There are fundamental questions concerning which companies should be considered telecommunications providers, and therefore subject to contribution to the fund. There are arguments that since universal service is a national policy, and one from which everyone who uses the communications system directly benefits, perhaps even non-telecommunications industries should contribute. Some even suggest that the entire system should be removed from its current funding mechanism and that Congress should allocate funds through general tax revenues, as other social policy or public works programs are funded.

The changing face of the telecommunications industry – through both the introduction of new competitive players and technological innovations – has created a need to reassess the means by which the Universal Service Fund (USF) is supported. As once distinct industries and markets converge – and as providers offer bundles that include both interstate and intrastate telecommunications services and non-telecommunications services at a single flat rate – new questions arise as to how the current mechanism is able to handle the evolving marketplace. For example:

- Is the Fund sustainable given the means by which it is currently funded?
- Are the contributions collected in an equitable manner with respect to both carriers and end users paying into the Fund?
- Are the contributions collected in a competitively neutral fashion so that no class of carrier is either aided or hindered competitively because of the means in which funds are collected?
- Is the current collection mechanism efficient in terms of the incentives it may create and how these incentives operate to allocate the resources?

Some argue the answer to all of these is no – that competition and new technologies may undermine the foundation of the program; that some users of the network may not be paying into the program leaving others to shoulder more of the burden; and that the current payment scheme creates economic inefficiencies. There are certainly also viewpoints to these statements. Based on the analysis that follows, the Forum had sufficient concern regarding the shortcomings of the current funding mechanism to warrant an examination of

several alternative funding mechanisms that could better serve the public by being more sustainable, equitable, competitively-neutral, and efficient.

A. Sustainability: Challenges in Meeting the Obligations of the Program

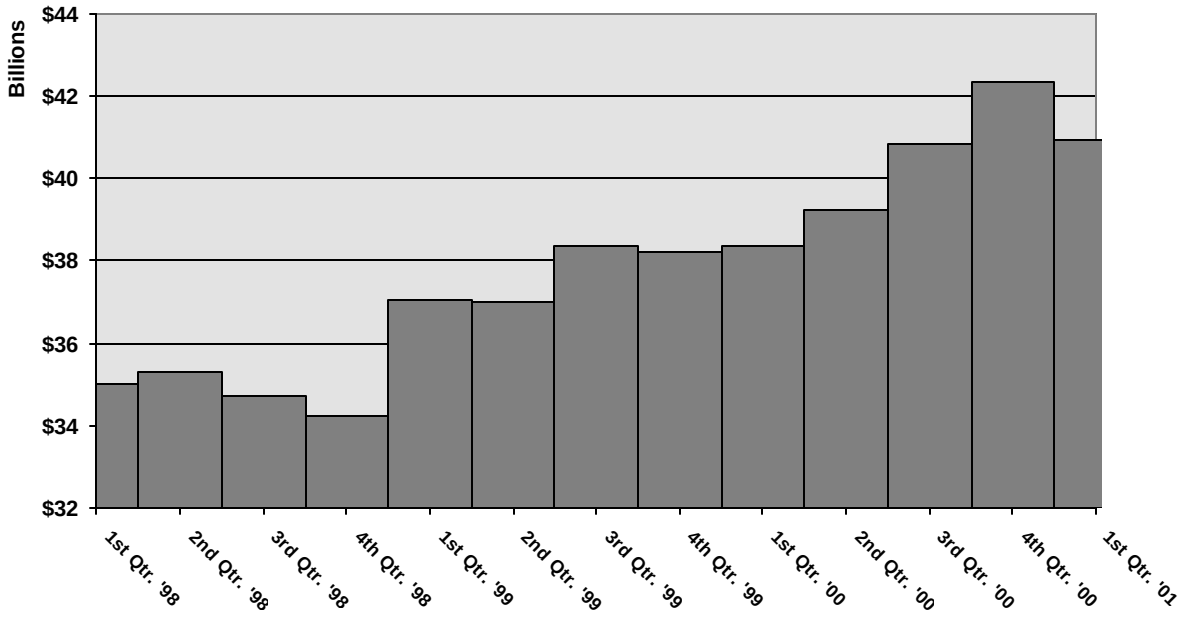
A core issue in the examination of the current funding mechanisms is whether they can sustain the statutory goals established for universal service in the 1996 Act. The issue exists with respect not only to sustaining current responsibilities but also to how well it can evolve to offer the services, potentially advanced services, that meet the needs of future generations. Any discussion of subsidizing some degree of advanced services through the program or increasing the reach of the low-income programs must acknowledge the extent to which concerns about sustainability would be exacerbated by such expanded responsibilities, all other things being equal.

As explained in Part Four, contributions to the program are currently based on a carrier's interstate end-user telecommunications revenues from the prior year and are assessed by applying an FCC-determined contribution factor (percentage) to these revenues. Those carriers that are required to pay into the program determine how they will collect their required share of the contribution on an individual basis.[18] The current collection factor is 6.6 percent of interstate end-user telecommunications revenues.[19] Table One shows the levels of interstate end-user telecommunications revenues projected into the first quarter of 2001.

[18] This leads to a number of different mechanisms for collecting the funds, such as separate line-items on bills and inclusion of universal service fees bundled into per-minute rates.

[19] *Proposed First Quarter 2001 Universal Service Contribution Factor*, DA 00-2764 (released 12/8/2000).

Table One: Universal Service Base: Interstate and International Revenue as Reported by Carriers



* Source: USAC[20]

The data may show general increases in interstate revenues that demonstrate a growing base to which the contribution factor is applied. However, it is important not to place undue reliance on future increases in the base commensurate with the trend of data portrayed since there are two market trends that may affect the future of interstate revenues as a funding source for the program:

First, there has been tremendous growth in new technologies that are substitutes for traditional interstate communications services. Some of these are not telecommunications services, *e.g.*, sending messages by e-mail or instant messaging. Others, such as the provision of long distance telephone service over the Internet (known as Internet Protocol telephony, or IP Telephony), are not classified as telecommunications services even though they represent another way of providing interstate telecommunications services. These services are increasingly substituting for services that are classified as interstate telecommunications services for purpose of contributing to the program. Thus, such substitution mentioned above have the potential of taking away customers and thus

[20] This data comes from interstate and international revenue information reported by carriers on FCC Form 499. The FCC uses this revenue information, along with the estimated interest earned, the funding requirements of the universal service support mechanisms, and program administrative costs submitted by USAC 60 days prior to the start of each quarter to develop contribution rates, which are then used by USAC to bill contributors on a monthly basis for their Universal Service Fund contributions during the next quarter. The data are carrier estimates and some of the fluctuations result from prior period corrections.

revenues from traditional interstate carriers and providing increasing pressure on interstate rates and the revenues that are used as the base of the program. While this trend has the potential for substitution, the impact has not yet been quantified with a degree of precision necessary for determining their effects on universal service.

Second, increasingly, interstate telecommunications services are being offered in "bundles" with intrastate telecommunications services and with information or advanced services. The latter are not categorized as telecommunications services by incumbent carriers, wireless providers, and new wireline entrants. Bundling these services together complicates the process of apportioning revenues between the interstate and intrastate jurisdictions for purposes of assessing contributions to the program.

The rapid changes taking place in the marketplace – both in terms of converging services and emerging competition – have the potential to have a serious impact on the long-term sustainability of the program, even if demand is static.

1. Impact of New Technologies and Services on the Sustainability of the Program

The growth of Internet telephony, also known as Internet Protocol telephony (IP telephony) or Voice over Internet Protocol (VoIP), is represented by services such as Dialpad.com and Net2Phone that use the Internet as an alternative to phone-to-phone connections over the public switched telephone network (PSTN).[21] Although the combination of equipment and services used to obtain these services vary considerably, users of these services often make long distance telephone calls through Internet Service Providers (ISPs) by using their computers. IP telephony is a service that provides long distance voice service, using specialized customer-provided equipment and a means of transmission offered by an ISP that had previously been used only for data services. The FCC does not regulate ISPs as telecommunications providers or common carriers under Title II of the Communications Act.[22] Therefore, IP Telephony providers do not pay carrier access charges or make direct contributions to the Universal Service program as do telecommunications providers.[23] IP telephony providers may purchase transport from carriers that pay into the Universal Service program, so their use of the network requires them to make indirect payments to the program via surcharges they pay when when they purchase service from telecommunications providers.

[21] The PSTN usually refers to the voice telephone network while the Internet is a collection of networks, which may include parts of the PSTN, but also includes packet-switched data networks.

[22] Title II of the Communications Act deals with the regulation of common carriers. This regulation includes rate regulation.

[23] The FCC has a special exemption from carrier access charges for ISPs, under which ISPs are treated as local phone customers and are exempt from the interstate access charges paid by carriers. Thus, rather than paying the higher carrier access charges, ISPs simply purchase phone lines from the local phone company as any local business would do and pay as end users.

The FCC's regulatory treatment of ISPs stems from its Computer II decision[24] in 1980 in which the FCC concluded that it had no Title II jurisdiction over the services it called "enhanced services,"[25] even if those enhanced services used common carrier transmission facilities. The FCC's rationale was twofold: firstly, data processing or information services were not considered telecommunications services, so they did not fall within the jurisdiction of the FCC. Secondly, ISPs, like customers, were viewed as end users, and regulation would have meant carving out new lines of distinction between those who are carriers and those who are end users. Another rationale for not regulating these enhanced services was to advance innovation and competition by encouraging the proliferation of these services and promoting the growth of entirely new industries.[26] In the 1996 Act, Congress renamed the distinction between basic services and enhanced services as a distinction between telecommunications services and information services and added definitions for both to the Act.[27] There was a debate regarding these definitions and whether ISPs fell clearly under information services, which are exempted by the FCC from Title II regulation. Currently, policymakers are debating whether IP telephony constitutes a telecommunications service or an information service, since it is becoming more difficult to clearly classify it as one or the other.

Supporters of the exemption assert that the Internet industry is thriving, and that consumers are getting goods and services conveniently and at competitive prices, and that regulation could only hamper all of the positive benefits. They also point out the fact that through leasing lines from carriers that pay into the program, Internet providers do contribute, albeit indirectly. As large end users, they contribute significantly, but being large end users does not mean that their status should be changed to that of a telecommunications provider. Opponents of this exemption raise issues of competitive neutrality and argue that these services ride on the telecommunications network but are not required to apply the contribution factor to their interstate revenues or otherwise pay directly into the support mechanisms as carriers must do.

Given the current regulatory status of ISPs with regard to Universal Service program contributions and payment of access charges, there may be cause for concern about sustainability of the program in the future even if there is no growth in the size of the program. To the extent that IP Telephony cuts into the market for interstate telecommunications services and reduces the revenues of carriers that pay into the Fund, the available pool of funding under the current universal service mechanism will

---

[24] Regulatory & Policy Problems Presented by the Interdependence of Computer and Communications Services & Facilities (Computer I), 7 FCC 2d 11, 13 (1966) (Notice of Proposed Rulemaking); 28 FCC 291 (1970) (Tentative Decision); 28 FCC 2d 267 (1971) (Final Decision), aff'd in part sub nom. GTE ServiceCorp. v. FCC, 474 F.2d 724 (2d Cir. 1973), decision on remand, 40 FCC 2d 293 (1973).

[25] In this decision, the Commission defined all services offered over a telecommunications network as either basic or enhanced. Basic service was defined as "transmission capacity for the movement of information," and enhanced service was defined as "any offering over the telecommunications network which is more than a basic transmission service." (Computer II Final Decision, 77 FCC 2d at 419, para. 93-94). Enhanced services involved those using computer processing applications accessing stored content.

[26] Computer II Final Decision, 77 FCC 2d at 420, para. 129.

[27] In effect, the distinction made between these terms amounted generally to a renaming of the terms: in the 1996 Act, basic services became telecommunications services, and enhanced services became information services.

diminish.[28] Thus, carriers who continue to contribute to the program under the current contribution mechanism will be required to contribute a greater percentage of their interstate revenues if current funding levels are to be maintained.[29]

Currently, some customers are able to secure lower rates for toll calls by obtaining their interstate telecommunications services over the Internet rather than through conventional interstate telecommunications carriers. Indeed some customers are offered IP Telephony for free in exchange for having banner advertisements displayed on their screens. If the underlying price differential of providing these services over the Internet represents real and sustainable cost advantages, then the provision of services in this manner may have real and lasting benefits to consumers. On the other hand, to the extent the lower price reflects only a regulatory distortion created by Internet service providers who are not required to contribute to the program, then the market advantage is artificial and may not serve the public interest in the long run. In the end, the magnitude of the consumer benefit of allowing Internet telephony to continue free from universal service obligations will have to be weighed against the availability of funds and sources of funds to sustain the program.

2. Impact of Packages of Services on the Sustainability of the Program

A second factor that may threaten the stability of interstate revenues as a funding source is the emergence of packages of interstate telecommunications services, intrastate telecommunications services, and non-telecommunications services offered by carriers. All providers – Incumbent Local Exchange Carriers (ILECs), Competitive Local Exchange Carriers (CLECs), cable companies and wireless carriers – are increasingly offering bundles of intrastate and interstate services including Internet, telephony, and multichannel video at flat rates. These rates are not easily separable into intra- and interstate revenues for purposes of ascertaining the available revenues for universal service program contributions. Without a prescribed means for consistently separating the intra- and interstate portions of a flat fee, the program is vulnerable to understatements of the percentage of the total flat fee that should be used in calculating contributions to the program, or alternatively, to the improper inclusion of revenues that are not generated by interstate telecommunications services. To the extent to which this occurs, there is the potential of decreasing the pool of interstate revenues from which to draw funding.

B. Equity and Competitive Neutrality: Who Pays and Who Does Not

As implementation of the Telecommunications Act of 1996 removes barriers to entry and the telecommunications marketplace becomes increasingly competitive, issues of equity and competitive neutrality in the collection of contributions to the program become more acute. The 1996 Act states that "every telecommunications carrier that provides interstate telecommunications services shall contribute, on an equitable and nondiscriminatory basis, to the specific, predictable, and sufficient mechanisms established by the Commission to

[28] Estimates of the growth of IP Telephony vary widely but there is general agreement that IP Telephony currently represents only a nominal amount of interstate traffic.

[29] This also raises issues of equity as the percentage factor assessed on interstate revenues rises because the base it is applied against falls.

preserve and advance universal service."[30] The notion of collecting funds on an equitable and competitively neutral basis is increasingly important in a marketplace characterized by the convergence of previously separate markets – for example, interstate telephony provided over the Internet or IP networks and service offerings comprised of interstate and intrastate telecommunications services and non-telecommunications services that are available at a single fixed price.

All these market trends require that public policy decision-makers and lawmakers pose questions about what to include in the definition of interstate telecommunications and whether it is appropriate to look beyond interstate revenues as the sole funding source and include intrastate and other revenues – or possibly entirely new schemes of revenue generation for the program, ranging from collecting from the general tax base to changing the mechanism from an increasingly difficult-to-define revenue base to a per line or per number charge.

Proponents of an expansion in the base for contributions to the program generally point to two factors: (1) market convergence means that a broader assessment base is necessary to ensure competitive neutrality, and (2) network externalities whereby users of the network benefit from the interconnection of as many people as possible and see universal service support, either by assisting connection of those with low-incomes or very high costs of connection, as a necessary cost of using the network. Since all users of the network benefit from its existence and from the fact that a broad base of users is connected to the network, then the case is made that all users should be responsible for supporting it.

In the Act, a telecommunications carrier is defined as "any provider of telecommunications services."[31] A *telecommunications service* means, "the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used."[32] The importance of a service being designated an interstate service is that it is then subject to federal (FCC) as opposed to state jurisdiction. Finally, an *information service* is "the offering of a capability for generating, acquiring, sorting, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of such capability for the management, control or operation of a telecommunications system or management of a telecommunications service."[33] These are the statutory definitions. As the expert agency, the FCC is given the authority to interpret these definitions.

Prior to the 1996 Act, only interexchange carriers were required to contribute to the Universal Service program. When universal service was codified in the 1996 Act, Congress chose to expand the universe of contributors to "every telecommunication carrier that provides interstate telecommunications services." The Commission was given the authority to exempt certain carriers, if their contribution would be deemed *de minimis*. The

[30] 47 U.S.C. § 254(d).
[31] 47 U.S.C. § 153.
[32] Id.
[33] Id.

Commission was also given the authority to require any other providers of interstate telecommunications to contribute to the program if the public interest "so requires."

As a result of the 1996 Act, the number of telecommunications service providers required to contribute to the program increased. Two of the rationales for including a broader class of carriers as contributors were equity and competitive neutrality; all who provide common carrier service using the telecommunications network should pay into the program. As a result, contributors now include all telecommunications service providers, including for the first time companies that provide cellular telephone, satellite and paging services.[34]

As discussed earlier, the Act differentiates between ISPs and providers of telecommunications because they provide enhanced or information services over the telecommunications network as opposed to providing basic transmission services (a distinction worth noting in that ISPs purchase basic transmission services from carriers and then use those services to deliver information services to their customers). The emergence of IP Telephony services has fueled a debate regarding: (i) the proper classification of IP telephony as either a telecommunications service or an information service; and (ii) whether, regardless of that classification, it should be required to contribute to the universal service mechanisms. Critics point out that when ISPs provided only data and data-processing services, the distinction between information services and telecommunications services was more obvious. Today, however, some services are almost perfectly substitutable, as subscribers have the option of communicating by voice over the Internet much in the same way as they would use a phone. As a result, these groups argue that the difference in regulatory treatment between some information services, particularly IP telephony and telecommunications services is becoming increasingly difficult to maintain.

The regulatory asymmetry between different service providers may become untenable if, from a consumer's perspective, they are all providing a similar product. The degree to which these services converge – without the requirements for paying into the program adapting – may provide an unfair competitive advantage to those who are not paying into the program. The carriers that do not have to contribute to the program may enjoy lower input prices which could enable them to set lower prices. This in turn would increase their market share and further erode the revenue base of the program or would require the payment system to be revamped into a competitively neutral structure, *e.g.*, by assessing contributions to end users or tax payers rather than carriers.

C. Efficiency: How Universal Service Goals Impact Phone Rates

The current telecommunications system relies on a number of support mechanisms that have collectively been used to achieve universal service goals. While some characterize these support mechanisms as subsidies, others argue that these mechanisms are a reasonable means to recover the allocated costs of a network that provides multiple

[34] See Universal Service Order, 12 FCC Rcd at 9175, para. 780, for a more complete list of examples of interstate telecommunications services.

telecom services. The perceptions of these subsidies, real or exaggerated, have spurred significant controversy in regards to the Universal Service program over what economists call allocative efficiency, weakening the support and undercutting the value of the program. These points of contention include such questions as:[35]

- Do long distance rates subsidize local rates? Some claim that the rates of long distance calls have been held artificially high in order to keep local rates lower. They have also, in the past, been held above cost to accommodate the access charge structure. However, as access charges have been driven down, there has been, at times, a corresponding decrease in toll rates. Others also suggest that the discussion of long distance rates subsidizing local rates relies completely on the full allocation of the loop cost to basic local service.

- Do lower cost urban areas subsidize higher cost rural areas? It is well established that service cost declines as population density increases, making urban areas less expensive to service than rural areas. Historically, however, urban rates have been set above costs (usually through a system of averaging rates across large geographic areas), leading some to suggest that they are supporting rural rates. Others maintain that while urban rates are higher than rural rates, they also have much larger local calling zones and more "bells and whistles."

- Do business users subsidize residential consumers? For an identical service, rates for business users are generally set higher than those for residential service. While some may contest whether there is a subsidy flow from business to residential - consider, for example, how low Centrex rates are – in general, rates for the same services are set higher for business customers.

