AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

S. HRG. 110–1111

THE PRESENT AND FUTURE OF THE UNIVERSAL SERVICE FUND

HEARING

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

MARCH 1, 2007

Printed for the use of the Committee on Commerce, Science, and Transportation

U.S. GOVERNMENT PRINTING OFFICE

73–387 PDF WASHINGTON : 2012

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

DANIEL K. INOUYE, Hawaii, *Chairman*

JOHN D. ROCKEFELLER IV, West Virginia	TED STEVENS, Alaska, *Vice Chairman*
JOHN F. KERRY, Massachusetts	JOHN MCCAIN, Arizona
BYRON L. DORGAN, North Dakota	TRENT LOTT, Mississippi
BARBARA BOXER, California	KAY BAILEY HUTCHISON, Texas
BILL NELSON, Florida	OLYMPIA J. SNOWE, Maine
MARIA CANTWELL, Washington	GORDON H. SMITH, Oregon
FRANK R. LAUTENBERG, New Jersey	JOHN ENSIGN, Nevada
MARK PRYOR, Arkansas	JOHN E. SUNUNU, New Hampshire
THOMAS R. CARPER, Delaware	JIM DEMINT, South Carolina
CLAIRE MCCASKILL, Missouri	DAVID VITTER, Louisiana
AMY KLOBUCHAR, Minnesota	JOHN THUNE, South Dakota

MARGARET L. CUMMISKY, *Democratic Staff Director and Chief Counsel*
LILA HARPER HELMS, *Democratic Deputy Staff Director and Policy Director*
MARGARET SPRING, *Democratic General Counsel*
CHRISTINE D. KURTH, *Republican Staff Director and General Counsel*
KENNETH R. NAHIGIAN, *Republican Deputy Staff Director and Chief Counsel*

CONTENTS

	Page
Hearing held on March 1, 2007	1
Statement of Senator Dorgan	39
Statement of Senator Inouye	36
Prepared statement	36
Statement of Senator Klobuchar	114
Prepared statement	117
Statement of Senator Pryor	42
Statement of Senator Rockefeller	20
Statement of Senator Smith	45
Statement of Senator Snowe	49
Statement of Senator Stevens	1
Prepared statement	36
Statement of Senator Thune	105

WITNESSES

Burke, Hon. John Downes, Board Member, Vermont Public Service Board; Member, Federal-State Joint Board on Separations; and Member, Federal-State Joint Board on Universal Service	15
Prepared statement	16
Copps, Hon. Michael J., Commissioner, Federal Communications Committee	7
Prepared statement	9
Crothers, David, Executive Vice President, North Dakota Association of Telecommunications Cooperatives	54
Prepared statement	56
Gregg, Hon. Billy Jack, Director, Consumer Advocate Division, Public Service Commission of West Virginia	21
Prepared statement	22
Landis, Hon. Larry S., Commissioner, Indiana Utility Regulatory Commission	11
Prepared statement	13
Massey, Richard N., Executive Vice President, Corporate Secretary, and General Counsel, Alltel Wireless	77
Prepared statement	78
Simmons, W. Tom, Senior Vice President, Public Policy, Midcontinent Communications	106
Prepared statement	108
Staihr, Ph.D., Brian K., Regulatory Economist, Embarq™ Corporation	71
Prepared statement	73
Tate, Hon. Deborah Taylor, Commissioner, FCC and Chairman, Federal-State Joint Board on Universal Service	1
Prepared statement	5
Tauke, Thomas J., Executive Vice President, Public Affairs, Policy and Communications, Verizon	87
Prepared statement	89

APPENDIX

Letter, dated March 8, 2007 to Hon. Daniel K. Inouye from George Strandell, General Manager and CEO, Golden West Telecommunications	124
Nelson, Hon. Bill, U.S. Senator from Florida, prepared statement	119
Pollak, F.J., President and CEO, TracFone Wireless, Inc., prepared statement	121
Wallace, Gary, Vice President, Corporate Relations, ATX Group, Inc., prepared statement	119

Page

Response to written questions submitted by Hon. Maria Cantwell to:
Hon. Michael J. Copps 133
Hon. Deborah Taylor Tate 130
Response to written questions submitted by Hon. Daniel K. Inouye to:
Hon. John Downes Burke 139
Hon. Michael J. Copps 131
David Crothers 153
Hon. Billy Jack Gregg 148
Hon. Larry S. Landis 134
Richard N. Massey 162
W. Tom Simmons 169
Brian K. Staihr, Ph.D. 154
Hon. Deborah Taylor Tate 127
Thomas J. Tauke 167
Response to written questions submitted by Hon. Bill Nelson to:
Hon. John Downes Burke 145
Hon. Michael J. Copps 132
David Crothers 154
Hon. Billy Jack Gregg 151
Hon. Larry S. Landis 137
Richard N. Massey 165
W. Tom Simmons 170
Brian K. Staihr, Ph.D. 156
Hon. Deborah Taylor Tate 129
Thomas J. Tauke 168