In its early stages, during the monopoly environment of AT&T, the support flows represented accounting shifts – moving funds from one part of the business to another – but in a competitive environment they take on a much greater significance. A system built on these support flows may indeed achieve the universal service goals of the Act in providing comparable rates and universal access, but critics of this system have argued that it is far from efficient, and therefore, problematic. The current system, critics argue, distorts the competitive landscape through price manipulation and rate averaging, thereby sending the wrong entry signals to players, encouraging competitors where there would otherwise be none, and deterring competition in areas where it may naturally thrive. To increase efficiency, critics generally call for mechanisms that do away with they these "cross-subsidies" and more closely align prices with cost.[36] However, the goal of increasing efficiency must be tempered with the recognition that elimination of all subsidies and alignment of prices with their underlying costs could make telephone service unaffordable in large parts of the country and violate the legislative mandate to provide universal service "at just, reasonable, and affordable rates."

---

[35] Crandall, Robert W., *After the Breakup: U.S. Telecommunications in a More Competitive Era*, Brookings Institute, February 1991, p. 23

[36] See, e.g. Robert W. Crandall, *Who Pays for Universal Service? When Telephone Subsidies become Transparent*, Brookings Institute, July 2000.

IV. Alternative Funding Options

During the CECA Universal Service Forum, some identified concerns about the sustainability and competitive neutrality of the fund. For the immediate future, if no new demands are placed on the funding mechanism, the current system should be adequate to handle the demands of universal service. However, there is potential for erosion of the interstate revenue base as well as the possibility for increased future demands on the system. CECA believes that the Universal Service Program, as a valuable social policy, needs to be strong and stable so that its mandate can be fulfilled. It must be flexible so that it can adapt to new demands that may arise in the evolving telecommunications environment. While the program is stable today, there are concerns that it might not be sustainable unless new funding sources are identified, if new services, including advanced services, are added, or even if the Low-Income program reaches its peak constituency. Universal service has benefited generations of Americans, and attention should be paid to make certain that it stays vibrant for generations to come.

The base from which revenue is currently generated is somewhat narrow, primarily collected by carriers from end users. This has led some to suggest that the higher rates associated with a narrow base is more inefficient than lower rates that would result from spreading the collections over a broader base. Consumer benefits come from raising funds in ways that minimize competitive, technological, and consumption distortions. With this in mind, some feel there is reason to be concerned about the current system having elements that are not competitively neutral, equitable and efficient, from both the consumer and the contributors' perspectives.

Based on these findings, it is prudent to examine options for modifying the universal service collection system to address the issues of sustainability, competitive neutrality, equity, and efficiency. The Forum considered several options that are discussed below. In any decisions made regarding funding, policymakers must carefully consider the pros and cons of each option. Given the mandate of the Act regarding universal service and the authority granted to the FCC by Congress, some of these options would require Congressional action before they could be implemented. The options include:

1. Include All Interstate Revenues

This option maintains the general structure of the current funding mechanism (as described in the previous chapter), but modifies it to create a broader the base of support from interstate service providers. Primarily this would mean including Internet service providers.

> **Pros:** This improves competitive neutrality among interstate service providers. The effect would be to enlarge the base of contributors so that individual service provider contributions are decreased. It improves the sustainability of the funds.

Cons: It imposes a financial burden on the Internet industry, and would require a re-examination of the statutory distinction made between *Telecommunication* Service Providers and *Information* Service Providers. It does not cure the structural inefficiencies and competition-discouraging consequences of the current fund, but would extend them into a market that is currently free of regulations. It does not address problems associated with bundles of interstate telecommunications, intrastate telecommunications, and non-telecommunications services in a single flat rate.

2. Include Interstate and *Intrastate Telecommunications Revenues*

This option includes all interstate telecommunications revenues, similar to the previous option, but would include all intrastate telecommunications revenues as well. An impact analysis, provided in Appendix 4 of this report, indicates that incorporating interstate and intrastate telecommunications revenues could reduce the contribution factor to as low as an estimated 2.5 percent instead of the current factor of roughly 6.8 percent.

Pros: Broadening the base increases the sustainability of fund. All telecommunications service providers benefit from expansion of the network. As flat rate packages consisting of interstate and intrastate revenues proliferate, it eliminates problems associated with identifying interstate revenues.

Cons: Intrastate telecommunications already contribute to universal service through explicit and implicit state subsidy mechanisms. Intrastate revenues are already subject to state taxes, so this change would result in a double taxation for carriers. Additional statutory changes would be necessary to coordinate federal and state tax codes to avoid the distortions caused by double taxation. Given the decision of the Fifth Circuit Court of Appeals, which precluded the FCC from including Intrastate revenues in its pool for the funding mechanism, this option would require a statutory change. It does not address problems associated with bundles of interstate telecommunications, intrastate telecommunications, and non-telecommunications services in a single flat rate.

3. Include Support from All Services

This option includes all interstate and intrastate telecommunications revenues, as in the previous option, but also includes the revenues from services and products that recover discounts under the Schools and Libraries fund. This option would include not only telecommunications service providers, but could also include companies that manufacture goods, such as networking equipment, or provide other services that are clearly not telecommunications services.

Pros: If universal service subsidies expand the reach and usage of the network and therefore benefit all companies providing services over the network and equipment for the network, then it is equitable to assess all companies that are beneficiaries.

Given the sheer size of the Schools and Libraries program – which takes up nearly half of the Fund – including revenue from subsidized products and services would help ease the perceived strain on funds out of the telecommunications loop.

Cons: Schools and Libraries contracts generally represent a very small portion of revenues of companies that provide services or equipment at a discount to schools and libraries. It would be very difficult to identify and measure which revenues should be included, unless fees are generated through additional sales or service taxes on the work performed. Additional taxes – in effect double taxing the work done through schools and libraries contracts – could lead to avoidance by contractors or higher prices for the goods and services, eliminating potential revenue gains. It does not address problems associated with bundles of interstate telecommunications, intrastate telecommunications, and non-telecommunications services in a single flat rate.

4. General Tax Funds

Instead of relying on telecommunications revenues to fund universal service, support for the Universal Service program could be drawn from general tax revenues through the normal federal legislative appropriations process. As a variation on this idea, general tax revenues could be used to supplement rather than replace telecommunications revenues. The supplement could be in the nature of a pure supplement to make up for funding shortfalls if they occasionally occur or, more boldly, to fund expansion of the program to underwrite broader access to advanced and enhanced network services as they become more essential tools for economic self-sufficiency. A further variation could be to use general tax revenues as a guarantee against shortfalls, much as existing federal facilities are available to guarantee borrowings or the solvency of financial institutions.

Pros: Payment through the general tax fund creates fewer market distortions and it is competitively neutral. This would also provide an open debate, which would be revisited annually, on the merits of universal service as a social policy. Ideally, the open debate could serve to strengthen the program in the sense that aspects of the program that do not hold up to scrutiny would be cut out, and items that have merit would be championed. It would also remove the stigma of the program for "flying under the radar." It may also dampen criticism of the program as a force for corporate welfare.

Cons: A general tax support may not be sustainable in the sense that there are many competing demands for tax dollars and the appropriation of funds would have to be renewed annually. Given the lack of assurances that the Congress would appropriate requisite funds from one year to the next (given competing claims on the budget) creates a very serious potential downside. Some have suggested that the program is now viewed favorably as a social program, but could attract the stigma of a "welfare" program if brought out in the open (i.e., the program is

valuable precisely because it is "flying under the radar"). Carriers may assert that an annual review of appropriated funds makes capital expenditures difficult to plan.

5. Excise Tax

A current excise tax on telecommunications services, originally created a century ago to fund the Spanish-American War, now funnels revenue into the general tax fund. The amount generated by this tax, at slightly less than three percent of all telephony revenues, is the approximate size of the current Universal Service Fund, and could be directed instead into the Universal Service Fund.

Pros: The excise tax is competitively neutral and very efficient to administer. Since the tax is already on the books, it could provide sufficient funding without having to create a new charge or assessment on customers.

Cons: It currently generates more revenues than are needed, which could lead to an unnecessary expansion of Universal Service Fund. Retargeting or earmarking the revenue raised through this tax to the Universal Service Fund would require legislative action and would entail a loss of revenues to the U.S. Treasury.

6. Flat Per-Line Assessment

One way to collect universal service funds from all users of the public switched telephone network is to make the assessment on a per-line basis. Since it is easier to identify lines than revenues, this would be an administratively efficient mechanism. Questions of equity could be addressed my setting the per-line rates higher for business lines than for residential lines, and the rate can easily be dropped to zero for low-income consumers. Analysis in Appendix 3 of the report shows three different levels of monthly per-line assessments (from $0.75 to $1.25) and the resulting impact on business assessments.

Pros: All beneficiaries of the public switched network would contribute, regardless of means or technology. Per-line charges are less distorting than usage-based charges. Given the large number of lines, the per-line charge would be relatively small. The per-line charge could be modified by class of customer to take into account equity issues (residential vs. business customers; voice-grade vs. high bandwidth lines) and competitive neutrality issues (Centrex vs. PBX lines). Since the carrier would simply be the collection agent, they would avoid controversial add-ons for uncollectibles and administrative costs. It is possible this could be done without a statutory change.

Cons: All surcharges have the potential of being confusing to consumers, who may dislike a charge that does not take into account actual usage. It could be controversial to set different rates for different classes of customers. It could create a disincentive for users to get multiple lines. Since the 1996 Act specifically refers

to collecting universal service from carriers, not customers, some may interpret this to mean that the FCC lacks the authority to make this change. Some may view this approach as a regressive tax since subscribers of all means and levels of use pay the same amount.

7. Per-Number Charge

Funding for universal service could be collected via a surcharge on every telephone number. This would apply to the actual numbers in use, as well as new phone numbers that are auctioned off in blocks. Similar to the Per Line Assessment, but would not cover any telephony that does not use traditional means, such as IP telephony.

Pros: Per number charges would be less distorting than usage-based charges. All beneficiaries of the public network would contribute. The FCC is already considering charging for numbers, and has suggested that the revenues could be a potential Universal Service Fund source.

Cons: This would complicate the FCC proposal for setting market prices to allocate numbers, and could be difficult to draw distinctions between numbers associated with businesses and residences. The charges would miss revenue from all telephony that does not go through a traditional telephone line (*e.g.,* IP telephony that goes through T-1, DSL, and cable modems). There would be a question of whether the charges would only be applied to numbers in use or all numbers, including ones in reserve.

V. Eligibility Issues

The Universal Service Program has been designed to ensure that quality services are available at just and reasonable rates to *ALL* Americans.[37] Critics of the system say it has failed to meet its goals and point to the fact that not everyone in the United States has a phone.[38] Does this suggest that these Congressional mandates are not being adequately implemented?

The CECA Universal Service Forum undertook an analysis of issues regarding the qualification for two of the programs in the Universal Service program, the High-Cost and Low-Income programs. Because of time constraints, the Forum did not examine the eligibility requirements and issues associated with the Schools and Libraries Program (E-Rate) or the Rural Health Program. The eligibility processes for these programs are central to the dissemination of the monies in the program and therefore to the ultimate success of its programs. The topic of eligibility for support from the program was divided into two distinct areas of USF administration and policy for purposes of examination in the Forum:

- Consumer eligibility for Lifeline and Link-up services
- Carrier eligibility for funding to serve high cost areas

Some Universal Service Fund allocations go to states to support specific customer services offered at discounted prices, i.e., Lifeline and Link-up, while other funds support carriers for providing services to high-cost franchise areas. In addition to issues that relate directly to standards of eligibility in both categories, the CECA Universal Service Forum also addressed issues regarding portability of support and disaggregating support areas.

A. Consumer Eligibility for Universal Service Funds: Lifeline and Link-up Programs

The Lifeline and Link-up programs both fall under the umbrella of the USF's Low-Income Program, which is administered by the Universal Service Administrative Company (USAC). The program helps offset telephone service connection (Link-up) and monthly service fees (Lifeline) for low-income consumers. Offering the low-income program services is a condition of a carrier being designated an Eligible Telecommunications Carrier (ETC) for purposes of receiving USF support for a given service area. A description of both the Link-up and Lifeline programs can be found in Part Four of this paper.

Qualification for the benefits of the low-income program is based on criteria established by each individual state or default criteria established by the FCC. States are required to establish narrowly targeted criteria based on income or factors directly related to income.

[37] 47 U.S.C. § 254(b).

[38] We acknowledge evidence that some Americans *choose* not to have phone service, but in this paper we feel it is more appropriate to focus on the ability to access service, and not personal choice.

In states that have not set criteria themselves, a consumer must participate in one of the following federal programs to qualify: Medicaid, Food Stamps, Social Security Income (SSI), Federal Public Housing Assistance, Low-Income Home Energy Assistance Program (LIHEAP), and in the case of Indian reservations, the receipt of Bureau of Indian Affairs general assistance.

1. Lifeline and Link-up

The Lifeline program guarantees access to a menu of basic services[39] and subsidizes portions of monthly charges that appear on consumers' phone bills. The amount of support for consumers varies based on supplemental contributions from states, but ranges from $3.50 to $7 per month.

The Link-up program lowers a low-income consumer's cost of initiating phone service. The program covers a reduction of one-half of the telephone company's charge for initiating service with a maximum of $30. The program also provides for an interest-free deferred payment plan for initiation charges.

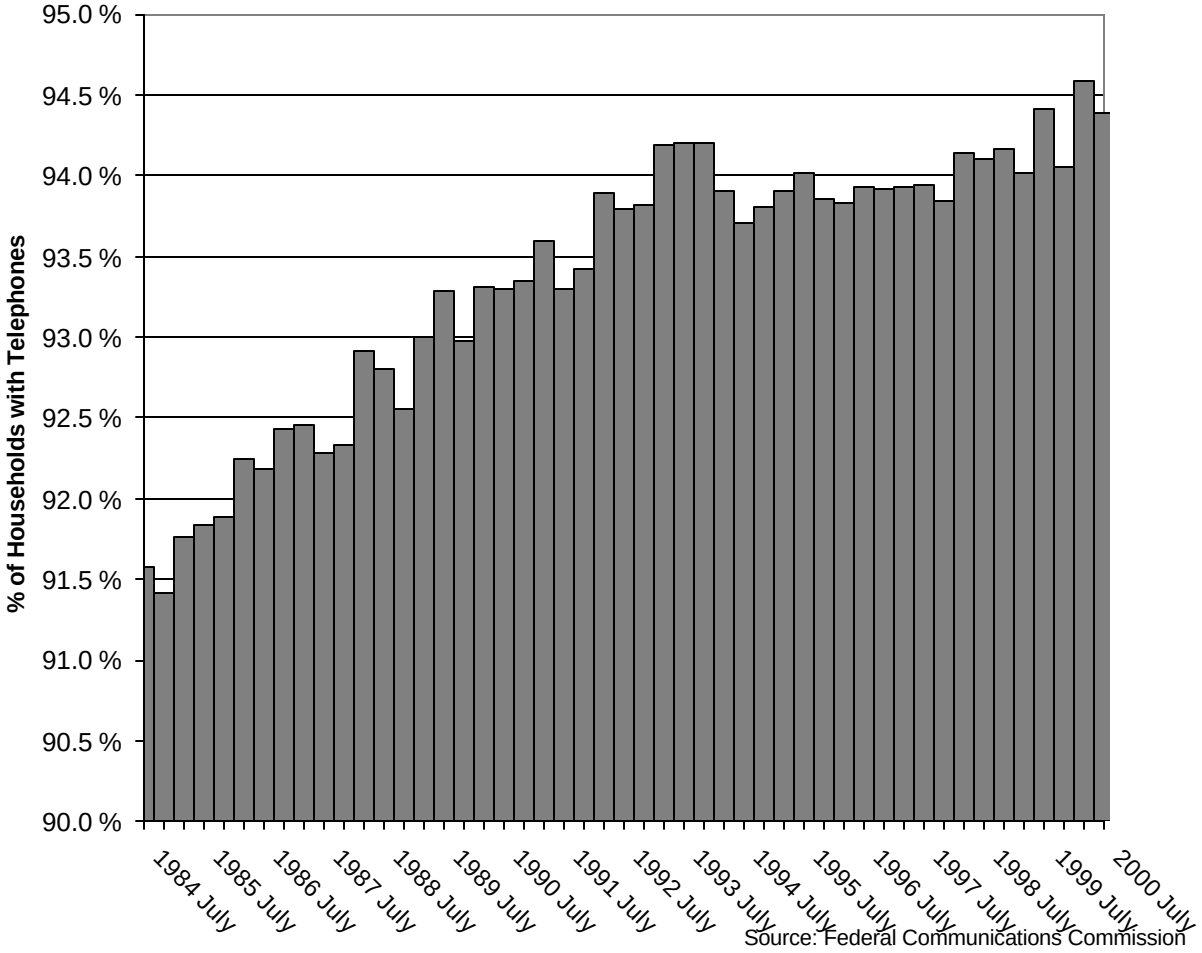
To get some sense of the success of the low-income programs in providing service to those who would otherwise not be able to afford it, it is useful to examine the level of telephone penetration in households. Data show the current national telephone penetration level is just over 94 percent as of July 2000 (see Table Two).

While a national coverage of 94 percent of households may seem promising in broad terms, this equates to almost 17 million people in households without telephones.[40] Even given those who either choose not to have a phone or are satisfied having access to a nearby phone, this number represents an unacceptably large number who do not have access to even basic telecommunications services in their residences.

[39] All qualifying low-income consumers will receive the following services: voice grade access to the public switched network; Dual Tone Multi-frequency; single-party service or its functional equivalent; access to emergency services; access to operator services; access to interexchange service; access to directory assistance; and toll limitation free of charge (provided that the carrier is technically capable of providing toll limitation). Toll limitation includes both toll blocking (which prevents the placement of any long-distance calls) and toll control (which limits the amount of long-distance calls to a pre-set amount selected by the consumer). (*See* http://www.fcc.gov/Bureaus/Common_Carrier/Factsheets/loincome.html).

[40] The number of individuals without a phone in their household was arrived at by multiplying the number of unserved households by 2.64, the most recent census data available (1990) for the average number of individuals in a household.

Table Two: Telephone Penetration Rates



Source: Federal Communications Commission

When examined at a more granular level, the data show that telephone coverage rates vary widely among different states. According to FCC data (see Table Three), the state with the highest level of telephone penetration in 1999 was North Dakota with 97.3 percent of households having telephones and the state with the lowest penetration was Mississippi with 88 percent. Examination at a state level is relevant for this discussion because the low-income programs are administrated by the states.

Table Three: Telephone Penetration Rate by State

(Annual Average Percentage of Households with Telephone Service)

State	1984	1999	Change
Alabama	88.4%	91.5%	3.0% *
Alaska	86.5	94.6	8.1 *
Arizona	86.9	93.2	6.3 *
Arkansas	86.6	88.9	2.3
California	92.5	95.7	3.3 *
Colorado	93.2	96.7	3.5 *
Connecticut	95.5	96.5	1.0
Delaware	94.3	95.7	1.5
District of Columbia	94.9	92.4	(2.5) **
Florida	88.7	92.6	3.9 *
Georgia	86.2	92.1	5.9 *
Hawaii	93.5	96.3	2.8 *
Idaho	90.7	93.8	3.1 *
Illinois	94.2	91.8	(2.4) **
Indiana	91.6	93.8	2.3
Iowa	96.2	95.8	(0.4)
Kansas	94.3	93.8	(0.5)
Kentucky	88.1	92.8	4.6 *
Louisiana	89.7	91.5	1.9
Maine	93.4	97.2	3.8 *
Maryland	95.7	95.3	(0.4)
Massachusetts	95.9	95.4	(0.5)
Michigan	92.8	94.2	1.3
Minnesota	95.8	96.9	1.1
Mississippi	82.4	88.0	5.6 *
Missouri	91.5	95.6	4.1 *

State	1984	1999	Change
Montana	91.0	95.3	4.3 *
Nebraska	95.7	95.9	0.2
Nevada	90.4	93.1	2.8
New Hampshire	94.3	97.0	2.7 *
New Jersey	94.8	93.9	(0.8)
New Mexico	82.0	89.8	7.8 *
New York	91.8	95.3	3.5 *
North Carolina	88.3	93.9	5.6 *
North Dakota	94.6	97.3	2.6 *
Ohio	92.4	94.7	2.3 *
Oklahoma	90.3	91.2	0.9
Oregon	90.6	95.2	4.6 *
Pennsylvania	94.9	97.1	2.3 *
Rhode Island	93.6	94.3	0.6
South Carolina	83.7	92.9	9.3 *
South Dakota	93.2	92.7	(0.5)
Tennessee	88.5	94.5	6.0 *
Texas	88.4	92.4	4.0 *
Utah	92.5	95.6	3.1 *
Vermont	92.3	95.3	3.1
Virginia	93.1	93.2	0.1
Washington	93.0	95.9	2.9 *
West Virginia	87.7	92.7	5.0 *
Wisconsin	95.2	95.7	0.5
Wyoming	89.9	95.0	5.2 *
Total United States	**91.6**	**94.2**	**2.6 ***

Changes may not be the same as calculated differences, due to rounding.
* Increase is statistically significant at the 95% confidence level.
** Decrease is statistically significant at the 95% confidence level.

Source: Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division

Some consumer leaders point to increased telephone penetration rates among low-income households (income of less than $10,000) as evidence of some level of success of the Lifeline and Link-Up programs. From 1984 (the first year of the program) to 1998, the number of poor households with telephones increased from 80 percent to 85 percent.[41] Consumer advocate groups praise the program in that it allows many groups access to telephone services who could not otherwise afford it. They also point out, however, that despite the limited success of the Low Income program, large numbers of American households still lack basic telephone service. In 1997, for example, an FCC study found that just 71 percent of households with incomes of less than $5,000 had phone service

[41] Federal Communications Commission, "Telephone Penetration By Income By State," March 2000, Chart #1. Also see Alexander Belinfante, "Telephone Subscribership in the United States: Data Through November 2000," FCC, Common Carrier Bureau, March, 2001.

compared to 99 percent of households with incomes of $35,000 or above.[42] Studies have also found that race and ethnicity may be a significant factor. One study determined, for example, that at all levels of income below $40,000, Whites have higher levels of telephone penetration than African Americans and Hispanics.[43] Consumer and public advocates argue that ensuring the universality of basic telephone service is a necessary foundation for any expansion of the USF to include advanced services, especially because most Internet access in the foreseeable future is expected to occur with dial-up modems.

2. Rates of Participation

One way of examining the reach of a program like Lifeline is to compare the number of households participating in the program at a state level to the number that receive means tested assistance (see Table Four). While the qualification factors for the Lifeline program vary by state and may not directly correspond with those of other public assistance programs, this comparison can provide a useful benchmark to assess participation in the program.

There are several possible explanations for less than optimal rates of participation in the low-income programs. One is that customer qualification in many jurisdictions is linked to a consumer's participation in social services programs, and for many there is a stigma associated with revealing this information (and even, alternatively, with participating in the programs). Other reasons include consumers not being aware of the program or while the consumer may have a low income, they do not meet the state's threshold for qualification for assistance, and as such may be both unable to afford telephone service and unable to qualify for assistance.

[42] FCC Monitoring Report, CC Docket 87-339, May 1997 (cited in "Deepening the Digital Divide: The War on Universal Service," Center for Media Education, December 1998) (http://www.cme.org/access/universal/ddpaper.html).

[43] Schement, J., "Beyond Universal Service: Characteristics of Americans Without Telephones, 1980-1993," Communications Policy Working Paper #1, 1994, (http://www.benton.org/Library/Universal/Working1/working1.html).

Table Four: Lifeline Recipients Compared To Recipients Of Other Public Assistance Sorted By Rank

	Lifeline Recipients 2Q00 Filings (USAC) (in Thousands)	Households Receiving Public Assistance* (in Thousands)	Lifeline as a % of Households with other programs
Delaware	0.7	55	1.3%
Oklahoma	3.7	265	1.4%
Maryland	3.9	235	1.7%
West Virginia	5.4	192	2.8%
Arkansas	9.1	254	3.6%
Louisiana	14.7	403	3.7%
Kansas	7.3	182	4.0%
Wyoming	1.3	32	4.1%
New Jersey	20.2	453	4.5%
Missouri	17.0	368	4.6%
Mississippi	16.2	315	5.2%
Alabama	21.1	394	5.3%
Indiana	20.0	356	5.6%
Pennsylvania	47.3	782	6.0%
South Carolina	20.9	302	6.9%
Virginia	21.8	305	7.1%
Tennessee	37.0	508	7.3%
Iowa	9.8	133	7.3%
Arizona	23.8	322	7.4%
New Hampshire	6.2	78	8.0%
Illinois	56.1	680	8.3%
North Carolina	56.2	554	10.1%
Oregon	30.3	261	11.6%
Kentucky	38.7	325	11.9%
Florida	133.1	1076	12.4%
Georgia	73.7	595	12.4%
Alaska	5.6	44	12.7%
Colorado	26.6	185	14.4%
Montana	10.0	65	15.3%
Nebraska	14.7	95	15.5%
Texas	258.5	1541	16.8%
Nevada	16.3	97	16.8%
Washington	65.9	380	17.4%
Hawaii	14.9	80	18.6%
Utah	19.5	102	19.1%
New Mexico	33.7	169	19.9%
Minnesota	55.3	273	20.3%
Ohio	159.1	769	20.7%
District of Columbia	11.2	52	21.5%
Wisconsin	63.0	285	22.1%
Idaho	19.4	85	22.8%
Michigan	142.2	623	22.8%
South Dakota	11.9	44	27.1%
North Dakota	11.7	43	27.3%
Massachusetts	169.9	495	34.3%
New York	607.7	1693	35.9%
Connecticut	65.5	170	38.6%
Vermont	28.9	62	46.6%
Rhode Island	47.7	88	54.2%
Maine	74.2	78	95.1%
California	3181.6	2595	122.6%
TOTAL U.S.	**5702.8**	**19536**	**29.2%**

Based on Data Prepared by USAC, the Census Bureau, and the Missouri Office of the Public Counsel
* Includes households that received means-tested cash or non-cash assistance including: Public Housing, Heating Assistance, Rent Assistance, Medicaid or Medicare, Supplemental Security Income, Hot Food Lunch, Food Stamps, Veterans Benefits, Public Assistance or Welfare.

While the promotion of Lifeline and Link-up programs is a matter of state discretion, there are several different mechanisms being undertaken by different carriers and state commissions to reach qualifying citizens and make enrollment in the programs easier. A report released in August 2000 by the Telecommunications Industries Analysis Project (TIAP report) examined the availability of universal service support for low-income

households.[44] The report offers a comparative analysis of different initiatives by states to extend lifeline benefits to consumers. Some of the initiatives include:

- **State supplements to federal support levels**: The report found that on average, the more additional support offered by a state, the more eligible consumers take advantage of the Lifeline program.

- **Self-certification**: In California, for example, customers can order Lifeline service with no verification check.

- **Expanding eligibility requirement to include a broader range of customers**: In Minnesota and Arizona, age and disability are also used in addition to income as qualifying factors; in Tennessee eligibility requirements are extended to recipients with income that is 125 percent of the annual federal poverty guidelines; Texas is considering a similar proposal and Pennsylvania is considering increasing eligibility levels to those at 150 percent of the federal poverty guidelines.

- **Community outreach programs**: In Vermont, local exchange companies are required to send all customers annual notices of how to apply for Lifeline; the Coalition for Affordable Local and Long Distance Service has developed a web site (www.lifelinesupport.org) to list benefits in different states; Tennessee will begin producing information in multiple languages and will establish a Manager of Consumer Outreach position to concentrate on programs like Lifeline; Puerto Rico plans to hold town hall meetings.

- **Direct customer contact**: In an Alaskan community a company undertook a door-to-door campaign; in Maine and South Dakota flyers and letters are sent to customers; the state of Wisconsin works with the Department of Revenue and the Department of Workforce Development to provide information; Illinois will be mailing information to all of its Medicaid recipients.

- **Coordination with other state agencies**: numerous states coordinate efforts with other agencies to reach citizens eligible for lifeline support.

- **Revised definitions of basic service**: California plans to review the definition of basic service as new services become more widely used to avoid some consumers having no access to information.

Not all of these approaches may be appropriate for adoption in every state (for instance, door-to-door visits may be prohibitively expensive in some areas and may be regarded as intrusive in some areas). The ideas offered above, however, illustrate some ways in which

[44] "Closing the Gap: Universal Service for Low-Income Households", TIAP, August 1, 2000. The report is available at http://www. tiap.org.

each individual state can target eligible consumers that are not currently subscribing to receive low-income benefits. There is strong support that states should evaluate and reexamine their programs along these lines to maximize their usefulness to the intended beneficiaries.

Some have noted general concern regarding self-certification programs, like that in the State of California, as a means of enrolling people in the low-income programs. California has 12 percent of the U.S. population, but in 1999 it received nearly 56 percent of the total federal Lifeline funds. The California program does have a household income cap to be used for determining eligibility for its Lifeline program, but allows residents to self-certify that they meet this requirement. Customers must re-certify annually and although the program does not include an audit mechanism, if a Lifeline subscriber is deemed ineligible they will be charged the regular tariffed rate retroactively from the time they became ineligible. Critics note that some sort of regular audit mechanism may be appropriate to ensure that Lifeline funds are not going to those who do not qualify.

3. Automatic Enrollment

Some states have chosen to enroll automatically all residents that fall under a certain income threshold. Vermont, for example, enrolls all residents that have incomes that are less than 175 percent of the poverty line. Auto-enrollment has gained broad support for determining those eligible for low-income support, especially since it does not rely on the consumers themselves filling out the forms or contacting the appropriate authorities. If done efficiently, low-income customers simply receive a bill that already has a portion of their amount due credited. Automatic enrollment avoids the problems associated with going through social services agencies, since many eligible customers many not receive social services benefits. It also enrolls many low-income consumers who may not know that they are eligible, or may be unwilling to go through the procedures to gain assistance.

While CECA believes that automatic enrollment is the best tool for states to use for enrolling eligible low-income consumers, it should be noted that it will only work for those consumers who already have telephone service since the credit is applied to all outgoing local phone bills. There may also be a significant number of consumers who do not have service because of costs who could benefit from the Low-Income program, yet are unaware of their eligibility. While automatic enrollment is an excellent policy option for assisting eligible consumers, it must be complemented with outreach and consumer education programs that explain the benefits of the Low-Income program for those without service.

B. Carrier Eligibility for Universal Service Funding

Only carriers designated as eligible telecommunications companies (ETCs), as defined in Section 214 of the Act, can receive universal service funds. Section 214(e)(2) gives states the primary responsibility for designating carriers as ETCs.[45] Section 214(e)(1) sets forth

[45] The FCC will designate ETC status only in those instances where a state has determined it lacks jurisdiction to designate ETC status to a carrier. For instance, in 1999 the Wyoming Public Service

the criteria for ETC designation; (i) to offer the services that are supported by the universal service support mechanisms; (ii) to offer these services throughout the designated service area; and (iii) to advertise the availability of those services using media of general distribution. To be deemed eligible as an ETC, the carrier is required to use at least some of their own transmission facilities to deliver telecommunications (as opposed to information) services.

In a non-rural telephone company area, the statute requires the grant of ETC status to a carrier that meets the criteria mentioned above, namely providing and advertising the universal service offering within the designated service area (as determined by the state) and using at least some of its own facilities. In a rural telephone company area, however, in addition to the requirements for non-rural areas, the carrier seeking ETC status as an additional carrier in a rural telephone company area is required to serve the entire rural telephone company study area at issue and the state is required to undertake an analysis as to whether the grant of ETC status is in the public interest. Critics have argued that these requirements, especially the public interest assessment factor present a barrier to competition and new technology in these areas.

Since the passage of the Telecommunications Act of 1996, few competitive carriers have undertaken the ETC process and been designated as ETCs. Of the competitive carriers designated as ETCs, very few have begun providing universal service and received universal service funding. Critics have charged that state regulatory regimes are often biased towards traditional wireline carriers creating a barrier for new entrants, especially those using non-traditional technologies such as wireless. These critics believe that certain state regulatory ETC hurdles that impose disparate procedural and substantive requirements on competitive carriers seeking ETC status discourage competition and should be addressed. They suggest that it would be good public policy to adopt ETC certification policies that are neutral with regard to technology.

Two recent cases, one before the Minnesota Public Utilities Commission and one before the FCC, illustrate some of the arguments raised in opposition to certification of a second ETC, especially a wireless carrier, and provide guidance toward a policy that is technology neutral and competition friendly.

1. Case Study No. 1: State Commission Designation of a Competitive Carrier as an ETC

In the Minnesota case,[46] Minnesota Cellular Corp. filed an application with the Minnesota Public Utilities Commission (Minnesota Commission) to obtain status as an additional ETC in 43 counties in northern Minnesota. They sought to become eligible for Universal Service program support for providing wireless local loop service in these counties.

Commission found that it lacked the authority to grant ETC status to Western Wireless because its state laws prevent it from regulating cellular providers except as related to quality of service.

[46] In the Matter of Minnesota Cellular Corporation's Petition for Designation as an Eligible Telecommunications Carrier, Minnesota Public Utilities Commission, October 27, 1999.

Several parties intervened, including a number of incumbent carriers. In its request for ETC status, Minnesota Cellular Corp. pledged to offer all services required by the statute (the core services) and price them within 10 percent of the rates charged by incumbents, and in addition would include advanced features such as an expanded local calling area and limited service mobility, Caller ID and voice mail. By designating Minnesota Cellular Corp. as an ETC in rural telephone company service areas, the Minnesota Commission became the first state commission in the nation to designate an additional carrier as an ETC in rural telephone company service areas.[47]

The opponents of the application raised two principal arguments:

1. The concern that wireless technology is unable to provide high quality and affordable service to customers in the way wireline technology can, and as such Minnesota Cellular Corp. would not meet the threshold for certification as an ETC because of its use of wireless technology.

2. Designating a second ETC in rural telephone company service areas is contrary to the public interest. A competing ETC could diminish the revenues of the incumbent, or in the very least create the possibility of diminished future revenues, thereby creating economic incentives for incumbents to defer investment in infrastructure. The competition could also cause a rise in prices for remaining customers because, as the competitor takes away subscribers, the base over which costs can be spread will decrease. In the most extreme case, the competition could put the incumbent provider out of business.

In its decision to grant conditional approval of ETC status for Minnesota Cellular Corp., the Minnesota Commission offered useful guidance for considering policies to embrace the concepts of competition and technological neutrality.

With regard to the technical capability of a wireless provider to offer high quality service and affordable rates, the Minnesota Commission cited FCC and Federal-State Joint Board on Universal Service rulings that urge states to refrain from discriminating against applicants on the basis of technology and open telecommunications markets to cable and wireless providers.[48] The Minnesota Commission found that as long as there is evidence that high quality and affordable service can be provided and lack of compelling evidence contrary to this fact, certifying a carrier that provides its service using wireless technology should not be a concern.

With regard to the public interest argument by challengers that cited the potential harmful effects of competition on rural markets, the Minnesota Commission rejected each of the arguments of the challengers. In its decision, the Minnesota Commission recognized both

[47] Since then several other state commissions have designated additional carriers as ETCs in rural telephone company service areas.

[48] In its Report and Order on Universal Service, the FCC concluded that universal service support mechanisms and rules should be competitively and technologically neutral. *Universal Service Order*, 12 FCC Rcd 8776, 8801, paras. 46-49.

the state and federal commitments to opening local telecommunications markets to competition, but acknowledged that some areas served by rural telephone companies may not be able to support more than one carrier. It also noted that Section 214 of the Act puts the burden on the carrier seeking additional ETC status to make a showing to the relevant authority that granting such status would be in the public interest.

The argument that competition could encourage incumbents to stop investing in infrastructure because of the fear of not being able to recoup investment was countered with the argument that the competition could also spur beneficial investment in infrastructure to provide superior service to beat the competition. The Minnesota Commission further reasoned that competition could motivate incumbents to find and implement new operating efficiencies, leading to lower prices and better service. In the unlikely case that this competition would cause the incumbent to go out of business, the Minnesota Commission reminded the challengers of the obligations of the ETC to serve every customer within the service area and the Minnesota Commission could require Minnesota Cellular Corp. to purchase or construct facilities necessary to ensure adequate service, leaving the consumers no worse off than they were before.

This case is important in that it illustrates a state coping with new technology and competition in a proactive manner. This is especially important in the continuing effort to reach unserved consumers, especially those in remote areas.

2. Case Study No. 2: FCC Designation of a Competitive Carrier as an ETC

In a similar decision at the federal level, the FCC was asked to consider ETC status for Western Wireless in Wyoming.[49] The Commission used this case to reiterate and support its policies for competition and technological neutrality. The Commission rejected arguments of possible 'cream skimming' of the most profitable customers by Western Wireless by pointing to the requirement in Section 214 whereby the ETC must offer its services through the entire service area. Similar to the Minnesota case, the FCC found nothing inherent in wireless technologies that make a carrier ineligible for status as a second ETC in an area. Overall, the Commission recognized the potential benefits of competition in rural markets by saying, "Designation of competitive ETCs promotes competition and benefits consumers in rural and high-cost areas by increasing customer choice, innovative services, and new technologies… In addition we find that the provision of competitive service will facilitate universal service to the benefit of consumers in Wyoming by creating incentives to ensure that quality services are available at just reasonable, and affordable rates."[50]

---

[49] *In the Matter of Federal-State Joint Board on Universal Service Western Wireless Corporation Petition for Designation as an Eligible Telecommunications Carrier,* Memorandum Opinion and Order, DA 00-2896 (rel. Dec. 26, 2000), (*Western Wireless Order*).

[50] *Western Wireless Order* at 17.

With regard to the argument that rural areas in general are not capable of sustaining competition for universal service support, the FCC said that it did not believe that was necessarily the case.

> Specifically, we find no merit to the contention that designation of an additional ETC in areas served by rural telephone companies will necessarily create incentives to reduce investment in infrastructure, raise rates, or reduce service quality to consumers in rural areas. To the contrary, we believe that competition may provide incentives to the incumbent to implement new operating efficiencies, lower prices, and offer better service to its customers.[51]

The Commission did note that some rural areas might not be able to support more than one ETC, but the claim in this case was not supported with credible evidence.

C. Portability and Disaggregation

There are two general issues that figure heavily in the debate about eligibility of carriers for universal service funding, portability and disaggregation, the latter of which includes two very different and important components – disaggregation of service areas and disaggregation of support. These two components are described below.

1. Portability

Prior to the passage of the 1996 Act, only incumbent local exchange carriers were eligible for universal service funding. Many carriers that did not receive funds claimed that universal service funding was discriminatory and kept competitors from going into high cost areas to compete. The reason, they insisted, was that since the incumbents received funding, they were able to keep rates artificially low. This of course was one of the prime objectives of universal service – to keep the rates in high-cost areas low enough that they could be somewhat comparable to those rates charged in urban areas, or low-cost, areas. However, without the subsidies that would allow them to offer the same low rates, competitors were at a distinct disadvantage. Thus, they argued that if competitive entry was desired, universal service funding would also have to be made available to all competitive carriers.

When Congress passed the 1996 Act, it reasoned that competition was being hampered by the limitations on who could receive universal service funding. It required that, consistent with the public interest, convenience and necessity, the state commission may (in the case of an area served by a rural carrier) and shall (in the case of an area served by a non-rural

[51] *Western Wireless Order* at 22.

carrier) designate more than one common carrier as eligible for funding.[52] In January 1998, the Commission implemented this directive and funding became "portable," so that funding would move among carriers that were serving high cost customers. In other words, if a competing Eligible Telecommunications Carrier (ETC) were to enter an area served by the incumbent and "win" a customer line from the incumbent ETC, then the competitor would receive the allocated funding associated with that customer line.