THE PRESENT AND FUTURE OF THE UNIVERSAL SERVICE FUND

THURSDAY, MARCH 1, 2007

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 10:03 a.m. in room SR–253, Russell Senate Office Building, Hon. Daniel K. Inouye, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. TED STEVENS, U.S. SENATOR FROM ALASKA

Senator STEVENS [presiding]. The Chairman is stuck in traffic and has asked me to start the hearing. I suggest we just allow the witnesses to begin, and wait for the Chairman to make his opening statement. Does that agree with you, Senator?

We welcome you all and look forward to your statements. We would appreciate it if you can be as short as you desire, but all of your statements will be printed in the record as though read.

Please. Ms. Tate?

STATEMENT OF HON. DEBORAH TAYLOR TATE, COMMISSIONER, FCC AND CHAIRMAN, FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE

Ms. TATE. Yes, good morning. Good morning, Vice Chairman Stevens and esteemed members of the Committee. Thank you all for the honor, really, of being here today.

I know that the entire Joint Board appreciates having the opportunity to actually have a dialogue with you all. Many of you all have been so instrumental in championing Universal Service policies for our Nation.

Last month, the FCC Commissioners testified before you and I stated then my commitment to Universal Service, no matter where Americans live. I re-emphasize that commitment today.

Also, this week, as you know, we celebrated the 10th anniversary of E-Rate. And I just wanted to thank Senators Snowe and Rockefeller for their leadership and vision for generations of young Americans.

First, I'd like to applaud Senator Stevens on the introduction of the Universal Service for Americans Act, which addresses an array of Universal Service issues, and, on the contributions side, provides broader statutory authority for the FCC to assess both interstate and intrastate revenues, a solution to expanding and stabilizing the contribution base that's not available under the present Act. It

was also, I might note, recommended unanimously by a previous Joint Board. So, I look forward to a continued dialogue with Senators Smith and Dorgan and Pryor and other members of this committee who will be introducing legislation.

Today, obviously I'm here not just as an FCC Commissioner, but also as the Chair of the Federal-State Joint Board, a role that I'm honored to serve and take seriously, and obviously am very, very pleased to be joined by a number of my colleagues on the Joint Board. I want to thank them, as well as my colleagues who are not here, for their commitment to the in-depth study of what are really complex issues. I also appreciate our mutual desire to build a consensus to address the challenges before us. As I stated at the *en banc* hearing, the good news is that I think we all truly share the same goal; it's just working on how we best reach the goals that are set forth in the Act, given the challenges of today's ever-changing technology and, of course, the growing marketplace.

I've seen and experienced firsthand the opportunities provided by Universal Service in rural parts of Tennessee, probably impossible without the Universal Service program.

In my written testimony, I provided you with an overview of the work that we've done to date during the past year since I became Chairman, but today I thought I'd just like to focus on providing some context for all the rest of the panel presenters that you all will hear today regarding the growth of the Fund.

A modern and high-quality communications infrastructure is essential to ensure that all Americans, including those living in rural areas, have access to the opportunities that broadband provides. The Joint Board, like this committee, has renewed the debate regarding Universal Service funding for broadband in underserved areas. However, changes in technology and increasing numbers—the numbers of carriers who are receiving Universal Service support—have grown dramatically and place significant and increasing pressure on the stability of the Fund, which now provides approximately $4 billion through the high-cost mechanism alone.

I brought a couple of charts that we had reviewed at our *en banc.* Chart 1 shows that, since 2003, the incumbent LEC payments have been relatively flat; and, they have actually begun to go down just a little in recent years. On the other hand, chart 1 shows that almost all of the recent growth in the high-cost Universal Service is largely a result of CETCs' access to high-cost support.