This portability requirement should have quelled the concerns of those who said that not having access to universal service funding was anti-competitive. However, many of those seeking funding are still concerned that the amount of funding transferred to them would not be sufficient, while incumbent carriers believe that the funding that their competitors receive (based on the incumbent's costs) could be a windfall for the competitors.

Portability is complicated by the fact that the support allocated to the ETC is based upon the average costs incurred over the entire exchange. Therefore, if the exchange includes densely populated areas that are less expensive to serve along with the sparsely populated areas that are more expensive, then the average cost will meet somewhere in the middle. However, some competing carriers claim that if they end up serving only the highest cost of the high cost customers – those that are the most expensive to serve, such as those living in the most remote or insular parts of the exchange – then they will not be able to compete because their subsidy will be based on the average cost of the entire exchange, not the individual lines. Many competitors claim that the support should reflect the actual cost of the individual lines, not the average of the area. This is the main premise behind the idea of "disaggregation," or "targeting," the practice of fitting the subsidies to more closely reflect the costs of service.

On the other hand, many of the incumbent LECs believe that competitors should not receive funding based on the costs ascribed to the incumbent. They suggest that the costs of providing service for the competitor would be much less than their costs for a number of reasons. One is that a competitor would not enter the market in the first place unless it knew that it could be profitable. One reason a competitor might have a cost advantage is that the competitor might be able to include input costs that were much lower than the those of the incumbent LECs', because, for example, they could use the latest, most efficient technology

The most apparent fact is that there is a debate over what should be portable, and how the assessment of that amount should be made. It is a problem that haunts decision-makers addressing carriers that use the model and those that still remain under cost. There is no non-wireline model, so any funding to a competitor, be that competitor a wireless, satellite or other type of carrier, will be based on a wireline model. The problem is intensified for those carriers who function under an actual cost scheme. The decision-makers are in an unenviable position in making the determination of what that "right amount" is.

[52] 47 U.S.C. § 102.

2. Disaggregation

Disaggregation is a complex issue because there are a number of different parameters that could be subject to greater or lesser degrees of disaggregation. First, there is the service area or study area used to determine the size of the overall fund. Traditionally, the ILEC providing service in a state has treated the entire geographic area served as a single service area or "study area." Currently, to determine the amount of high cost funding available to non-rural LECs, an ILEC's state-wide average costs are compared to the nationwide average; that is, the service area or study area used is the ILEC's aggregated statewide service area. By basing this comparison on a state-wide average cost, the low cost areas served by the ILECs "cancel out" some of the high cost areas served, so the total size of the universal service fund is smaller than it would be if the service area used were also disaggregated.

Within such a broad service area, however, there will be higher and lower cost areas to serve. To the extent that a universal service objective is (given the size of funding available, as determined by state-wide averages) to target funds to those areas that are most costly to serve, costing must be performed at a more disaggregated level than the state-wide serving area to identify those highest cost areas and to limit the funding to service providers serving customers in those highest cost areas. Thus, a second parameter subject to disaggregation involves the costing required to target funds to high cost areas.

Once costing has been disaggregated to identify the geographic areas for which universal service funds should be targeted, that costing must be applied to new entrants as well as the ILECs. An ETC should be able to define its service area any way it chooses, but would only receive funds for serving customers located in the highest cost geographic areas.

There is one additional disaggregation factor. The cost of essential inputs, particularly the local loop to the customer premises, is subject to substantial geographic variation. The FCC has required ILECs to disaggregate rates for unbundled loops into at least three zones. If these loop price zones do not correspond to the cost zones used for targeting universal service funds, then competitors will have an arbitrage opportunity and may enter some markets and avoid others simply because the universal service subsidy is not based on the same level of disaggregation as the loop price.

VI. Which Services Merit Support?

Judgments about which services merit support by the program are crucial because they may mark the dividing line between the "haves" and the "have-nots" in a society in which economic empowerment increasingly depends upon access to information and the technologies that deliver it. A significant portion of the population (some six percent of American households, representing more than six million households) for one reason or another does not have access to even "plain old telephone service" (POTS). This is evidenced by the data on telephone subscribership and the Lifeline and Link-up programs presented in the report.

More and more, Americans are taking part in the information age and the growth of the Internet shows that Americans are increasingly interested in more than just POTS. The 1996 Act provides some high-level and long-range guidance for the evolution of the Universal Service program, but leaves many of the details to the Federal-State Joint Board and the FCC to flesh out. As technology evolves and becomes vitally important to the social and economic well-being of all Americans, so too must universal service evolve. The services that are supported by the Universal Service program must be carefully examined to ensure that it is in touch with the needs of all Americans.

A. Core Services

The 1996 Act defines universal service as "an evolving level of telecommunications services"[53] and charges the FCC with determining which services are essential, and therefore supported by universal service funding, based on a variety of factors,[54] including the extent to which these services:

- Are essential to education, public health, or public safety;
- Have, through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers;
- Are being deployed by telecommunications carriers; and
- Are consistent with the public interest, convenience, and necessity.

The basic package of services that is eligible for universal service funding is likely to continue to evolve as policymakers grapple with which services are essential to Americans, a naturally dynamic process that is contemplated by the 1996 Act. Currently, the

[53] 47 U.S.C. § 254(c).

[54] In its interpretation of the Act, the FCC has concluded that not all four criteria must be met for a service to be determined to be essential for universal service purposes.

following are designated as "core" services and carriers who offer them (and meet other requirements specified in the Act) are eligible to receive universal service funds[55]:

- Voice grade access to a telephone network
- Access to touchtone capability
- Single party service
- Access to emergency services, that may including 911
- Access to operator services
- Access to interexchange services
- Access to directory assistance
- Limited long-distance calling for qualified customers

This group of core services is not meant to be static. Section 254(b) of the 1996 Act also sets out clear Congressional intent for the promulgation of universal service policies that encourage the deployment of services beyond basic services when it states that, "Access to advanced telecommunications and information services should be provided in all regions of the Nation." The 1996 Act further sets up a forward-looking approach to the definition of universal service when, in Section 254 (c), it defines universal service as, "an evolving level of telecommunications services that the Commission shall establish periodically under this section, taking into account advances in telecommunications and information technologies and services."

Section 254 is not the only part of the 1996 Act that addresses policymakers' role in access to advanced services. In Section 706, Congress created a requirement for the Commission and the states to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans."[56] The term "advanced telecommunications capability" is defined as "high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology."[57] This section requires the Commission and the states to achieve this goal through the use of "price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment," and to report "regularly" on the success their efforts. This section of the 1996 Act encourages the Commission to develop policies that promote private sector deployment of advanced services, and when read in conjunction with Section 254, makes it clear that the Universal Service program was not intended to single-handedly address the issue of access to advanced services.[58]

---

[55] *Federal-State Joint Board on Universal Service*, Report and Order, FCC 97-157, CC Docket No. 96-45 (released May 8, 1997).
[56] 47 C.F.R. § 706(a).
[57] 47 C.F.R. § 706(c)(1).
[58] In practice, the FCC has not seized upon section 706 as a vehicle to promote advanced services. In its two reports on progress in deployment of advanced services, the FCC has concluded that deployment is

The 1996 Act clearly sets out the goals of promoting advanced services and creating an evolving definition of the services that are to be covered by some sort of universal service mechanism, and in doing so, grants significant discretion to the Joint Board and the Commission to promulgate these policies. With this discretion comes a challenging task – to determine the means by which public policy can accomplish the goal of bringing access to advanced services to all Americans.

Before undertaking a discussion of the role the Universal Service program plays with respect to advanced services, it is helpful to understand the current state of affairs regarding the availability of advanced services such as Internet access (both dial-up and high-speed) in areas that are historically less technologically advanced, namely low-income and rural areas. These areas are the focus of the "digital divide."

B. Universal Service and the Internet

Recent data show that there are gaps in connectivity to the Internet and personal computer ("PC") ownership for many Americans, especially those that are poor and those that live in rural areas. An October 2000 study released by the National Telecommunications and Information Administration (NTIA) shows a wide gap in computer ownership and Internet access between households with lower incomes and households with higher incomes[59] (see Table Five). The table shows that in households with incomes less than $15,000, 19 percent have a computer and 13 percent have Internet access. This contrasts sharply with households with higher incomes, for example, in the $25,000-$34,999 bracket, 59 percent have computers and 46 percent have Internet access. The gap is also evident in different racial and ethnic groups. White households owned PCs at twice the level of African American households (56 percent vs. 33 percent) as of August 2000. In rural areas, however, the gap is not as severe, with 50 percent of rural households having a computer and 39 percent having Internet access as compared to 52 percent of urban households having computers and 42 percent having Internet access.

---

proceeding in a reasonable and timely manner and that no proactive or deregulatory steps are required to fulfill its statutory duties.

[59] National Telecommunications and Information Administration, Falling Through the Net: Toward Digital Inclusion, October 2000, (NTIA Study)

Table Five: Computer Ownership and Internet Access by Household

	Percent Households With A Computer			Percent Households With Internet Access		
	August 2000	Point Change over Dec. 1998	Expansion Rate (Percent)	August 2000	Point Change over Dec. 1998	Expansion Rate (Percent)
All	**51.0**	**8.9**	**21.1**	**41.5**	**15.3**	**58.4**
White Non-Hispanic	55.7	9.1	19.5	46.1	16.3	54.7
Black Non-Hispanic	32.6	9.4	40.5	23.5	12.3	109.8
Asian Amer. & Pac. Isl.	65.6	10.6	19.3	56.8	20.8	57.8
Hispanic	33.7	8.2	32.2	23.6	11	87.3
Under $15,000	19.2	4.7	32.4	12.7	5.6	78.9
$15,000 - $24,999	30.1	6.4	27.0	21.3	10.3	96.3
$25,000 - $34,999	44.6	8.8	24.6	34	14.9	78.0
$35,000 - $49,999	58.6	8.4	16.7	46.1	16.6	56.3
$50,000 - $74,999	73.2	6.9	10.4	60.9	17	38.7
$75,000 +	86.3	6.4	8.0	77.7	17.4	28.9
Less than High School	18.2	5.7	45.6	11.7	6.7	134.0
High School Graduate	39.6	8.4	26.9	29.9	13.6	83.4
Some College	60.3	11	22.3	49	18.8	62.3
College Graduate	74.0	7.1	10.6	64	17.2	36.8
Post Graduate	79.0	6.8	9.4	69.9	16.9	31.9
Rural	50.4	10.5	26.3	38.9	16.7	75.2
Urban	51.5	8.6	20.0	42.3	14.8	53.8
Central City	53.7	15.2	39.5	37.7	13.2	53.9

Source: NTIA Study, *Falling through the Net IV,* Tables I-1 and I-2

It is generally true that poor people and minorities in the U.S. are less likely to own computers and be connected to the Internet than are middle and upper income citizens and non-minorities. However, the data show that in just the past few years, PC ownership and access to the Internet have grown dramatically among segments of society that heretofore have not been significantly involved in the digital revolution. In particular, the August 2000 data show a 75 percent increase in rural households connected to the Internet over

December 1998 when only 22 percent had access. Households in the lowest income level (under $15,000) saw an increase of 79 percent in Internet access in the period between December 1998 and August 2000 (from 7.1 percent to 12.7 percent). Impressively, the Internet access rate for African Americans more than doubled in this period.

As more Americans access the Internet, the demand for high-speed access has grown. By August 2000, of all households that were already online, 10.7 percent had access to the Internet through broadband facilities,[60] and this number is expected continue growing rapidly.[61] Broadband access is not only faster than standard dial-up access, but it also allows for a broader range of high capacity content such as streaming video. Similar to general Internet access, broadband subscribership varies by income, education and location. In rural areas, 7.3 percent of those households with Internet access have broadband access, compared to 11.8 percent in urban areas and 12.2 percent in central cities. Among Internet-available households with incomes less than $15,000, only 7.7 percent had broadband access as compared to 13.8 percent for households with incomers over $75,000. Households with members holding college degrees outpaced the average for broadband access at 12.5 percent while in those with high school or less, only 9 percent have broadband access.

The data above demonstrate that clear gaps exist among different groups – racial, socio-economic, and geographic – in terms of the extent to which they are connected to advanced services. This data suggests that large segments of the population are not participating in the types of information sharing enjoyed by other groups. The fear is that these groups are missing out on access to knowledge and the power that comes with that access. This "digital divide" has led some groups to call for the expansion of the definition of universal service to address this apparent inequity.

It is also important to note that there is a distinction between advanced services being included in the definition of supported services and actual Internet or broadband access. Some suggest that even if advanced services were included in universal service, it would not necessarily mean that more Americans could obtain them. Unlike basic telephony, where a simple phone and cord are needed for service inside the household, access to advanced services also contingent upon computers, software, other various hardware equipment, and the skills and knowledge of how to use them. With this in mind, there are a variety of issues that need to be attended to in order to address the digital divide, only some of which may be covered by the Universal Service Program. Therefore many have asserted that it is near-sighted to think that the digital divide can be bridged by universal service alone, and that there is a definite need for a more comprehensive strategy that

[60] NTIA Study page 23. NTIA notes that the study based its definition of broadband subscribership on the use of the most common technologies, such as Digital Subscriber Line (DSL), cable modems and Integrated Services Digital Network (ISDN), despite the fact that some of these services may provide less than the 200 kilobits per second transmission standard used in the FCC determination of broadband access.

[61] According to Jupiter Research, by 2005 there may be more than 28 million households connected to broadband. This will represent a jump of over five-fold from the year 2000. See "More than One in Three US Online Households Will Connect Via Broadband in 2005, Jupiter Research Says," http://jup.com/company/pressrelease.jsp, accessed November 9, 2000.

includes federal, state, and local governments working in unison to develop the infrastructure, provide the skills, and assist with obtaining the right equipment.

C. An Evolving Definition of Universal Service

At the core of the debate over expanding the Universal Service program to include advanced services is a disagreement about which services should be deemed "essential" services, and a further disagreement about what the programs can afford to support. Determining which services are essential to a community or a nation is a formidable task given the competing views on the issue and the diverse geographical and socioeconomic backgrounds of the American people.

Most stakeholders agree that a minimum level of access to telecommunications services is essential for meaningful participation in the economic, social and political aspects of modern society. Disagreements arise in determining that level of service. Some advocates of expanding the definition of supported services envision a "broadband telecommunications platform" in which a variety of advanced services would be accessible and affordable for all Americans, including voice, data, image graphics, and full motion video.[62] Others would keep the current definition of supported services and provide for advanced services through the E-rate, which provides discounts to schools and libraries for advanced services.[63]

Proponents of expanding the universal service program argue that as more advanced services become available and are adopted by a significant number of Americans, the level of services needed for effective participation by all groups naturally increases. For example, several states are experimenting with voting over the Internet,[64] and if this trend continues, there may be more opportunities for civic involvement and participation using high-speed connections. These groups also argue that government intervention is necessary due to the unique nature of network economics. They stress that the existence of strong network externalities in telecommunications services implies that the interaction of market forces alone will not bring about widespread adoption of new technologies by a majority of Americans as rapidly as is desirable.[65]

Other stakeholders oppose expanding the definition of universal service to include advanced services. These groups argue that expanding the basic core package to eligible consumers is undesirable at this time, given the breakneck speed of technological innovation and the constant introduction of new services. Such an environment, they argue, is not conducive to government intervention that seeks to define a particular

---

[62] See, e.g., "Connecting Each to All: A Telecommunications Platform for the Information Age," Alliance for Public Technology (APT), 1993 (http://www.apt.org/publica/each2all.html).

[63] As previously noted, the Schools and Libraries program is beyond the scope of the Forum.

[64] See, e.g., "Arizona Democrats Plan First Online Election," *IDG News*, December 17, 1999 (http://www.nwfusion.com/news/1999/1217webvote.html).

[65] From general economic theory, the idea is that while the addition of a new member to an existing network gives all members an external benefit, the marginal benefit to the individual is less than the marginal benefit to society. This leads to a smaller network than is socially desirable.

package of technologies to be included in universal service. These stakeholders call for a focus on the *process* rather than the *products* in examining the universal service definition. Instead of offering universal support for services, for example, these groups argue that government should be redefining the program so that it favors networks and technologies that are, as one analyst defined it, "digital, scalable and extensible."[66] Its supporters see this approach as preferable because it allows the market to make the decision about which services are essential while charging policymakers with constructing a viable platform that could support a broad array of advanced services.

Some have noted that the 1996 Act is very clear in its four-part standard for determining when a particular service should be considered for inclusion in the definition of universal service, including when a substantial majority of residential subscribers have adopted the service. If the trends are positive and adoption rates are high, new services should be included, provided there is evidence of high penetration rates and usage. The idea of universal service for bringing telephone service to all American households was embraced as a policy goal after a majority of U.S. households already had telephone services.[67] With slightly more than 55 percent of Americans accessing the Internet in late 2000,[68] and with a growing number using broadband to do so, some suggest that the time is rapidly approaching for additional services, including advanced services, to be considered in the definition of supported services.

Even some of the opponents of expanding the definition of universal service do admit, however, that evidence of market failures preventing widespread adoption of certain telecommunications services could also justify an expansion of the current definition. These groups maintain that, on the contrary, the latest data supports a diminishing "digital divide" in certain categories. At the highest income levels ($75,000+), for example, the gap between White and African American household ownership of personal computers has declined by 6 percent between 1997 and 1998.[69] A separate study found that from 1994-1997, African American and Hispanic households with incomes less than $35,000 purchased computers at a faster rate than Whites.[70] On the other hand, proponents argue that the gap has continued to widen for low-income, least educated, and certain minorities.

It should be noted that provisions of the Telecommunications Act of 1996 are already providing a foundation for the advancement of advanced services, and that there are many carriers that are receiving universal service funding for deploying technologies that are advanced services capable. The 1996 Act provides, for example, that a variety of competing technologies (wireless, satellite) are eligible to receive USF for providing telecommunications services to customers.[71] This is an important distinction because even

---

[66] Gillett, S., "Technological Change, Market Structure, and Universal Service," Massachusetts Institute of Technology, April 1994.
[67] Mueller, M., "Universal Service in Telephone History: A Reconstruction," *Telecommunications Policy*, Vol. 17, Issue 5, page 355, cited in Id., page 21.
[68] Nielsen Net Ratings, November 2000 (http://www.nua.ie/surveys/how_many_online/n_america.html).
[69] *Id*., pages 8 and 21.
[70] National Telecommunications and Information Administration, "PC Rate by Race and Income," 1998 (cited in "The Internet and Society: Universal Access, Not Universal Service," Progressive Policy Institute, September 1998, pages 8-9).
[71] See Universal Service Order, 12 FCC Rcd at 8850-8851, para. 134.

though the definition of supported services does not include advanced services at this time, it does not prevent broadband capable plant from being supported. Some suggest that this new competitive environment is a very effective means for bringing affordable access to advanced telecommunications services for rural and low-income customers, and will help pave the way for the inclusion of advanced services in the definition of supported services at a later time. Making sure that there are no obstacles to USF support for advanced services may be just as significant as actually adding them into the definition.

In this sense, the universal service provisions in the 1996 Act are already opening the doors for advanced services on a larger scale later. However many supporters of universal service also caution that like the provision of voice grade service to rural, high cost, and low-income consumers, the advanced services market by itself may not be enough to reach all sectors of the United States without the support of the Universal Service Program. With this in mind, CECA believes it is important to monitor the deployment of plant that is capable of advanced services, and is important to watch closely for segments of the population that may be left out.

To this end, CECA offers a framework for determining the appropriate circumstances under which certain services, including but not limited to advanced services, can and should be included in the definition of services supported by the Universal Service program (see Appendix 3).

D. Looking Ahead

It is nearly impossible for any one person or organization to stay on top of all of the advances in telecommunications and technology. Even so, the Commission, the Joint Board and the states are tasked with promoting advanced telecommunications services for all Americans. In order to assist regulators in meeting these lofty goals, the CECA calls for the creation of a Technology Task Force (TTF) to aid regulators in a comprehensive examination of the social, political, economic, and technological landscape within which advanced services can be observed.

The TTF would be comprised of a wide balance of stakeholders – representatives from rural and urban areas, academics, business groups, representatives from various sectors of the telecommunications industry, and members of state and local governments. The TTF would monitor, on a regular and ongoing basis, the status of the deployment of technology in all areas of the nation, and indicators of the demand for those services. The TTF would have the flexibility to examine issues outside the boundaries of jurisdiction of the FCC, and if appropriate, could present observations and recommendations to other governmental and non-governmental agencies.

In formulating their recommendations regarding advanced services that should be considered by the FCC and the Joint Board for universal service support or for support by any other governmental program, the CECA Universal Service Forum has created a decision tree of questions to help guide decision-makers in their analysis. Part Four

includes a series of questions that CECA feels are appropriate for answering the question of when to include advanced services in the definition of core supported services.

E. A Note of Caution

While the mandates of the 1996 Act regarding advanced services are clear, one must not ignore the impact that the expansion of core services would have on the size and sustainability of the program. As new services are supported the financial strain on the program will increase. It will be critically important to weigh the potential impact on the program against the social benefits before new services are added to the definition. This underscores the importance of a careful review and examination of the alternative funding mechanisms presented earlier in this paper. It also underscores the need for the fund to be flexible so that it can evolve to meet the needs of the future.

There are also concerns that the current definition of supportable services may lead to two unfortunate consequences relating to the deployment of telecommunications infrastructure: (1) The low threshold for core services currently supported by the program may lead to a "race to the bottom," in which carriers have little incentive to deploy anything but the cheapest plant possible to minimize costs and maximize the amount of support received. The concern is that without minimum thresholds on the quality and capacity of plant that will ensure that the plant can accommodate advanced services, the Universal Service program could in fact be supporting plant that meets the minimum requirements of today, but will not be upgradeable in the future without considerable expense.[72] (2) At the other end of the spectrum, there are concerns that the program may encourage deployment of plant that is more expensive than necessary, knowing that the program will support them. If true, this may not be the most efficient allocation of the Funds, and could lead to competitive disadvantages to non-ETC carriers, which could in the end, hurt consumers.

CECA concludes that the bar indeed should be raised on the minimum standards for plant deployment to ensure that all Americans will have access to advanced services in the future, but also acknowledges that there are no clear answers to what the new minimum standards should be nor how to create new standards while maintaining the principle of technology neutrality.

[72] This concern has been raised particularly for small rural telephone companies and cooperatives. It is important to note that some government agencies, the Rural Utilities Service (RUS) in particular, provides significant funding support for these entities but also insists on firm requirements that the facilities be upgradeable in the future.

PART THREE: RECOMMENDATIONS AND OBSERVATIONS

VII. Recommendations

The following recommendations have been developed by CECA based on the ideas generated during discussions and the exchange of views from the Forum participants.

A. Supported Services

CECA believes that the services supported by the Universal Service Program are vital to the social well-being of all Americans. CECA also asserts that advanced and enhanced services, as links for maintaining connectedness among Americans and as tools for economic viability, will continue to increase in importance. Therefore, **CECA recommends that all supported services be maintained and that steps be taken consistent with legislative mandate to determine when additional services, including advanced services, should be included in the definition of supported services**. CECA recommends taking the following steps:

1. Create a Technological Task Force to Advise on Supported Services

CECA recommends that a Technological Task Force (TTF), in an advisory capacity to the FCC and the Federal-State Joint Board, be created to determine the optimal time for inclusion of additional services, including advanced services. The TTF would be a stakeholder group that would take a comprehensive examination of the social, political, economic, and technological landscape within which advanced services are considered. The TTF will have several advantages as a supplement to the FCC review process:

- The TTF would be comprised of a broad balance of stakeholders, much like the Rural Task Force, so that a variety of viewpoints on advanced services could be considered. Ensuring that the key stakeholders are represented is essential to the success and credibility of the TTF;
- The TTF could monitor progress on a more continuous basis than the regular review mandated by the Act;
- The TTF would have the flexibility to examine issues outside the boundaries of jurisdiction of the FCC, and if appropriate, could present observations and recommendations to other governmental and non-governmental agencies.

CECA recommends that a TTF consisting of approximately 20 members be established to advise the Commission. The TTF should include a balance of key representatives of stakeholder interests, including:

- Industry and business representatives;

- Consumer leaders;
- Payer states and payee states;
- Academics and technical experts;
- Low income advocates and ratepayer advocates.

2. Utilize a Deliberative Approach for Determining Essential Services

The 1996 Act mandates that universal service be "an evolving level of telecommunications." As such, the Federal-State Joint Board and the FCC must determine precisely *how* universal service should evolve and *what* it should evolve into. **CECA recommends that decision-makers take a deliberative approach to determining such issues as whether to include advanced services in the definition of supported services.** To guide the process of reaching a decision, CECA has developed a series of questions for the FCC and the Joint Board to explore. Those are included in Appendix 5 of the report.

3. Coordinate the National Development of Advanced Services through the USF

CECA recommends that federal, state, and local governments should engage in an effort, nationally coordinated through the Universal Service Program, to encourage deployment of advanced services in all possible venues, specifically including economic development agencies. The Universal Service Program is a valuable asset in the provision of telecommunications services to Americans, and is also excellently positioned to oversee, plan, and synchronize governmental efforts to create the conditions under which advanced services are deployed.

B. The Low-Income Program

CECA believes that efforts should be made to ensure that the maximum number of low-income individuals are served by the Low-Income program. The recommendations below are intended to enhance the operational effectiveness of the program and encourage broader outreach efforts.

4. Use "Star" States as Benchmarks for Low Income Policies

The less than optimal penetrations rates suggest that most states could work more efficiently to ensure that Low Income support goes to all those who are in need. While state officials acknowledge that the Lifeline and Link-up programs are not benefiting a great number of eligible low income households, some states have policies that result in better targeting and support for households that are in need of assistance. **CECA recommends that the FCC examine the various state programs and determine which state policies can be held up as models for other states to adopt or replicate.**

A nationwide benchmark, such as the standard used in Vermont—where a flat threshold of 175 percent of the poverty line is used to determine who is eligible and then all eligible households are automatically enrolled into the system—can reduce the guesswork and produce clear numbers for state regulators.

5. Create a Compendium of Successful Outreach Tools

Even when states can determine more precise numbers of eligible households for Low Income support, a problem remains that many of those households may not realize that support is available. Publicizing this support is a requirement for Eligible Telecommunications Carrier (ETC) status, but it is not clear what the best means of publicizing might be. Currently, efforts to inform eligible individuals takes the form of:

- Bill stuffers from carriers;
- Television, radio, and print commercials;
- Information detailed on tax returns;
- Door to door, literally extending the message by word of mouth;
- Through web pages, such as the CALLS website;
- Information distributed through educational and social service agencies;
- Direct mailing to qualified customers.

This list gives examples of the variety of techniques available for making the program known to those hardest to reach. **CECA recommends that the FCC create a compendium of public education and outreach methods currently being used, along with an objective summary of the merits and limitations of each method.** This compendium can then be available to state regulators who wish to compare the methods used in their states with other demographically similar states.

C. Streamline ETC Certification Procedures

CECA believes that the goal of the Act—to introduce competition—will be enhanced if the ETC certification process is made most efficient, if undue delays are avoided, and if ease of certification is improved, thereby better enabling new entrants to compete. CECA acknowledges that many states have gained sufficient experience with the process over the past four years so as to have substantially accomplished streamlining. **CECA recommends that federal and state regulators, with the input of interested small carriers, continue to oversee progress in this area to ensure a technology-neutral and carrier-neutral approach to competition.**

VIII. Further Observations

The Forum identified several additional issues that are still in need of attention. The following observations are provided to help guide the debate.

A. Potential Tension Between Net Payor and Net Payee States

CECA believes that a vibrant, ubiquitous national network is in the best interest of the United States, both from an economic and a social perspective. The focus on a national network means that there will be states that contribute more financially than they receive, but ideally are rewarded by being connected to a dynamic network that would not otherwise exist.

However, CECA notes that there may be a growing tension between net payor and net payee states. Densely populated states pay more into the High-Cost program than they receive. Some from these states complain that carriers in some states receive universal services support for their overall loop costs, but are not required to offset those costs by including revenue generated by vertical or "premium" services, such as voice mail, call waiting, and call forwarding. At the same time, others have also pointed out that in programs like the Low-Income and the Schools and Libraries programs, the flow of funds goes the opposite direction, from low to high population density states. As long as the funds continue to go where they are needed, there may always be some states that are gaining slightly more than they are paying. CECA urges policymakers to emphasize the National benefits of the Universal Service Program and to take measures to reduce the tensions that may arise from payor states.

B. The Importance of Avoiding Perverse Incentives in Universal Service Support

There are concerns that the current definition of supportable services may lead to two unfortunate consequences in the deployment of telecommunications equipment:

(1) The low threshold for core services supported by the program may lead to a "race to the bottom," in which carriers deploy the cheapest plant possible to maximize the amount of support received. The concern is that without bottom limits as to load capacity (bandwidth, signal-to-noise ratio, and bit/second data capacity), the Universal Service program could in fact be supporting plant that meets the minimum requirements today, but will not be upgradeable in the future.

(2) At the other end of the spectrum, there are concerns that the program may encourage "gold plating," whereby carriers deploy the most expensive and

sophisticated plant available knowing that the program will support them. If true, this may not be the most efficient allocation of the funds, and could lead to competitive disadvantages to non-ETC carriers.

CECA believes that the bar should be raised on the minimum standards for plant deployment. CECA recommends that policymakers examine what the new minimum standards should be and how to create new standards while maintaining the principle of technology neutrality.

C. Disaggregation of Service Areas

The CECA Universal Service Forum discussed at length the idea of disaggregating service areas to allow new entrants to serve areas that best match their resources and business plans. While disaggregating (reducing the size of) the service area that a competitive ETC would have to serve would likely accelerate the introduction of competition in the most densely populated parts of rural areas, unless the support for an area is also disaggregated with the service, there runs the risk of encouraging the "cherry picking" of the lower-cost, more profitable customers by a competitor to the detriment of the incumbent. A potential solution might include disaggregating the amount of support along with the service area so that the subsidy received for a person in an area that costs less to serve would be less than the subsidy for someone in a less densely populated area.

Congress recognized that it is appropriate for States, with assistance from the FCC, to assess whether it is in the best interest of consumers to disaggregate the study area to create smaller service areas. The Act clearly intends to ensure that specific rural areas' needs and circumstances are carefully considered before any disaggregation occurs. CECA believes that this topic merits further analysis.

PART FOUR: BACKGROUND AND TECHNICAL INFORMATION

IX. Flow of Funds In and Out of the Universal Service Program

The Universal Service Fund is essentially comprised of several different programs. The Universal Service Administrative Company (USAC), a private, non-profit company, administers the USF and oversees the four divisions of the Universal Service Fund: The High Cost Division (HCD), the Low Income Division (LID), the Rural Health Care Division (RHCD) and the Schools and Libraries Division (SLD). In 1998, all four programs distributed more than $5 billion in funds to eligible recipients.[73] The National Exchange Carrier Association, Inc. (NECA) provides program support for all divisions of the program.

A. Key Institutions Involved in the Universal Service Program

1. National Exchange Carrier Association (NECA)

Formed in 1983 by the Federal Communications Commission (FCC) as a not-for-profit membership corporation, NECA[74] is governed by a board of directors elected annually by its local telephone company members. The 15-member board includes telephone company representatives as well as individuals from other areas.

One of the key responsibilities of NECA is to administer the FCC's access charge plan. Access charges are the fees that long distance companies pay to access the local phone network to complete calls and are delineated in tariffs filed with the FCC by or on behalf of local telephone companies. Above cost access charges have provided an implicit subsidy used to meet universal service goals.

2. Universal Service Administrative Company (USAC)

The Universal Service Administrative Company (USAC) is a private, not for profit corporation that is responsible for administering the federal funds intended to provide every state and territory in the United States with access to affordable telecommunications services through the federal Universal Service program. Carriers serving high cost areas, low-income neighborhoods, as well as rural health care providers, public and private schools and public libraries, are eligible to seek support from the Universal Service program.

B. Description of How the Revenues Are Collected

USAC is responsible for collecting mandatory contributions to the universal service support mechanisms, and for disbursing universal service support funds to all eligible entities.[75] For the year 2000, USAC will have billed and collected approximately $4.5

[73] http://www.universalservice.org.
[74] http://www.neca.org.
[75] This section replicates and otherwise relies on materials provided by USAC with its consent.

billion from more than 2,400 telecommunications carriers, and USAC will distribute approximately $4.4 billion to program participants (See Appendices 1 and 2). In 1999, USAC billed and collected approximately $3.9 billion, and distributed more than $3.6 billion. The USAC collects funds from contributing telecommunications service providers in accordance with FCC regulations under rules adopted by the FCC pursuant to the Telecommunications Act of 1996. Section 54.709(a) of the Commission's rules set forth the specific method of computation for contributions to the Universal Service program.

FCC rules provide that contributions to the universal service support mechanisms shall be based on contributors' end-user interstate telecommunications revenues, using a contribution factor determined quarterly by the Commission based on information submitted by USAC (see Table Six). USAC collects revenue data twice each year from more than 5,000 service providers to meet this requirement. To accomplish this task USAC distributes more than 5,000 forms every six months to interstate telecommunications carriers. USAC then collects, verifies, and summarizes the interstate and international industry revenue reported from the past six months by the carriers. USAC collects revenue data for the first six months of the year at the beginning of September and revenue for the entire previous year at the beginning of April. The data reported in September are subtracted from the data reported in April to capture just the final six months of the year.

The Commission bases the quarterly universal service contribution factor on the ratio of total projected quarterly expenses of the universal service support mechanisms to total end-user telecommunications revenues. USAC files its projection of quarterly expenses approximately two months before the beginning of a quarter. The Commission then has opportunity to review the filing and approve, modify, or reject the filing. USAC develops the projected expenses through various methodologies unique to each support mechanism. Current projections exceed $1.3 billion per quarter.

Thus, contributions are the product of a contributor's end-user telecommunications revenues multiplied by a quarterly contribution factor that is equal to the ratio of total projected quarterly expenses of the universal service support mechanisms to total end-user telecommunications revenues.

Table Six: Universal Service Contribution Factors 1998-2001

	Total Industry Revenue Factor*	Interstate and International Revenue Factor
1Q98	0.7200%	3.1900%
2Q98	0.7600%	3.1400%
3Q98	0.7500%	3.1400%
4Q98	0.7500%	3.1800%
1Q99	0.5800%	3.1800%
2Q99	0.5700%	3.0500%
3Q99	0.9900%	2.9400%
4Q99 - Oct.	1.1000%	2.8870%
4Q99 - Nov. & Dec.	-	5.8995%
1Q00	-	5.8770%
2Q00	-	5.7101%
3Q00	-	5.5360%
4Q00	-	5.6688%
1Q01	-	6.6827%

Source: USAC

* Funding for the schools and libraries program included intrastate revenues until a 5th Circuit Court of Appeals decision in 1999 determined that intrastate revenues could not be used for federal programs.

C. Description of How Funds Are Disbursed

1. The High Cost Support Mechanism

The High Cost Support Mechanism enables eligible carriers in areas with very high costs to recover some of those costs from the support mechanisms, leaving the remainder of the costs to be recovered through end-user rates and, in some cases, state universal service funds. In this manner, the High Cost Support Mechanism is intended to hold down rates and thereby preserve and advance universal telephone service. The High Cost Support Mechanism provides support to eligible telecommunications service providers to help ensure that the services offered and rates paid by Americans living in rural or remote areas for telecommunications services are reasonably comparable to the services offered and prices charged to those living in more densely populated areas. Costs in rural areas may be higher for a variety of reasons including geographic dispersion and the need for specialized equipment in order to provide basic service. Insular areas are also included because these areas face similar challenges to providing basic service and experience high costs. Some of these areas, for example, are surrounded by hundreds of miles of ocean or have unusual topography and unique weather patterns.[76]

[76] "Rural Task Force Mission and Purpose," White Paper 1, September 1999, page 14 (http://www.wutc.wa.gov/rtf).

To be eligible to receive support, a common carrier must be designated an eligible telecommunications carrier (ETC) by a state commission or the FCC in accordance with Subpart F of the Commission's Part 36 rules and Subpart D of its Part 54 rules. Qualified ETCs are entitled to receive funds from the High Cost Support Mechanism. As the administrator of the High Cost Support Mechanism, USAC must collect contributions, determine the amount of support that can be made available to eligible service providers, and distribute funds, all in accordance with FCC regulations. In CY 1998 and again in CY 1999, the USF distributed more than $1.7 billion to companies who serve customers in high cost areas. For calendar year 2000 USAC projects approximately $2.1 billion will be distributed to companies who serve customers in high cost areas.

There are five components to the High Cost Support Mechanism:

1. High Cost Loop (HCL) support deals with non-traffic sensitive "local loop costs," a term that refers to the costs of outside telephone wires, poles, and other facilities that link each telephone customer's premises to the public switched telephone network. The HCL support mechanism provides support for the cost for the "last mile" of connection for rural companies. The non-traffic sensitive costs are allocated between the state and interstate jurisdictions because all local loops can be used for making and receiving both intrastate and interstate telephone calls. Historically, a 25 percent allocation of the non-traffic sensitive cost was made to the interstate jurisdiction using the Subscriber Plant Factor (SPF). The average total cost per loop, however, varies significantly among carriers. HCL support allows rural carriers with an average total cost per loop in excess of 115 percent of the national average to have between 90 percent and 100 percent of those excess costs recovered by HCL support (after consideration of the 25 percent Gross Allocation). Non-rural carriers have transitioned to the FCC proxy cost model support system.

2. Local Switching Support (LSS) helps cover the high switching costs for companies that serve fewer than 50,000 customers. Previously a multiplication factor was used in the dial equipment minute interstate access rates (Dial Equipment Minutes, or DEM weighting) of these small carriers. The Commission eliminated that implicit subsidy in access charges and established LSS so those carriers would recover a portion of their costs through an explicit universal service mechanism.

3. Long Term Support (LTS) helps offset interstate access charges for rural and non-rural companies. LTS provides support to the members of the National Exchange Carrier Association common line pool, to allow them to charge a below-cost carrier common line access rate that is uniform for all companies in the pool. The amount of LTS that a carrier is eligible to receive is the prior year level of LTS adjusted for change in the Gross Domestic Product-Chain Price Index (GDP-CPI).

4. High Cost Model Support (HCM) is based on the forward-looking costs of providing supported services as determined by a computer generated model of non-rural carrier's telephone service area. For each state, the cost model calculates the wire center average forward-looking cost per line incurred by non-rural carriers to

provide supported services. These wire center average costs are then averaged at the statewide level to determine the statewide average forward-looking cost per line. HCM provides support to non-rural carriers in those states that have a statewide average forward-looking cost per line greater than the national benchmark, which is set at 135 percent of the national average forward-looking cost per line. A hold-harmless element provides for a phased elimination of the non-rural carrier support received under the HCL or LSS elements.

5. Interstate Access Support (IAS) helps offset interstate access charges for Price Cap companies. Like LTS, the purpose of IAS is to provide explicit support to ensure reasonably affordable interstate rates. IAS provides support to Price Cap carriers serving lines in areas where they are unable to recover their permitted revenues from the newly revised subscriber line charges. The support is fixed at an aggregate annual amount of $650 million. IAS is targeted to the density zones that have the greatest need for it.

All High Cost Support is provided on a portable, per-line basis, and available on a competitively neutral basis to any eligible telecommunications carrier serving a supported customer, regardless of the technology used by that carrier.