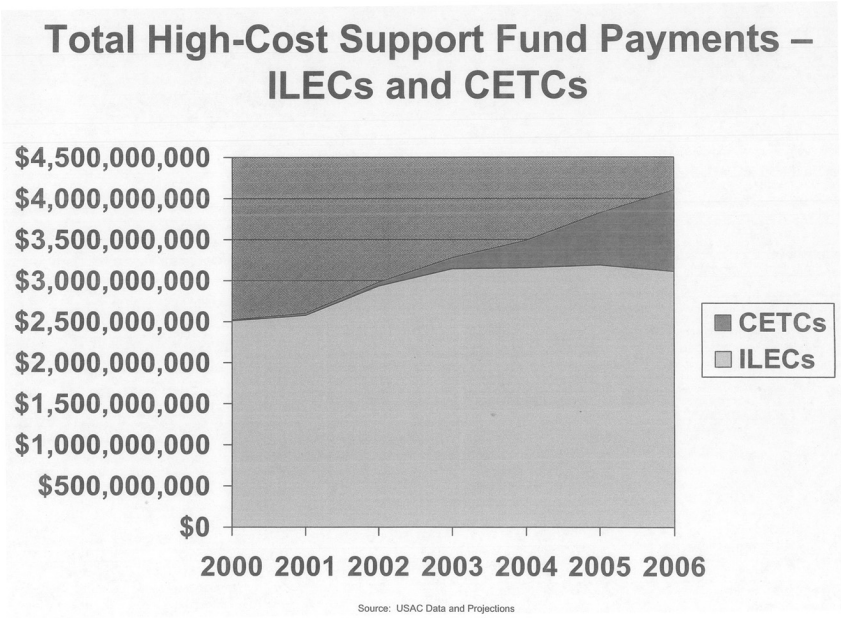


Chart 2 shows that the USF payments to CETCs have been growing at a rate of 101 percent per year since 2002. Specifically, in 2000, CETCs received a million dollars. We expect that to be a billion in 2006.

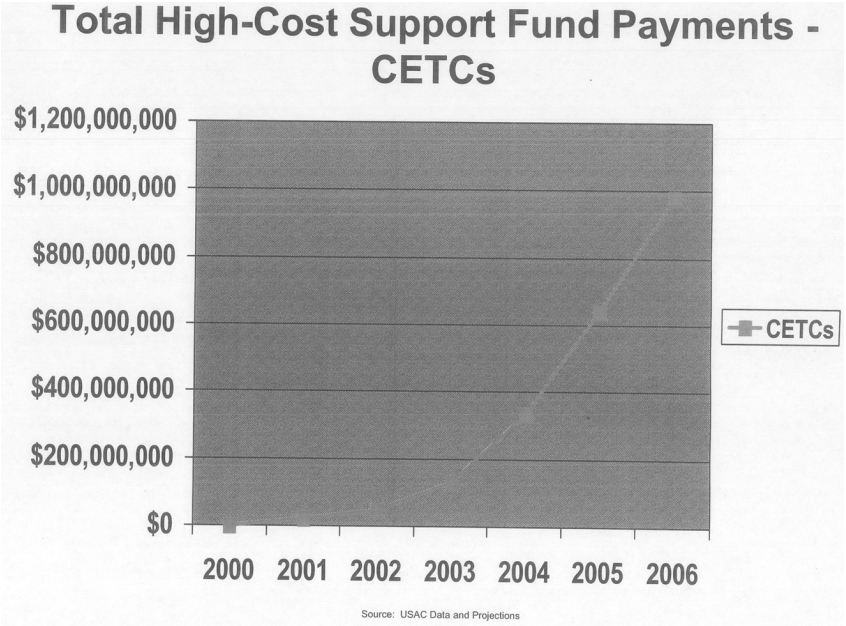
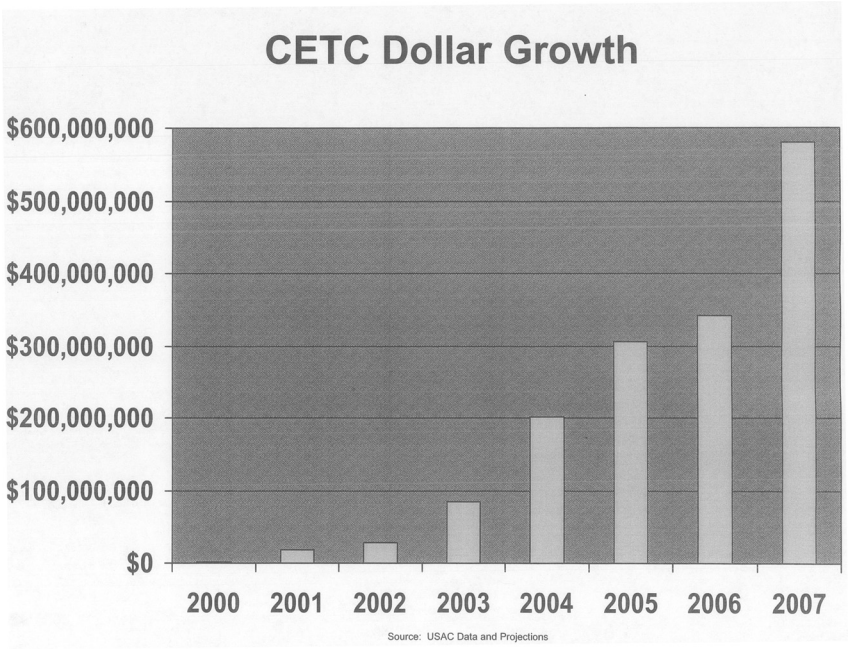
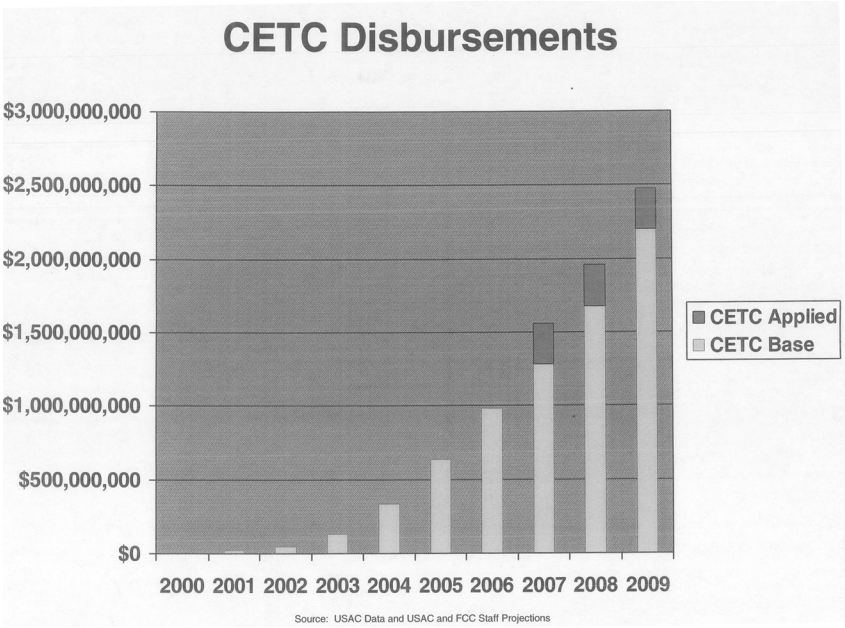


Chart 3 shows the rapid year-over-year dollar growth of CETCs. This also highlights another problem, and that is that CETCs pres-

ently, as you know, receive Universal Service support based on the incumbent LEC's embedded cost, or the per line support amount that the incumbent LEC receives, rather than support based on their own costs.





These charts show that our current high-cost mechanism is in need of repair and revision. Discussion of this issue should not in any way be construed as critical of the dazzling array of services that competitors, including wireless providers, are bringing to many parts of our country, including rural areas. However, as a Federal official, I believe that we are called to be good stewards of consumer dollars and the Fund.

The Chairman and others, including Verizon, CTIA, and Alltel, and I think you will hear from them later, have proposed various reverse auctions as a possible mechanism that could be used for distributing high-cost support. Certainly, auctions could provide technologically and competitively neutral means of controlling the Fund's growth and ensuring more efficient technology.

Other commenters, some of whom you will hear from today, have discussed other tools: geospatial mapping, more targeted distribution of support, and improved data-based decisionmaking. I hope to continue to facilitate the discussions among all of my colleagues, while doing all we can to ensure affordable, quality services are available to consumers, no matter where they choose to live in this country. However, we must do so in a way that is sustainable, to allow new generations of Americans to have access to the latest generation of services, so that our country and our citizens can compete in the increasingly global economy.

Thank you all, and I'm pleased to answer questions after the presentations.

[The prepared statement of Ms. Tate follows:]

PREPARED STATEMENT OF HON. DEBORAH TAYLOR TATE, COMMISSIONER, FCC AND CHAIRMAN, FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE

Good morning, Chairman Inouye, Vice Chairman Stevens, and distinguished members of the Committee. I especially want to thank you, Chairman Inouye and Vice Chairman Stevens, for your leadership and commitment to Universal Service.

I appreciate your invitation to participate in this hearing. It was exactly 1 month ago that I sat at this table before you with the other members of the Federal Communications Commission (FCC or Commission). At that time, I stated my commitment to promoting the availability of quality, affordable telecommunications services to consumers—no matter where they live—across the United States and I reemphasize that today.

I also wanted to recognize the work of this Committee on Universal Service issues. I applaud Senator Stevens' introduction of the Universal Service for Americans Act, S. 101, which addresses an array of Universal Service issues. For example, the bill addresses Universal Service contributions by giving the Commission discretion to assess both interstate and intrastate revenues—a solution to expanding and stabilizing the contribution base that is not available to the Commission under the existing Act. I also look forward to working with other members of this Committee who may be introducing legislation on universal service.