2. The Low Income Support Mechanism

Following the breakup of AT&T in 1984, the federal government developed a plan to recover the high costs associated with the local telephone network in a competitive environment. At the time, it was determined that some of these costs would be recovered using a Subscriber Line Charge (SLC), which was charged to local telephone customers. Policymakers became concerned that this charge would make local service unaffordable for low-income consumers and introduced the Lifeline program to assist these consumers.[77] Initially, the Lifeline program offered a 50 percent reduction in monthly local service charges for customers who satisfied a means test (determined by the state commission). The program was later expanded in 1985 to cover twice the SLC, which amounts to $7.00 per line in federal support today, not including any matching state contributions which can bring the assistance to as much as $10.50 per bill.[78]

The Link-Up program followed in 1987, which provides assistance for up to half of the first $60 of the connection fee for local service. The Link-Up program is also a means-tested program. Together, Lifeline and Link-Up comprise a $500 million program, known

[77] "Preparation for Addressing Universal Service Issues: A Review of Current Interstate Support Mechanisms," Federal Communications Commission, Common Carrier Bureau, February 1996. The report points out that FCC and Census Bureau studies later indicated that subscribership had not declined following implementation of the SLC. The program was retained, however, and the focus shifted from amelioration of the effects of a single charge to the active expansion of telephone service to low-income households.

[78] McConnaughey, J., "Universal Service and the National Information Infrastructure (NII): Making the Grade on the Information Superhighway," 1999.

as the Low Income program, which is funded by contributions from interstate telecommunications companies that provide interstate services, as this has been defined by the Telecommunications Act of 1996. All states and telecommunications carriers who are receiving universal service funds are required to offer the Lifeline program to their qualifying customers. In April 2000, President Clinton and the FCC announced a plan to increase the funding of the Lifeline program to provide basic telephone service to Native Americans living on reservations for as little as $1.00 per month.[79]

In 1998, nearly $470 million in support was extended to low-income consumers, and in 1999 nearly $480 million. In 2000 support grew based on revisions to interstate access charges for Price Cap companies and the additional support for providing discounted service to low-income consumers on Tribal Lands. Low Income support exceeded $553 million in 2000.

There are four components to the Low Income Support Mechanism:

1. Lifeline support reimburses local service providers for providing discounted telephone charges to eligible subscribers. Lifeline support enables low-income customers to save at least $5.25 per month and up to $7 per month on their telephone bills. Consumers may also qualify for an additional $3.50 per month in matching support from their state;

2. Link-Up support reimburses local service providers for providing discounted connection charges to eligible low-income consumers. Customers qualifying for Link-Up support are eligible to save up to 50 percent on installation fees (not exceeding $30);

3. Toll Limitation Service support compensates local service providers for costs incurred in establishing the toll limitation service for the low-income subscriber. Service providers are required to offer toll limitation service at no cost to the low income consumer; and

4. PICC support reimburses interstate Presubscribed Interexchange Carrier Charges to local service providers in instances where the low-income subscriber has selected toll limitation service. PICC support ended in July 2000, coincident with an increase to the Lifeline support for Price Cap carriers.

Low Income Support will continue to grow to provide additional support to low-income customers living on reservations. The FCC's Tribal Lands order[80] enhances Low Income Support in the following ways:

---

[79] "FCC Chairman Kennard and Commissioner Gloria Tristani Joined President Clinton in Announcing a Plan to Provide Local Phone Service for $1 a Month In Indian Country," *FCC News Release*, April 17, 2000. The Release noted that the Navajo Reservation, for example, has one of the lowest telephone penetration rates—just 22 percent of households have telephone service.

[80] 12th Report and Order, Memorandum Opinion and Order and Second Further Notice of Proposed Rulemaking, CC Docket 96-45, FCC 00-208, (adopted June 8, 2000).

- An increase in the discount off the local phone bill that eligible low-income consumers on reservations can receive under the current federal Lifeline program of $25. Under the new rules, carriers may receive between $30.25 - $32.85 per subscriber per month in USF support, depending on various factors such as state matching.

- An increase in the assistance available for the cost of initiating service provided under the current Link-Up program by $70 to a total of $100 per customer. This will reduce the initial connection charges and line extension costs associated with initiating phone service to income eligible customers on tribal lands.

- Broader consumer qualification criteria for Lifeline and Link-Up so that means-tested, or income-based programs in which low-income tribal members are more likely to participate in are included.

3. The Rural Health Care Support Mechanism

Health care providers located in rural areas throughout the United States are increasingly turning to advanced communications technologies to provide telehealth services to patients. The Rural Health Care Support Mechanism, created by the 1996 Act, was designed to ensure that these health care providers pay no more than their urban counterparts to use these and other advanced technologies in providing health care services to their patients.

The Rural Health Care Support Mechanism supports monthly telecommunications charges, installation charges, and long-distance Internet connection charges. Eligible rural health care providers must be either public or not-for-profit to obtain support from the support mechanism, and must be:

- Post-secondary educational institutions offering health care instruction, teaching hospitals, and medical schools;
- Community health centers or health centers providing care to migrants;
- Local health departments or agencies;
- Community mental health centers;
- Not-for-profit hospitals;
- Rural health clinics; or
- Consortia of health care providers consisting of one or more entities described above.

The burgeoning communications and information technologies now available to health care providers are streamlining the process of information sharing among health care practitioners. By making telehealth available to even the smallest and most remote health

care providers, universal service support helps to make health care efficient, effective, and comprehensive, regardless of where the health care is administered. Carriers receive support from the program to offset higher rural rates resulting in more than $5.4 million in reduced telecommunication cost to Health Care facilities with $4.9 million of support in 2000.

4. The Schools and Libraries Support Mechanism

The Schools and Libraries Support Mechanism—often called the "E-rate"—was also created by the 1996 Act, and provides support for eligible schools and libraries to help offset the cost of advanced telecommunications services. Eligible schools and libraries receive discounts ranging from 20 to 90 percent on the following services:

- Telecommunications services, including local and long-distance service
- Internet access
- "Internal connection" projects such as wiring and networking schools and libraries to facilitate the use of advanced telecommunications technology.

The range of discounts available to schools and libraries corresponds to the income level of students in their community (eligibility for the federal school lunch program), and whether their location is urban or rural (See Table Seven). Income for a school or district is measured by the percentage of students eligible for the National School Lunch Program (NSLP) administered by the United States Department of Agriculture:

Table Seven: E-Rate Discounts

If the percentage of students that qualify for the NSLP is:	*…and the school or library is in an urban area, the E-rate discount will be:*	*...and the school or library is in a rural area, the E-rate discount will be:*
Less than 1%	20%	25%
1% to 19%	40%	50%
20% to 34%	50%	60%
35% to 49%	60%	70%
50% to 74%	80%	80%
75% to 100%	90%	90%

Source: USAC

Applicants must develop an approved "technology plan" outlining how advanced technologies or discounts on existing technologies will help them in their day-to-day operations or in fulfilling the goals of their organizations. Providing these connections affords students and library patrons the same access to high technology and near-instant information and resources that once could only be found at the university level. In 1999, service providers received more than $1.355 billion in support, and in 2000 more than $1.678 billion was provided to service providers to offset charges to schools and libraries.

Appendix 1: Projected Disbursements To Service Provider Type 1998 – 2000

	Support Disbursed in 1998	Support Disbursed in 1999	Support Projected in 2000	Total Support
Competitive Access Provider				
High Cost		534,012.00	1,793,570.00	2,327,582.00
Low Income	131,573.00	725,800.00	1,155,470.18	2,012,843.18
Schools & Libraries		13,393,414.89	18,092,452.04	31,485,866.93
Total Disbursed	131,573.00	14,653,226.89	21,041,492.22	35,826,292.11
Cellular/Wireless Provider				
Schools & Libraries		5,273,515.42	5,935,873.19	11,209,388.61
Total Disbursed		5,273,515.42	5,935,873.19	11,209,388.61
DAT				
Schools & Libraries		1,861,679.02	1,941,707.13	3,803, 386.15
Total Disbursed		1,861,679.02	1,941,707.13	3,803,386.15
Internet Service Provider				
Schools & Libraries		75,496,452.32	85,751,838.96	161,248,291.28
Total Disbursed		75,496,452.32	85,751,838.96	161,248,291.28
Inter-Exchange Carrier				
Schools & Libraries		42,880,448.58	45,607,323.01	88,487,771.59
Total Disbursed		42,880,448.58	45,607,323.01	88,487,771.59
Local Exchange Carrier				
High Cost	1,691,667,972.00	1,720,203,432.00	2,687,296,835.00	6,099,168,239.00
Low Income	380,493,988.00	487,254,839.00	552,087,232.36	1,419,836,059.36
Schools & Libraries		465,322,469.50	442,933,525.24	908,255,994.74
Rural Health Care		544,490.61	4,875,264.44	5,419,755.05
Total Disbursed	2,072,161,960.00	2,673,325,231.11	3,687,192,857.04	8,432,680,048.15
Local Reseller				
Schools & Libraries		7,055,244.53	4,835,838.60	11,891,083.13
Total Disbursed		7,055,244.53	4,835,838.60	11,891,083.13
Non-Traditional Provider				
Schools & Libraries		690,457,309.93	799,182,926.28	1,489,640,236.21
Total Disbursed		690,457,309.93	799,182,926.28	1,489,640,236.21
OSP				
Schools & Libraries		37,817.52	46,189.77	84,007.29
Total Disbursed		37,817.52	46,189.77	84,007.29
OTHL				
Schools & Libraries		24,842,195.50	36,257,809.85	61,100,005.35
Total Disbursed		24,842,195.50	36,257,809.85	61,100,005.35
OTHM				
Schools & Libraries		12,153.76		12,153.76
Total Disbursed		12,153.76		12,153.76

Appendix 1 (Con't)

	Support Disbursed in 1998	Support Disbursed in 1999	Support Projected in 2000	Total Support
OTHT				
Schools & Libraries		530,445.35	298,723.22	829,168.57
Total Disbursed		530,445.35	298,723.22	829,168.57
Paging Company				
Schools & Libraries		1,027,056.02	1,106,756.98	2,133,813.00
Total Disbursed		1,027,056.02	1,106,756.98	2,133,813.00
Payphone Provider				
Schools & Libraries		145,702.10	958,817.94	1,104,520.04
Total Disbursed		145,702.10	958,817.94	1,104,520.04
PRE				
Schools & Libraries		26,702.12	4,699.44	31,401.56
Total Disbursed		26,702.12	4,699.44	31,401.56
PRIV				
Schools & Libraries		20,164,148.08	23,805,400.96	43,969,549.04
Total Disbursed		20,164,148.08	23,805,400.96	43,969,549.04
Satellite Carrier				
Schools & Libraries		1,209,649.45	876,216.42	2,085,865.87
Total Disbursed		1,209,649.45	876,216.42	2,085,865.87
SMR				
Schools & Libraries		660,451.24	340,914.23	1,001,365.47
Total Disbursed		660,451.24	340,914.23	1,001,365.47
TEN				
Schools & Libraries		272,860.61	95,576.97	368,437.58
Total Disbursed		272,860.61	95,576.97	368,437.58
Toll Reseller				
Schools & Libraries		5,649,130.06	4,657,499.79	10,306,629.85
Total Disbursed		5,649,130.06	4,657,499.79	10,306,629.85
No Designation				
Schools & Libraries		1,260,310.87	231,172.72	1,491,483.59
Total Disbursed		1,260,310.87	231,172.72	1,491,483.59

TOTALS				
High Cost	1,691,667,972.00	1,720,737,444.00	2,689,090,405.00	6,101,495,821.00
Low Income	380,625,561.00	487,980,639.00	553,242,702.55	1,421,848,902.55
Schools & Libraries	0.00	1,357,579,156.87	1,472,961,262.74	2,830,540,419.61
Rural Health Care	0.00	544,490.61	4,875,264.44	5,419,755.05
Total Disbursed	**2,072,293,533.00**	**3,566,841,730.48**	**4,720,169,634.73**	**10,359,304,898.21**

Source: USAC

Appendix 2: Contributions By Service Provider Type 1998 – 2000

	Billed in 1998	Billed in 1999	Billed in 2000	Total Billing
Competitive Access Provider				
High Cost	9,646,030.86	17,243,053.96	32,669,715.64	59,558,800.46
Low Income	2,765,114.48	4,887,888.53	7,724,068.10	15,377,071.11
Schools & Libraries	6,498,925.59	15,854,869.74	24,820,485.81	47,174,281.14
Rural Health Care	508,901.97	32,224.00	138,503.22	679,629.19
Total Disbursed	19,418,972.90	38,018,036.23	65,352,772.77	122,789,781.90
Cellular/Wireless Provider				
High Cost	45,662,105.47	82,156,207.58	145,999,088.88	273,817,401.93
Low Income	13,086,860.51	23,271,692.26	34,055,639.43	70,414,192.20
Schools & Libraries	188,697,086.33	229,417,995.46	105,113,255.78	523,228,337.57
Rural Health Care	14,790,536.07	208,166.32	553,876.85	15,552,579.24
Total Disbursed	262,236,588.38	335,054,061.62	285,721,860.94	883,012,510.94
DAT				
High Cost	158,151.06	188,226.20	365,388.42	711,765.68
Low Income	45,282.24	53,934.12	85,833.72	185,050.08
Schools & Libraries	55,084.80	256,281.94	270,198.81	581,565.55
Rural Health Care	4,402.38	300.48	1,471.05	6,173.91
Total Disbursed	262,920.48	498,742.74	722,892.00	1,484,555.22
Internet Service Provider				
Total Disbursed	0.00	0.00	0.00	0.00
Inter-Exchange Carrier				
High Cost	1,276,448,111.61	1,230,263,318.93	1,551,217,870.94	4,057,929,301.48
Low Income	365,842,996.57	353,612,262.18	365,259,113.39	1,084,714,372.14
Schools & Libraries	483,691,787.59	703,131,073.16	1,158,535,645.42	2,345,358,506.17
Rural Health Care	37,972,692.81	1,236,565.44	6,369,308.28	45,578,566.53
Total Disbursed	2,163,955,588.58	2,288,243,219.71	3,081,381,938.03	7,533,580,746.32
Local Exchange Carrier				
High Cost	240,438,220.62	273,923,045.85	352,717,323.90	867,078,590.37
Low Income	68,915,439.41	78,611,324.24	83,469,707.10	230,996,470.75
Schools & Libraries	531,892,168.72	549,556,914.02	268,960,078.39	1,350,409,161.13
Rural Health Care	41,720,471.83	497,728.94	1,508,120.84	43,726,321.61
Total Disbursed	882,966,300.58	902,589,013.05	706,655,230.23	2,492,210,543.86
Local Reseller				
High Cost	1,334,654.98	2,341,461.64	2,393,009.94	6,069,126.56
Low Income	382,561.41	667,552.80	532,026.65	1,582,140.86
Schools & Libraries	1,634,685.93	2,721,388.90	1,318,923.77	5,674,998.60
Rural Health Care	127,958.14	2,404.76	9,515.42	139,878.32
Total Disbursed	3,479,860.46	5,732,808.10	4,253,475.78	13,466,144.34
Non-Traditional Provider				
Total Disbursed	0.00	0.00	0.00	0.00

Appendix 2 (Con't)

	Billed in 1998	Billed in 1999	Billed in 2000	Total Billing
OSP				
High Cost	6,699,467.50	6,752,778.20	6,511,348.24	19,963,593.94
Low Income	1,920,569.57	1,920,292.58	1,525,237.82	5,366,099.97
Schools & Libraries	3,588,085.09	4,768,846.96	5,088,168.09	13,445,100.14
Rural Health Care	280,721.75	-29,227.77	31,564.20	283,058.18
Total Disbursed	12,488,843.91	13,412,689.97	13,156,318.35	39,057,852.23
OTHL				
High Cost	238,533.81	226,503.58	282,002.07	747,039.46
Low Income	68,381.49	64,846.25	67,529.01	200,756.75
Schools & Libraries	285,352.02	150,446.16	225,603.81	661,401.99
Rural Health Care	22,598.58	254.41	1,319.49	24,172.48
Total Disbursed	614,865.90	442,050.40	576,454.38	1,633,370.68
OTHM				
High Cost	3,371,827.74	4,154,627.03	2,958,367.87	10,484,822.64
Low Income	966,559.11	1,196,880.35	708,036.39	2,871,475.85
Schools & Libraries	1,047,135.03	2,166,379.52	2,407,321.72	5,620,836.27
Rural Health Care	81,952.89	4,938.14	14,549.87	101,440.90
Total Disbursed	5,467,474.77	7,522,825.04	6,088,275.85	19,078,575.66
OTHT				
High Cost	2,537,610.12	2,490,256.07	2,642,306.22	7,670,172.41
Low Income	727,362.00	718,949.59	621,606.83	2,067,918.42
Schools & Libraries	859,949.04	1,267,659.07	1,939,149.05	4,066,757.16
Rural Health Care	67,403.52	2,176.95	10,866.27	80,446.74
Total Disbursed	4,192,324.68	4,479,041.68	5,213,928.37	13,885,294.73
Paging Company				
High Cost	6,902,275.78	7,482,414.89	8,906,678.29	23,291,368.96
Low Income	1,978,684.10	2,140,833.99	2,105,347.29	6,224,865.38
Schools & Libraries	16,217,611.10	18,005,039.30	6,702,800.14	40,925,450.54
Rural Health Care	1,270,500.37	7,209.51	38,991.01	1,316,700.89
Total Disbursed	26,369,071.35	27,635,497.69	17,753,816.73	71,758,385.77
Payphone Provider				
High Cost	1,497,335.82	1,920,883.73	2,600,348.12	6,018,567.67
Low Income	429,209.07	546,980.79	608,351.09	1,584,540.95
Schools & Libraries	4,252,985.46	5,695,521.04	1,883,137.00	11,831,643.50
Rural Health Care	332,881.92	-11,517.74	10,129.46	331,493.64
Total Disbursed	6,512,412.27	8,151,867.82	5,101,965.67	19,766,245.76
PRE				
High Cost	9,943,054.49	14,162,233.54	16,956,175.30	41,061,463.33
Low Income	2,850,382.22	4,036,433.50	3,929,978.54	10,816,794.26
Schools & Libraries	3,106,391.08	7,992,225.22	12,717,354.64	23,815,970.94
Rural Health Care	243,089.84	-9,001.74	74,721.75	308,809.85
Total Disbursed	16,142,917.63	26,181,890.52	33,678,230.23	76,003,038.38

Appendix 2 (Con't)

	Billed in 1998	Billed in 1999	Billed in 2000	Total Billing
PRIV				
High Cost	1,551,828.60	2,253,212.83	3,702,515.59	7,507,557.02
Low Income	444,979.56	640,450.23	901,551.76	1,986,981.55
Schools & Libraries	590,688.06	1,283,858.05	2,803,332.11	4,677,878.22
Rural Health Care	46,078.62	9,948.54	14,112.45	70,139.61
Total Disbursed	2,633,574.84	4,187,469.65	7,421,511.91	14,242,556.40
Satellite Carrier				
High Cost	2,528,416.25	2,131,538.46	2,400,257.00	7,060,211.71
Low Income	724,979.21	610,018.89	552,507.37	1,887,505.47
Schools & Libraries	725,503.64	1,167,801.12	1,890,663.95	3,783,968.71
Rural Health Care	56,550.41	-3,170.97	8,730.02	62,109.46
Total Disbursed	4,035,449.51	3,906,187.50	4,852,158.34	12,793,795.35
SMR				
High Cost	129,527.22	127,877.55	201,119.88	458,524.65
Low Income	37,118.67	36,476.82	47,038.98	120,634.47
Schools & Libraries	414,896.85	617,417.75	145,982.04	1,178,296.64
Rural Health Care	32,485.50	475.78	780.12	33,741.40
Total Disbursed	614,028.24	782,247.90	394,921.02	1,791,197.16
TEN				
High Cost	1,206,665.97	1,072,021.17	969,946.05	3,248,633.19
Low Income	345,856.62	308,014.29	231,402.39	885,273.30
Schools & Libraries	603,330.72	823,306.82	764,712.54	2,191,350.08
Rural Health Care	47,351.52	926.76	4,406.34	52,684.62
Total Disbursed	2,203,204.83	2,204,269.04	1,970,467.32	6,377,941.19
Toll Reseller				
High Cost	88,488,587.34	98,583,398.08	117,010,670.39	304,082,655.81
Low Income	25,364,016.09	28,194,560.72	27,430,235.33	80,988,812.14
Schools & Libraries	38,457,402.46	64,940,371.06	87,990,415.98	191,388,189.50
Rural Health Care	3,018,031.34	43,248.21	466,498.24	3,527,777.79
Total Disbursed	155,328,037.23	191,761,578.07	232,897,819.94	579,987,435.24
No Designation				
Total Disbursed	0.00	0.00	0.00	0.00
TOTALS				
High Cost	1,698,782,405.24	1,747,473,059.29	2,250,504,132.74	5,696,759,597.27
Low Income	486,896,352.33	501,519,392.13	529,855,211.19	1,518,270,955.65
Schools & Libraries	1,282,619,069.51	1,609,817,395.29	1,683,577,229.05	4,576,013,693.85
Rural Health Care	100,624,609.46	1,993,650.02	9,257,464.88	111,875,724.36
Total Disbursed	**3,568,922,436.54**	**3,860,803,496.73**	**4,473,194,037.86**	**11,902,919,971.13**

Glossary of Acronyms for Appendices 1 and 2

TEN Shared Tenant Service Provider - manages or owns a multi-tenant location that provides telecommunications services or facilities to the tenants for a fee.