Today, I am here again not only as an FCC Commissioner, but also in my role as Chair of the Federal-State Joint Board on Universal Service (Joint Board), a role that I am honored to serve and greatly respect. I am pleased that I am joined by some of my Joint Board colleagues—fellow FCC colleague Commissioner Mike Copps, Commissioner Larry Landis of Indiana, Commissioner John Burke of Vermont, and Director Billy Jack Gregg of the Consumer Advocate Division of West Virginia. All of the Joint Board members—those here today, as well as FCC Chairman Martin, Joint Board State Chair Ray Baum of Oregon, and Commissioner Edgar from Florida—deserve praise for their commitment to the in-depth study of these complex issues in addition to their full time jobs as government officials. I also appreciate our mutual desire to build consensus to address the challenges before us.

Congress required the FCC to institute a Joint Board "to recommend changes to any of [the FCC's] regulations in order to implement sections 214(e) and [254]" of the Act. Accordingly, I welcome the opportunity to hear directly from you regarding

Universal Service issues facing the FCC, the industries we impact and most importantly, as section 254 of the Act states, "consumers in all regions of the Nation." Like many of you, I have seen and experienced firsthand the opportunities provided by Universal Service in very rural areas. I remember the day the telephone wire was rolled up a gravel road to my grandmother's house in rural Tennessee—likely an impossibility without a Universal Service program. At the same time, in my roles at the FCC and on the Joint Board, I have a responsibility to preserve and advance the Universal Service Fund to best serve the public interest.

Since becoming Chair of the Federal-State Joint Board on Universal Service, the Joint Board has continued its work to review the Universal Service policies and respond to the FCC's referrals. I have been committed to keeping our work on a timetable paced to fulfill our statutory role in a thoughtful and deliberative manner, including holding meetings and conference calls, issuing notices, and reviewing comments. The Joint Board staff held a retreat for 3 days in June 2006 to review outstanding and new proposals, and the Joint Board met in August 2006 during the NARUC meeting in San Francisco. Because there were several newer members of the Joint Board, including myself, in September, we hosted a 2-day meeting at the FCC focusing on training. We heard from USAC, NECA and FCC Bureau experts about the mechanics of the Universal Service programs. The state members of the Joint Board and staff met again in November 2006 during the NARUC meeting in Miami. The full Joint Board held its recent *en banc* hearing less than 2 weeks ago here in Washington, D.C. We were pleased that members of your staffs attended as well.

We continue to evaluate the issues expressly delegated by the FCC to the Joint Board for consideration, including what many call the "rural review" proceeding and the "basis of support" elements of the competitive ETC review. As a part of its analysis, the Joint Board is looking at ways to improve the distribution of high-cost Universal Service support. Accordingly, we continue to evaluate draft proposals, hear from experts, and explore solutions that will help sustain the benefits of the Universal Service program for years to come. As Chairman of the Joint Board, I hope to encourage discussion among my colleagues and facilitate consensus that will ensure that American consumers throughout the Nation continue to have access to an evolving level of innovative services.

Although the Joint Board has been considering several options, last summer, the Joint Board sought public comment on the use of reverse auctions as a tool to improve the distribution of high-cost support. On August 11, the Joint Board issued a Public Notice and sought comment on primary questions, such as the overall appropriateness and legality of implementing reverse auctions, as well as questions about the mechanics of any reverse auctions, such as Federal and state jurisdictional roles, quality of service obligations, and the unique questions regarding the treatment of incumbent local exchange carriers (LECs). The Joint Board received numerous comments and reply comments last fall, and also received additional submissions in the record. Further, as a part of last week's *en banc* hearing, the Joint Board heard experts, including witnesses from the National Telecommunications Cooperative Association, Verizon, and CTIA—The Wireless Association® discussing specific proposals, benefits, and concerns regarding the use of reverse auctions. We also heard from experts on geo-spatial mapping and more targeted approaches to the distribution of support that would modify our current programs, including witnesses from the Polis Center in Indianapolis, CostQuest Associates, and Embarq™. I am encouraged that you plan to hear from some of these same groups later today.

I think it is important to understand how technological change in the industry is impacting the policy discussion. The communications marketplace continues to evolve daily, as convergence shakes the foundations of the old order for industry, for government, and for consumers alike. While this convergence creates real benefits for consumers through the introduction of exciting new services and increased competition among multiple service providers, it also challenges us to adapt our regulations to keep pace with these technological changes.

The Joint Board continues to carefully evaluate the balance of issues at the intersection where the policies of Universal Service and competition meet. It is critical that we not lose sight of the Universal Service goals, as we look forward to ensuring that an evolving level of communications services are rolled out to all areas of the country.

As we heard at the *en banc,* the area of greatest growth in the high-cost program relates to the increasing entry of competitive ETCs into rural areas. The fact is that overall support funding for incumbent LECs has been flat or decreasing in recent years. On the other hand, we have witnessed rapid growth in the funding of CETCs—sometimes funding a second, third or more entrants in what have been determined to be *high-cost* markets. According to FCC and USAC data, competitive

ETC funding has grown from $1 million in 2000 to $1 billion in 2006. If this continues at the present rate, CETC funding could double by funding year 2008.

This growth is not only due to multiple providers receiving high-cost support, but also because CETCs receive Universal Service support based on the incumbent LEC's embedded costs or the per line support amount that the incumbent LEC receives. But as we heard at the *en banc,* as competitors enter areas supported by Universal Service high-cost funding, their actual costs are likely to be very different, often lower, than the incumbent telephone carrier's costs on a per line basis.

Discussion of this issue should not be construed as critical of the dazzling array of services that competitors, including wireless providers, are bringing to the rural areas of our country. Indeed, wireless services have added a new dimension to connectivity—mobility—that is very important to many consumers. It is no wonder that wireless telephone connections now far out strip the number of wireline connections—by over 25 percent, according to the FCC's most recent figures. I have mentioned the issue to you in detail because the fact is that the growth of Universal Service high-cost support is easily identified, and is expected to continue to grow rapidly.

As we look ahead to the long-term goals of the Universal Service program, we must balance the goal of encouraging competitive entry with the other challenges, such as the further deployment of advanced services. For instance, Alltel recently filed a novel proposal to allocate funding for broadband in unserved areas through competitive bidding. It is essential that as the converging communications landscape changes, we recognize how technological changes are putting strains on the mechanics of our contribution and distribution systems which must be addressed by policies that avoid subjecting the program to unsustainable growth. Like you, as a Federal official, we are stewards of these consumer dollars. While doing all we can to ensure that affordable, quality services are available to consumers all across the country, we must do so in a way that is sustainable to allow new generations of Americans to have access to the latest generation of services so that our country is able to compete in the increasingly global economy.

Again, I appreciate your invitation to be here with you today. I look forward to hearing from you today and in the future, and I will be pleased to answer any questions.

Senator STEVENS. Well, thank you, Commissioner Tate.

Our next witness is Commissioner Michael Copps, of the FCC.

STATEMENT OF HON. MICHAEL J. COPPS, COMMISSIONER, FEDERAL COMMUNICATIONS COMMITTEE

Mr. COPPS. Thank you, Mr. Vice Chairman, members of the Committee.

I'm pleased to visit with you again today to focus on the challenge of how to bring advanced telecommunication services to all of our citizens and to ensure that our Universal Service system, which has accomplished so much, can make this happen in a sustainable way. Each and every citizen of this great country should have access to the wonders of communications, whether they live in rural areas, on tribal lands, or in our inner cities, whether they have limited incomes or disabilities, whether they are schoolchildren or rural healthcare providers.

If we're going to ensure that no community and no citizen is left behind by a lack of access to basic or advanced telecommunications in this new digital age, we need to make some changes. We must, first of all, include these new opportunity-creating technologies as part of our Universal Service program. In plainer English, it is time to bring broadband into the Universal Service system. Then we must fine-tune the Fund. We must broaden the USF contribution base. We must make sure funds are distributed with maximum equity among consumers, areas, and technologies. We must fund what is necessary to achieve our goal, and no more. And we

must appreciate that the economies of nonrural, rural, and truly remote service areas can be very different.

If we're going to broaden the purposes of Universal Service, we need to make that commitment up front. USF surely cries out for changes in many aspects, but isn't it better to get the mission clear before we do a lot of tinkering around the edges? I'm not suggesting delaying the fine-tuning. I'm just suggesting the urgency of stating the message and the mission. It strikes me that first you have an objective, then you have a program. A USF commitment to broadband strikes me as a pressing national need. Broadband is the great network and infrastructure challenge of our time, just like canals and railroads and highways were in an earlier era. Our future will, in significant measure, be decided by how well we build our broadband connectivity in the digital age.

So, first we need to look at what role Universal Service should play in meeting this great infrastructure challenge. I recognize that the process of incorporating broadband will involve complex and difficult choices about what mix of technologies, like wireless and copper-based, and fiber, to support, and how to support them, and over what time frame. And I don't have a silver-bullet answer, but I'm not sure anyone else does either. I do know that we need to confront these questions in a forthright and honest fashion. We need to resolve them through a process that involves all the stakeholders in this important issue. That surely includes the state authorities, like the experts sitting beside me here today, who are such a fountain of creative and insightful ideas on the subject. And I hope the FCC will play a more proactive role in the effort, not least by gathering the hard data that is absolutely essential for sound policymaking, doing the analyses, and teeing up options for you and Congress to look at. You should push us to do more, much more, in this regard.