PAY Payphone Service Provider - provides customers access to telephone networks through pay telephone equipment, special teleconference rooms,etc. Payphone service providers are also referred to as pay telephone aggregators.

PRIV Private Service Providers - offers telecommunications to others for a fee. This would include a company that offers excess capacity on a private system that is used primarily for internal purposes.

LEC Incumbent LEC - provides local exchange service. An incumbent local exchange carrier (ILEC) generally is a carrier that was at one time franchised as a monopoly service provider.

CAP CAP/CLEC (Competitive Access Provider/Competitive Local Exchange Carrier) - competes with incumbent LEC's to provide local exchange services or telecommunications services that link customers with interexchange facilities, local exchange networks, or other customers.

LRES Local reseller - provides local exchange or fixed telecommunications services by reselling services of other carriers.

CEL Cellular/PCS/SMR (Cellular, Personal Communications Service and Specialized Mobile Radio service providers) - primarily provides wireless telecommunications services (wireless telephony). This category includes the provision of wireless telephony by resale. An SMR provider would select thiscategory if it primarily provides wireless telephony rather than dispatch or other mobile services.

PAG Paging and Messaging - provide wireless paging or wireless messaging services. This category includes the provision of paging and messaging services by resale.

DAT Wireless Data - provides mobile or fixed wireless data services using wireless technology. This category includes the provision of wireless data services by resale.

IXC IXC (Interexchange Carrier) - provides long distance telecommunications services substantially through switches or circuits that it owns or leases.

TRES Toll Reseller - provides long distance telecommunications services primarily by reselling the long distance telecommunications services of other carriers.

OSP OSP (Operator Service Provider) - companies other than incumbent LEC's that serve customers needing the assistance of an operator to complete calls, or needing alternate billing arrangements.

SAT Satellite - provides satellite space segment or earth stations that are used for telecommunications service.

PRE Pre-paid Card - provides pre-paid calling card services by selling pre-paid calling cards to the public or to retailers. Pre-paid card providers typically resell the toll service of other carriers and determine the price of the service by setting the price of the card and controlling the number of minutes that the card can be for.

SMR SMR (dispatch) (Specialized Mobile Radio service provider) – primarily provides dispatch and mobile services other than wireless telephony.

OTHL Other Local - telecommunication companies that provide local service and do not conform to one of the above categories.

OTHM Other Mobile - telecommunication companies that provide mobile service and do not conform to one of the above categories.

OTHT Other Toll - telecommunication companies that provide toll service and do not conform to one of the above categories.

ISP Internet Service Provider - providers of access to the Internet.

NTP Non-traditional Provider - if you are a company that does not provide telecommunication services.

Appendix 3: Per Line USF Recovery Analysis

An Illustrative Example Using 1999 Lines

	Number of Lines (Millions)	Charge per Line per Month ($0.75)	Charge per Line per Month ($1.00)	Charge per Line per Month ($1.25)
A. Residential Subscribers – Wireline				
Primary and Non-Primary	109.672	$0.75	$1.00	$1.25
Lifeline (exempt from charge)	5.558	$0.00	$0.00	$0.00
B. Business Subscribers – Wireline				
Single Line	4.325	$0.75	$1.00	$1.25
Multi Line	**54.923**	**$2.75**	**$2.31**	**$1.86**
*Special Access**	**53.234**	**$2.75**	**$2.31**	**$1.86**
C. Residential Subscribers – Wireless				
Cellular, PCS, Hybrid	52.887	$0.75	$1.00	$1.25
Pagers	6.853	$0.25	$0.25	$0.25
D. Business Subscribers – Wireless				
Cellular, PCS, Hybrid	24.517	$0.75	$1.00	$1.25
Pagers	34.682	$0.25	$0.25	$0.25
Industry Annual USF Obligation	$5,415.2	1st Qr 2001 Annualized	1st Qr 2001 Annualized	1st Qr 2001 Annualized
Residential/Small Business Share		**34.1%** **$1,847,200**	**44.7%** **$2,421,400**	**55.3%** **$2,995.6**
Business (Non-Single Line) Share		**65.9%** **$3,568,000**	**55.3%** **$2,993,800**	**4.7%** **$42,419.6**

*Voice-grade equivalents account for digital circuits on a traditional access line basis.

Note: This analysis provides a general estimate of the business subscribers' multi-line and special access per line charges based on fixed charges of all other lines. To be more accurate, the analysis would need to be refined to incorporate estimated 2001 lines, Centrex/PBX equivalency for multi-line business, and digital/analog equivalency for other lines.

Appendix 3 (Con't)

Type of Lines:	Number of Lines: (In Millions)	Data Source:
Residential Switched Access Lines	**115.230**	Table 4.10, SOCC released August 11, 2000 [Total Residential]
Residential -- LIFELINE	**5.558**	Table 2.19, SOCC released August 11, 2000 [Residence Lifeline]
Residential -- Non-Lifeline	**109.672**	Derived
Household with Telephone	**99.100**	Table 5.2, SOCC released August 11, 2000 [Household with Telephones as of November 1999]
Business Switched Access Lines	**57.446**	Table 4.10, SOCC released August 11, 2000 [Total Business]
Single Business Lines	**4.325**	Table 2.19, SOCC released August 11, 2000 [Business Single Line]
Business Multi Line	**53.121**	Derived
Business Multi Line plus Payphone	**54.923**	Payphone= 1.803 M, from Table 4.10 of SOCC, August 11, 2000
Special Access Lines	**53.234**	Table 4.10, SOCC released August 11, 2000 [Total Special Access Lines]
Cellular, PCS, and Hybrid Wireless Subscribers -- TOTAL	**77.404**	Table 6, US Cellular, PCS, and Hybrid Consumer & Business Subscribers; US Wireless Services and Devices Market Assessment, 1999-2004, IDC [www.idc.com]
-- CONSUMER	**52.887**	
-- BUSINESS	**24.517**	
Paging Subscribers -- TOTAL	**41.535**	Table 19, US Consumer & Business Paging Subscribers; US Wireless Services and Devices Market Assessment, 1999-2004, IDC [www.idc.com]
-- CONSUMER	**6.853**	
-- BUSINESS	**34.682**	

Appendix 4: How Change in the Contribution Base Impacts USF Factors

An Illustrative Example Using Historical Data

1st Quarter 2001 Program Costs ($ millions):	
Schools, Libraries, and RHC	$ 528.550
High Cost and Low Income*	$ 825.245
All Programs	$ 1,353.795
Year 1999 Contribution Base ($ millions):	
Intrastate- All Filers	$ 135,903
Interstate and International	$ 79,861
Intrastate, Interstate, and International	$ 215,764

Uncollectibles to adjust contribution bases	1%
Projected Contribution Factors Using 1999 Contribution Base and 2001 Program Costs -- All Programs on Same Base	
All Programs on Interstate & International Contribution Base	**6.85%**
All Programs on Intrastate, Interstate, and International Contribution Base	**2.54%**

* Includes CALLS Access USF Fund

Note: This analysis uses a 1999 contribution base, as it was prepared before the 2000 contribution base figures were available. Using Year 2000 figures would alter the results slightly.

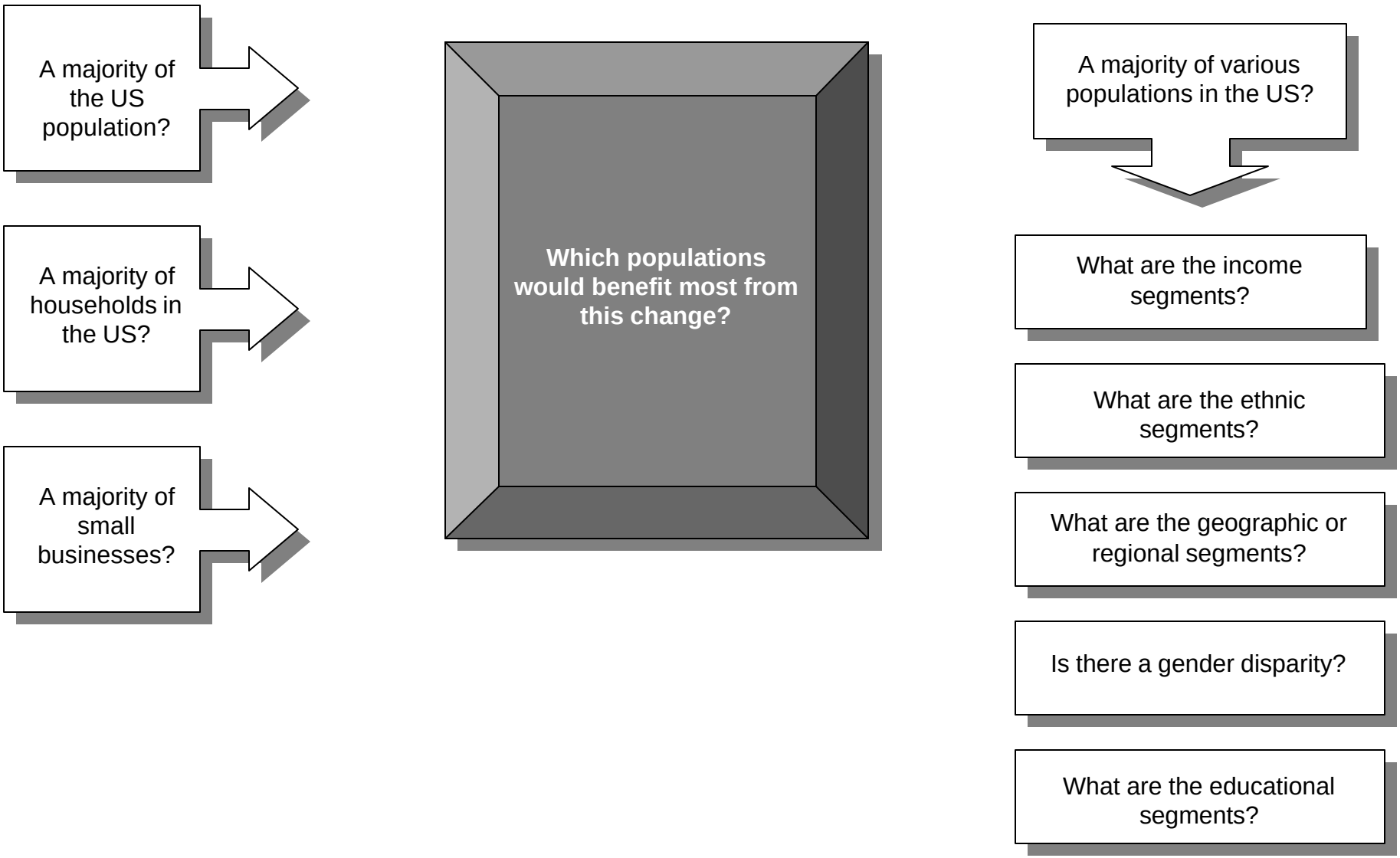
Appendix 5: Supported Services Flow Chart

There is no doubt that advanced services—broadband—are in great demand by certain segments of the population. Of relevance to the Universal Service program and the FCC is whether or not advanced services are desired as much by a substantial majority of the population, including residential users. More importantly, the FCC must determine whether or not advanced services should be considered "essential" services. CECA has concluded that, at this time, there is not enough evidence to indicate that the majority of Americans consider broadband to be an essential service. Historically, clean water, heat in the winter, safe electricity, and basic telephone services are among those considered essential ingredients for societal health, safety, or economic development. It is still too early to determine if advanced services should be viewed in the same way.

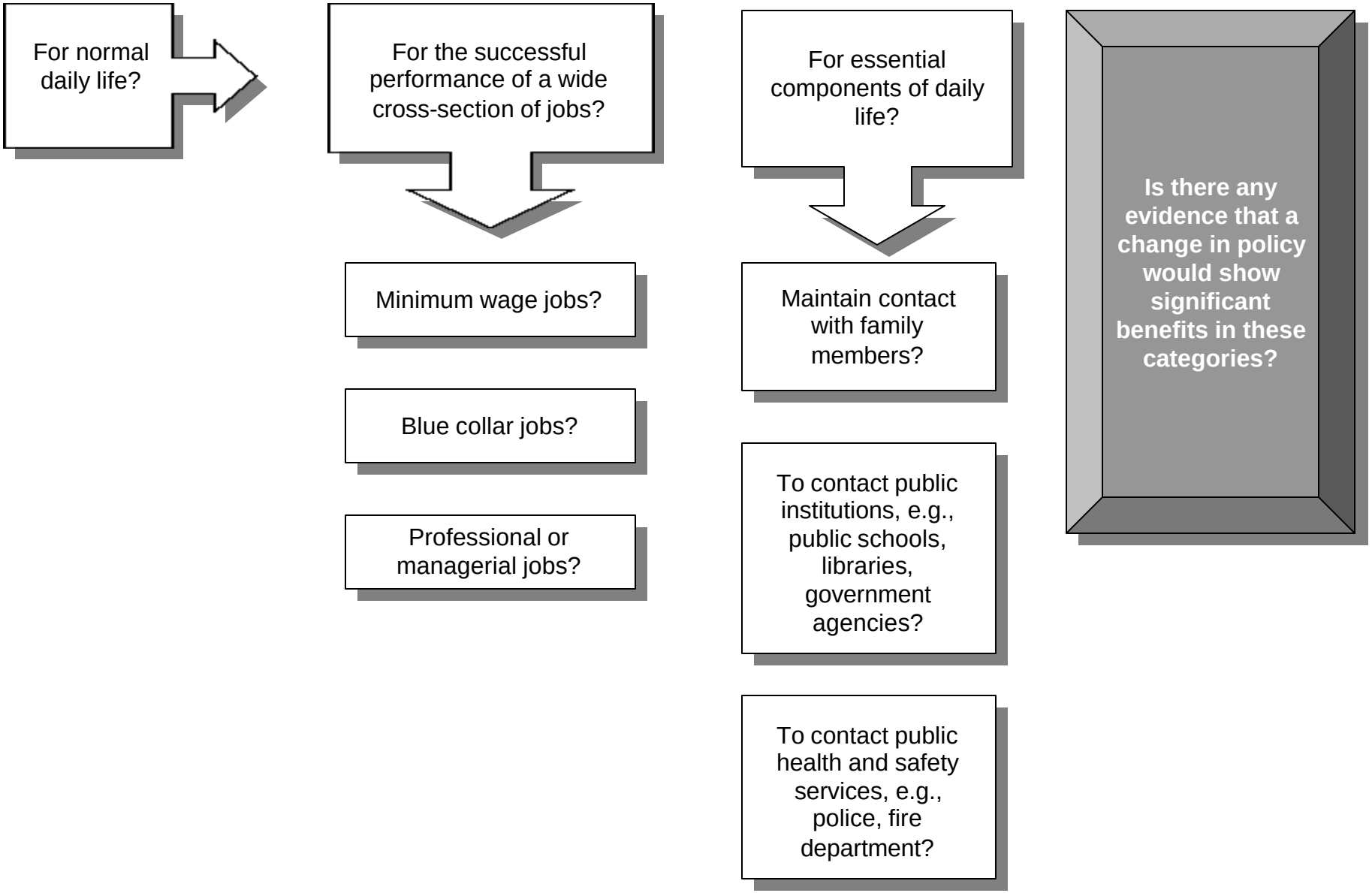
However, CECA strongly supports the provisions in the 1996 Act that mandate a continuous review of the timely deployment of advanced services, and an ongoing assessment of the role played by advanced services so that at the appropriate time, these services can be justifiably included in the definition of supportable services.

CECA submits this flow chart of questions that are relevant to making this determination. The flow chart represents a relevant cross-section of factors that should be examined, although is not intended to be a comprehensive or exhaustive list of questions that administrators will deploy. Given that the final determination will ultimately be based upon a subjective analysis of the net social benefits of adding advanced services, this chart is offered as a tool for examination of the more objective components.

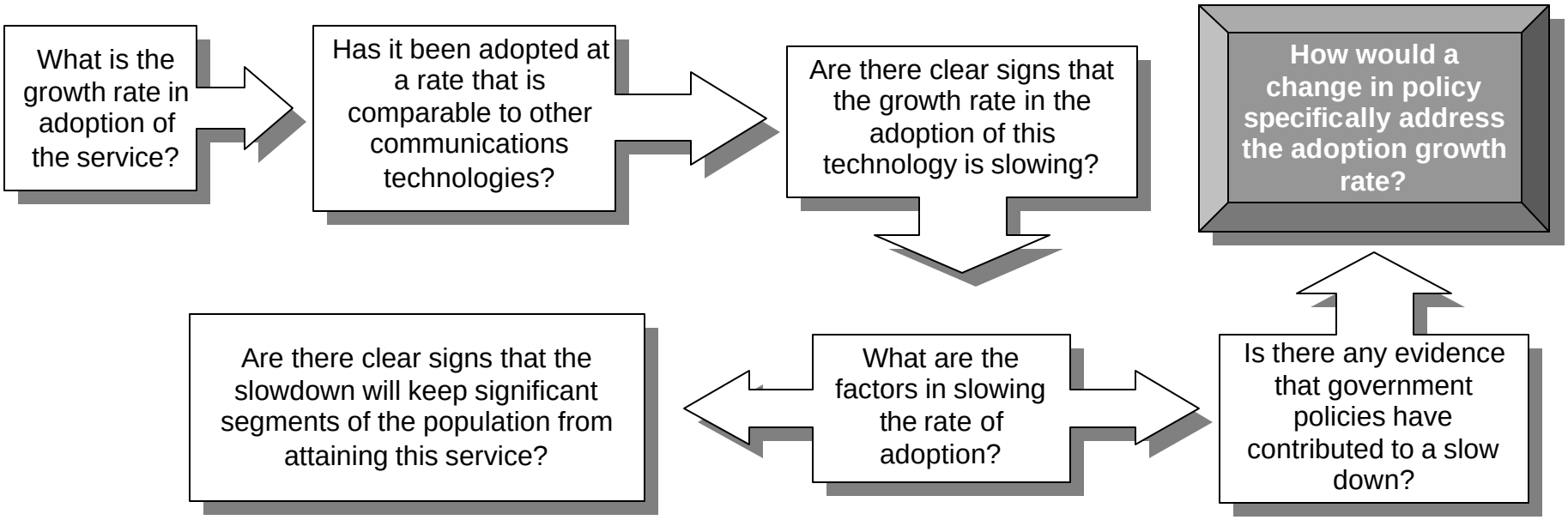
1. TARGET POPULATION: Is it being used by…



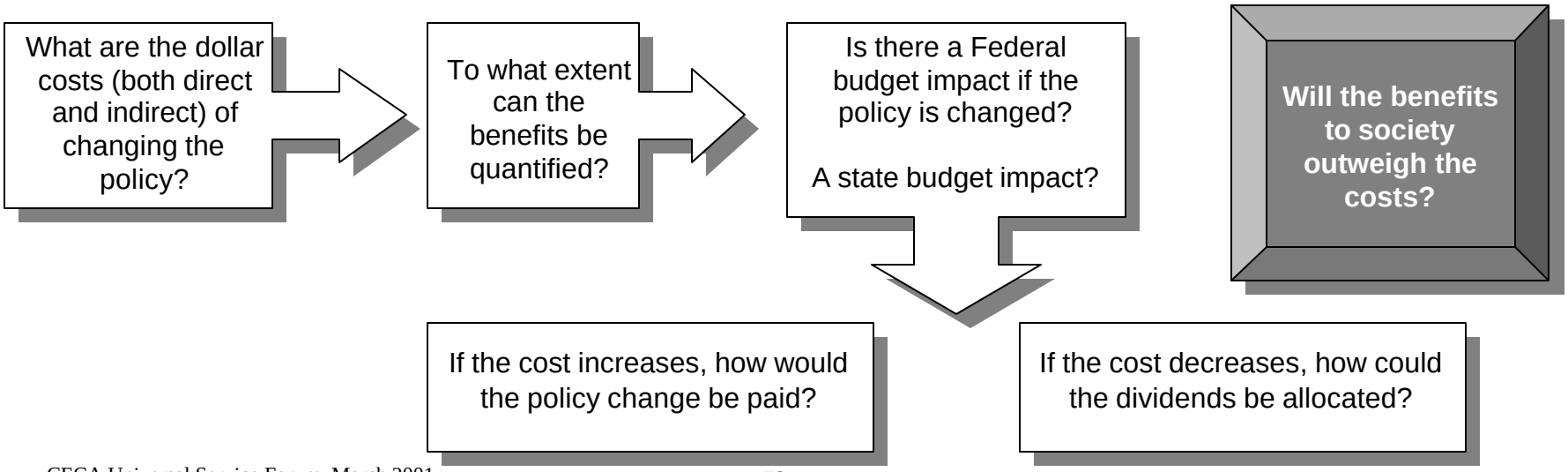
2. HOW ESSENTIAL ARE THE SERVICES? Is this Service Necessary or Critical...