We also need direction on whether Universal Service is going to be "the" vehicle or "a" vehicle in a comprehensive national broadband strategy, because such a strategy might involve additional components, like matching grants or tax incentives. But this much I know: we simply cannot throw up our hands and say that there shouldn't be any Federal Universal Service support for broadband. Unfortunately, in too may ways, that's exactly what our approach to Universal Service does today.

In truth, I believe that Congress already gave the FCC and the states a statutory mandate to bring access to advanced telecommunications to each and every citizen of this country. I'm not sure, however, that all of my colleagues on the Commission agree that we have the authority to include broadband in universal service, or even on whether doing so is the way to go; hence, the apparent need for Congressional guidance.

I realize much of our discussion today may be considerably more nitty-gritty and mechanics-oriented than what I've just said. We have a duty to deal with the nuts and bolts of managing the program we have today. So, permit me, quickly, to propose three things that I think could be done immediately to put Universal Service on a more solid footing so that it can be better deployed to help shape our future.

First, with boundaries between local and long distance eroding and the skyrocketing success of any-distance calling plans, assessing Universal Service contributions only on interstate services is anachronistic. While it will require a legislative fix, I believe that assessing both intrastate and interstate revenues is a good idea. It would significantly lower the contribution factor and would expand the base of future funding for broadband buildout, if that is the road you choose.

Second, it is as clear as clear can be that the costs of investing and maintaining wireless and wireline infrastructure are inherently different. I believe that wireless can and should be part of Universal Service, but the time has come to put an end to the irrational and costly system of supporting wireless carriers based on the cost of wireline incumbents. The identical support rule is the subject of a five year old Joint Board referral. I believe it is time for the Board to make a recommendation to the full Commission.

Third, I believe that the Universal Service system cannot thrive without regular review and care. The high-cost fund, like many other good programs, can only benefit from additional oversight and auditing to ensure that a few bad actors don't jeopardize the strength of this great enabling program.

The Joint Board and the FCC are discussing how best to shore up the Fund. Board Chairman Tate and our state colleagues here this morning are working hard to develop recommendations for the Commission. Our state colleagues on this morning's panel are among the Nation's leading experts on Universal Service. They have put creative ideas before the Joint Board and the Commission. And Commissioner Tate and I may well be asked to vote on these ideas in the months ahead.

Last week, the Joint Board held a valuable *en banc* hearing addressing some of the issues we will be discussing this morning. I would like to at least see some recommendations come forth in the next few months. And, by way of suggestion, I would hope that future referrals from the Commission would contain some time limitations for Board action. The USF can do great things for America. It can help ensure that often unserved areas of our country are connected to vital education, public health, public safety, employment, and business opportunities, but we do not have the luxury of time to get this right, because the rest of the world has no intention of waiting for us.

So, thank you for holding this hearing. I look forward to our conversation today to see how we can best maintain a robust and effective and forward-looking Universal Service system that remains true to its essential mission and true to the mission of our country.

[The prepared statement of Mr. Copps follows:]

PREPARED STATEMENT OF HON. MICHAEL J. COPPS, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

Mr. Chairman, Mr. Vice Chairman, members of the Committee, I am pleased to visit with you again today to focus on one of the most important challenges confronting this Committee, our Commission and the country. This is the challenge to bring advanced telecommunications to all our citizens and to ensure that our Universal Service system, which has accomplished so much, can make this happen in a sustainable way. Since I went to the FCC nearly 6 years ago, my overriding objective has been to help bring the best, most accessible and cost-effective communica-

tions system in the world to all our people—and I always underline the "all." Each and every citizen of this great country should have access to the wonders of communications—whether they live in rural areas, on tribal lands, or in our inner cities; whether they have limited incomes or disabilities; whether they are schoolchildren or rural healthcare providers.

If we are going to ensure that no community, no citizen, is left behind by lack of access to basic or advanced telecommunications in this new digital age, we need to think anew, adjust our policies and craft the proper incentives. We must include these new opportunity-creating technologies as part of our Universal Service program. In plainer English, it is time to bring broadband into the Universal Service system. We must also update and broaden the USF contribution base. We must make sure funds are distributed with maximum equity among consumers, areas and technologies. And we must recognize that the economics of non-rural, rural and truly remote service areas are fundamentally different.