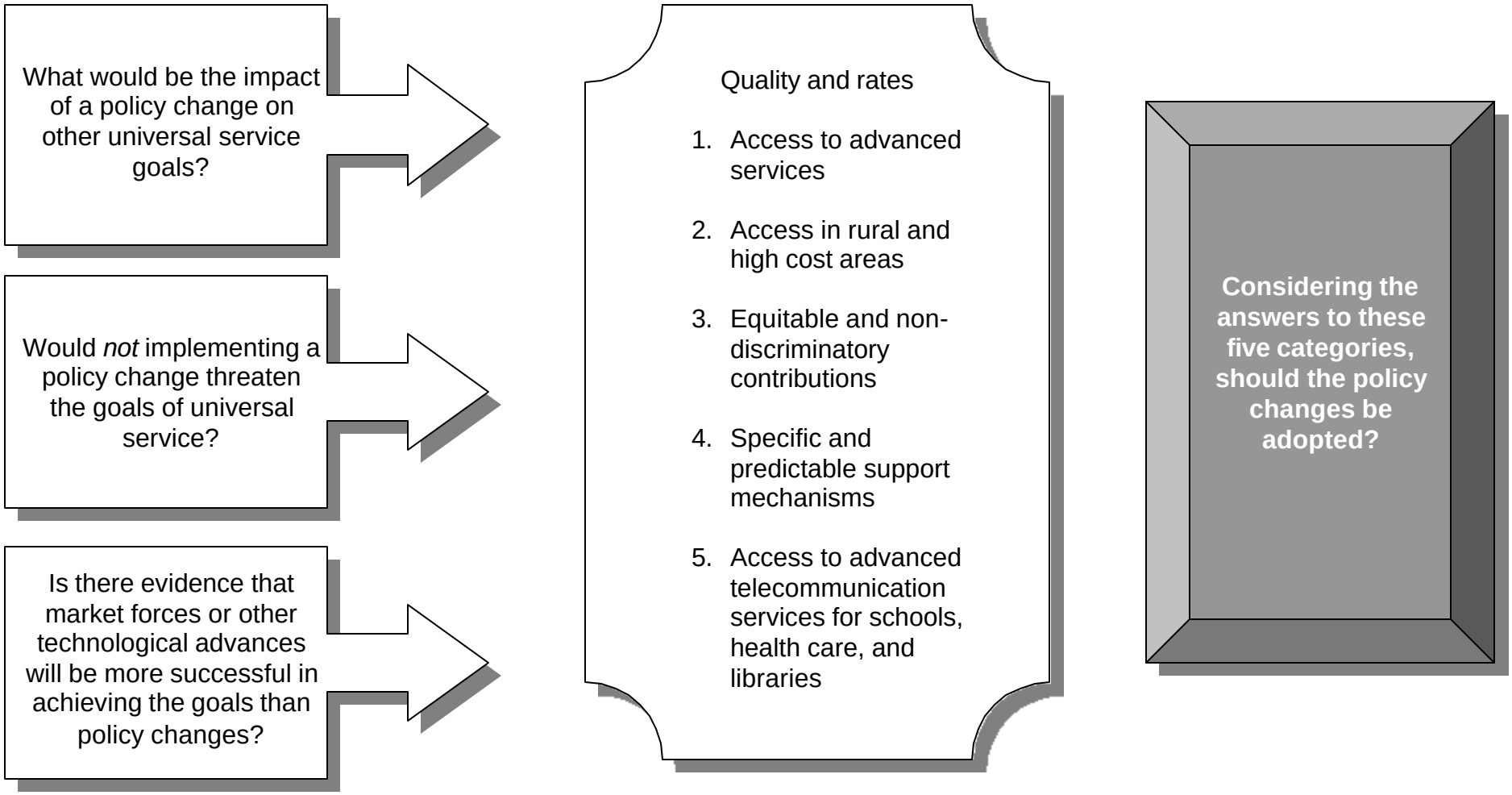
3. GROWTH RATE OF THE SERVICE



4. COSTS AND BENEFITS OF SERVICE



5. IMPACT OF POLICY CHANGES



Appendix 6: Relevant Universal Service Statutes

SEC. 254. UNIVERSAL SERVICE

(a) PROCEDURES TO REVIEW UNIVERSAL SERVICE REQUIREMENTS-

(1) FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE- Within one month after the date of enactment of the Telecommunications Act of 1996 , the Commission shall institute and refer to a Federal-State Joint Board under section 410(c) a proceeding to recommend changes to any of its regulations in order to implement sections 214(e) and this section, including the definition of the services that are supported by Federal universal service support mechanisms and a specific timetable for completion of such recommendations. In addition to the members of the Joint Board required under section 410(c), one member of such Joint Board shall be a State-appointed utility consumer advocate nominated by a national organization of State utility consumer advocates. The Joint Board shall, after notice and opportunity for public comment, make its recommendations to the Commission 9 months after the date of enactment of the Telecommunications Act of 1996 .

(2) COMMISSION ACTION- The Commission shall initiate a single proceeding to implement the recommendations from the Joint Board required by paragraph (1) and shall complete such proceeding within 15 months after the date of enactment of the Telecommunications Act of 1996 . The rules established by such proceeding shall include a definition of the services that are supported by Federal universal service support mechanisms and a specific timetable for implementation. Thereafter, the Commission shall complete any proceeding to implement subsequent recommendations from any Joint Board on universal service within one year after receiving such recommendations.

(b) UNIVERSAL SERVICE PRINCIPLES- The Joint Board and the Commission shall base policies for the preservation and advancement of universal service on the following principles:

(1) QUALITY AND RATES- Quality services should be available at just, reasonable, and affordable rates.

(2) ACCESS TO ADVANCED SERVICES- Access to advanced telecommunications and information services should be provided in all regions of the Nation.

(3) ACCESS IN RURAL AND HIGH COST AREAS- Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.

(4) EQUITABLE AND NONDISCRIMINATORY CONTRIBUTIONS- All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service.

(5) SPECIFIC AND PREDICTABLE SUPPORT MECHANISMS- There should be specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service.

(6) ACCESS TO ADVANCED TELECOMMUNICATIONS SERVICES FOR SCHOOLS, HEALTH CARE, AND LIBRARIES- Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services as described in subsection (h).

(7) ADDITIONAL PRINCIPLES- Such other principles as the Joint Board and the Commission determine are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act .

(c) DEFINITION-

(1) IN GENERAL- Universal service is an evolving level of telecommunications services that the Commission shall establish periodically under this section, taking into account advances in telecommunications and information technologies and services. The Joint Board in recommending, and the Commission in establishing, the definition of the services that are supported by Federal universal service support mechanisms shall consider the extent to which such telecommunications services—

(A) are essential to education, public health, or public safety;
(B) have, through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers;
(C) are being deployed in public telecommunications networks by telecommunications carriers; and
(D) are consistent with the public interest, convenience, and necessity.

(2) ALTERATIONS AND MODIFICATIONS- The Joint Board may, from time to time, recommend to the Commission modifications in the definition of the services that are supported by Federal universal service support mechanisms.

(3) SPECIAL SERVICES- In addition to the services included in the definition of universal service under paragraph (1), the Commission may designate additional services for such support mechanisms for schools, libraries, and health care providers for the purposes of subsection (h).

(d) TELECOMMUNICATIONS CARRIER CONTRIBUTION- Every telecommunications carrier that provides interstate telecommunications services shall contribute, on an equitable and nondiscriminatory basis, to the specific, predictable, and sufficient mechanisms established by the Commission to preserve and advance universal service. The Commission may exempt a carrier or class of carriers from this requirement if the carrier's telecommunications activities are limited to such an extent that the level of such carrier's contribution to the preservation and advancement of universal service would be de minimis. Any other provider of interstate telecommunications may be required to contribute to the preservation and advancement of universal service if the public interest so requires.

(e) UNIVERSAL SERVICE SUPPORT- After the date on which Commission regulations implementing this section take effect, only an eligible telecommunications carrier designated under

section 214(e) shall be eligible to receive specific Federal universal service support. A carrier that receives such support shall use that support only for the provision, maintenance, and upgrading of facilities and services for which the support is intended. Any such support should be explicit and sufficient to achieve the purposes of this section.

(f) STATE AUTHORITY- A State may adopt regulations not inconsistent with the Commission's rules to preserve and advance universal service. Every telecommunications carrier that provides intrastate telecommunications services shall contribute, on an equitable and nondiscriminatory basis, in a manner determined by the State to the preservation and advancement of universal service in that State. A State may adopt regulations to provide for additional definitions and standards to preserve and advance universal service within that State only to the extent that such regulations adopt additional specific, predictable, and sufficient mechanisms to support such definitions or standards that do not rely on or burden Federal universal service support mechanisms.

(g) INTEREXCHANGE AND INTERSTATE SERVICES- Within 6 months after the date of enactment of the Telecommunications Act of 1996 , the Commission shall adopt rules to require that the rates charged by providers of interexchange telecommunications services to subscribers in rural and high cost areas shall be no higher than the rates charged by each such provider to its subscribers in urban areas. Such rules shall also require that a provider of interstate interexchange telecommunications services shall provide such services to its subscribers in each State at rates no higher than the rates charged to its subscribers in any other State.

(h) TELECOMMUNICATIONS SERVICES FOR CERTAIN PROVIDERS-

(1) IN GENERAL-

(A) HEALTH CARE PROVIDERS FOR RURAL AREAS- A telecommunications carrier shall, upon receiving a bona fide request, provide telecommunications services which are necessary for the provision of health care services in a State, including instruction relating to such services, to any public or nonprofit health care provider that serves persons who reside in rural areas in that State at rates that are reasonably comparable to rates charged for similar services in urban areas in that State. A telecommunications carrier providing service under this paragraph shall be entitled to have an amount equal to the difference, if any, between the rates for services provided to health care providers for rural areas in a State and the rates for similar services provided to other customers in comparable rural areas in that State treated as a service obligation as a part of its obligation to participate in the mechanisms to preserve and advance universal service.

(B) EDUCATIONAL PROVIDERS AND LIBRARIES- All telecommunications carriers serving a geographic area shall, upon a bona fide request for any of its services that are within the definition of universal service under subsection (c)(3), provide such services to elementary schools, secondary schools, and libraries for educational purposes at rates less than the amounts charged for similar services to other parties. The discount shall be an amount that the Commission, with respect to interstate services, and the States, with respect to intrastate services, determine is appropriate and necessary to ensure affordable access to and use of such services by such entities. A telecommunications carrier providing service under this paragraph shall—

(i) have an amount equal to the amount of the discount treated as an offset to its obligation to contribute to the mechanisms to preserve and advance universal service, or

(ii) notwithstanding the provisions of subsection (e) of this section, receive reimbursement utilizing the support mechanisms to preserve and advance universal service.

(2) ADVANCED SERVICES- The Commission shall establish competitively neutral rules—

(A) to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and nonprofit elementary and secondary school classrooms, health care providers, and libraries; and

(B) to define the circumstances under which a telecommunications carrier may be required to connect its network to such public institutional telecommunications users.

(3) TERMS AND CONDITIONS- Telecommunications services and network capacity provided to a public institutional telecommunications user under this subsection may not be sold, resold, or otherwise transferred by such user in consideration for money or any other thing of value.

(4) ELIGIBILITY OF USERS- No entity listed in this subsection shall be entitled to preferential rates or treatment as required by this subsection, if such entity operates as a for-profit business, is a school described in paragraph (5)(A) with an endowment of more than $50,000,000, or is a library not eligible for participation in State-based plans for funds under title III of the Library Services and Construction Act (20 U.S.C. 335c et seq.).

(5) DEFINITIONS- For purposes of this subsection:

(A) ELEMENTARY AND SECONDARY SCHOOLS- The term `elementary and secondary schools' means elementary schools and secondary schools, as defined in paragraphs (14) and (25), respectively, of section 14101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 8801).

(B) HEALTH CARE PROVIDER- The term `health care provider' means—

(i) post-secondary educational institutions offering health care instruction, teaching hospitals, and medical schools;
(ii) community health centers or health centers providing health care to migrants;
(iii) local health departments or agencies;
(iv) community mental health centers;
(v) not-for-profit hospitals;
(vi) rural health clinics; and
(vii) consortia of health care providers consisting of one or more entities described in clauses (i) through (vi).

(C) PUBLIC INSTITUTIONAL TELECOMMUNICATIONS USER- The term `public institutional telecommunications user' means an elementary or secondary school, a library, or a health care provider as those terms are defined in this paragraph.

(i) CONSUMER PROTECTION- The Commission and the States should ensure that universal service is available at rates that are just, reasonable, and affordable.

(j) LIFELINE ASSISTANCE- Nothing in this section shall affect the collection, distribution, or administration of the Lifeline Assistance Program provided for by the Commission under regulations set forth in section 69.117 of title 47, Code of Federal Regulations, and other related sections of such title.

(k) SUBSIDY OF COMPETITIVE SERVICES PROHIBITED- A telecommunications carrier may not use services that are not competitive to subsidize services that are subject to competition. The Commission, with respect to interstate services, and the States, with respect to intrastate services, shall establish any necessary cost allocation rules, accounting safeguards, and guidelines to ensure that services included in the definition of universal service bear no more than a reasonable share of the joint and common costs of facilities used to provide those services.

SEC. 706. ADVANCED TELECOMMUNICATIONS INCENTIVES

(a) IN GENERAL- The Commission and each State commission with regulatory jurisdiction over telecommunications services shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) by utilizing, in a manner consistent with the public interest, convenience, and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.

(b) INQUIRY- The Commission shall, within 30 months after the date of enactment of this Act, and regularly thereafter, initiate a notice of inquiry concerning the availability of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) and shall complete the inquiry within 180 days after its initiation. In the inquiry, the Commission shall determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion. If the Commission's determination is negative, it shall take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market.

(c) DEFINITIONS- For purposes of this subsection:

(1) ADVANCED TELECOMMUNICATIONS CAPABILITY- The term `advanced telecommunications capability' is defined, without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.

(2) ELEMENTARY AND SECONDARY SCHOOLS- The term `elementary and secondary schools' means elementary and secondary schools, as defined in paragraphs (14) and (25), respectively, of section 14101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 8801).

SEC. 102. ELIGIBLE TELECOMMUNICATIONS CARRIERS

(a) IN GENERAL- Section 214 (47 U.S.C. 214) is amended by adding at the end thereof the following new subsection:

(e) PROVISION OF UNIVERSAL SERVICE-

(1) ELIGIBLE TELECOMMUNICATIONS CARRIERS- A common carrier designated as an eligible telecommunications carrier under paragraph (2) or (3) shall be eligible to receive universal service support in accordance with section 254 and shall, throughout the service area for which the designation is received—

(A) offer the services that are supported by Federal universal service support mechanisms under section 254(c), either using its own facilities or a combination of its own facilities and resale of another carrier's services (including the services offered by another eligible telecommunications carrier); and

(B) advertise the availability of such services and the charges therefor using media of general distribution.

(2) DESIGNATION OF ELIGIBLE TELECOMMUNICATIONS CARRIERS- A State commission shall upon its own motion or upon request designate a common carrier that meets the requirements of paragraph (1) as an eligible telecommunications carrier for a service area designated by the State commission. Upon request and consistent with the public interest, convenience, and necessity, the State commission may, in the case of an area served by a rural telephone company, and shall, in the case of all other areas, designate more than one common carrier as an eligible telecommunications carrier for a service area designated by the State commission, so long as each additional requesting carrier meets the requirements of paragraph (1). Before designating an additional eligible telecommunications carrier for an area served by a rural telephone company, the State commission shall find that the designation is in the public interest.

(3) DESIGNATION OF ELIGIBLE TELECOMMUNICATIONS CARRIERS FOR UNSERVED AREAS- If no common carrier will provide the services that are supported by Federal universal service support mechanisms under section 254(c) to an unserved community or any portion thereof that requests such service, the Commission, with respect to interstate services, or a State commission, with respect to intrastate services, shall determine which common carrier or carriers are best able to provide such service to the requesting unserved community or portion thereof and shall order such carrier or carriers to provide such service for that unserved community or portion thereof. Any carrier or carriers ordered to provide such service under this paragraph shall meet the requirements of paragraph (1) and shall be designated as an eligible telecommunications carrier for that community or portion thereof.

(4) RELINQUISHMENT OF UNIVERSAL SERVICE- A State commission shall permit an eligible telecommunications carrier to relinquish its designation as such a carrier in any area served by more than one eligible telecommunications carrier. An eligible telecommunications carrier that seeks to relinquish its eligible telecommunications carrier

designation for an area served by more than one eligible telecommunications carrier shall give advance notice to the State commission of such relinquishment. Prior to permitting a telecommunications carrier designated as an eligible telecommunications carrier to cease providing universal service in an area served by more than one eligible telecommunications carrier, the State commission shall require the remaining eligible telecommunications carrier or carriers to ensure that all customers served by the relinquishing carrier will continue to be served, and shall require sufficient notice to permit the purchase or construction of adequate facilities by any remaining eligible telecommunications carrier. The State commission shall establish a time, not to exceed one year after the State commission approves such relinquishment under this paragraph, within which such purchase or construction shall be completed.

(5) SERVICE AREA DEFINED- The term `service area' means a geographic area established by a State commission for the purpose of determining universal service obligations and support mechanisms. In the case of an area served by a rural telephone company, `service area' means such company's `study area' unless and until the Commission and the States, after taking into account recommendations of a Federal-State Joint Board instituted under section 410(c), establish a different definition of service area for such company.'