Permit me to begin by emphasizing the importance of an USF commitment to broadband because this is, far and away, the most meaningful step we can take to create opportunity for our citizens, to ensure community development in every area of our country and to keep our Nation competitive in the global economy. Broadband is the great network and infrastructure challenge of our time. If you double back through the years of this Nation's history, you will find that just about every formative era has had its own major infrastructure challenge. Go back to the very beginning as settlers pushed into the frontier and populated new lands. Their infrastructure challenge was to develop ways to deliver their produce and products to increasingly far-away markets. So they found ways to build roads and turnpikes and canals and ports to meet that challenge. Later, as we industrialized, the need was to lay a railway grid, first across regions and then across the country, climaxed by the great saga of the Transcontinental railroads as we became a continental power following the Civil War. Closer to our own era, in the Eisenhower years as suburbs grew and our demography changed, came the Interstate Highway System binding the country more closely together. We saw it in communications, too, in extending telephone service to rural America with the Rural Electrification amendments under Harry Truman and with the Universal Service Fund that we are gathered here to discuss this morning. In all of these infrastructure build-outs, there was a critical role for government, business and local community organizations to work together toward a great national objective. This is really the American Story. It's how we built our Nation and how we grew. It is, I believe, the only way we will continue to grow it.

From where I sit, broadband networks *are* the canals and railroads and highways of the digital age. Our future will be in significant measure decided by how we master, or fail to master, advanced communications networks and how quickly and how well we build out broadband connectivity.

So first we need to look at what part Universal Service should play in meeting this great infrastructure challenge. I recognize that the process of incorporating broadband into Universal Service will involve many complex and difficult choices about what mix of technologies—like wireless, copper-based, and fiber—to support, how to support them, and on what time frame. I certainly don't have a silver bullet answer here today, and I am not sure that anyone else does either. But I do know that we need to confront these questions in a forthright and honest fashion, and we need to resolve them through a process that involves *all* the stakeholders in this important issue. That surely includes the state authorities, like those sitting beside me here today, who are a fountain of creative and insightful ideas on this subject. I hope the FCC will play a more proactive role in this effort—not least by gathering the hard data that is absolutely essential to sound policymaking, doing the analysis and teeing up options for Congress to consider. We also need to make sure that decisions about Universal Service are part of a complete national broadband strategy, which might involve additional components such as matching grants and tax incentives. More than anything else, I know that we simply can't throw up our hands and say that there shouldn't be *any* Federal Universal Service support for broadband. Yet in too many ways that is exactly what our approach to Universal Service does today.

In truth, I believe that Congress already gave the FCC and the states the statutory mandate to advance the cause of bringing access to advanced telecommunications to each and every citizen of our country. I'm not sure, however, that all my colleagues on the Commission agree that we have the authority to be more proactive in encouraging broadband deployment and penetration, and this is why I am hopeful that Congress will choose to make this clear for all of us to understand.

Earlier this year I was fortunate enough to meet a small business owner who was able to work out of his home on a rural hilltop on the Big Island of Hawaii after

broadband service was installed—rather than trekking each day to the nearest town miles away to get online. And not too long ago I visited an Inuit village in Alaska, totally unreachable by road, where a sick child with an ear infection could be examined by a doctor hundreds of miles away. In another Alaskan village, students had used their broadband connection to speak in real time with the crew of the International Space Station. Like a string wrapped around a finger, stories like these remind us that lives and livelihoods and our very health are hugely influenced by the communications infrastructure available to us.

As we work on implementing these lofty concepts, we must also of course deal with nitty-gritty of administering the program we have today. Permit me propose three things that I believe could be done immediately to put Universal Service on a more solid footing so that it can be better deployed to shape our future. First, with boundaries between local and long distance eroding, and the skyrocketing success of any-distance calling plans, assessing Universal Service contributions only on interstate services is anachronistic. While it will require a legislative fix, I believe that assessing both intrastate and interstate revenues is a good idea. Second, it is as clear as clear can be that the costs of investing and maintaining wireless and wireline infrastructure are inherently different. I believe that wireless can and should be a part of Universal Service, but the time has come to put an end to the irrational and costly system of supporting wireless carriers based on the cost of wireline incumbents. The identical support rule is the subject of a 5-year old Joint Board referral; I believe it is high time for the Board to make a recommendation to the full Commission so we can take corrective action. Finally, I believe that the Universal Service system cannot thrive without regular review and care. The high-cost fund, like many other good programs, can only benefit from additional oversight and auditing to ensure that a few bad actors do not jeopardize the strength of this great enabling program.

The Joint Board and the FCC are in the midst of a serious debate on how to best shore up the Universal Service Fund and how it can meet the changing needs of the country as we head into the 21st century. Board Chairman Tate and our state colleagues here this morning are hard at work developing recommendations for the Commission. Our state colleagues on this panel are among the Nation's leading experts on Universal Service. They have put creative ideas before the Joint Board and Commissioner Tate and I may well be asked to vote on these ideas in the months ahead. Last week, the Joint Board held a valuable *en banc* hearing addressing some of the issues we will be discussing today. I continue to urge my colleagues that we act quickly and deliberately to address the rising demands on Universal Service. All of us want this system to work. None of us wants our country, or anyone in it, to miss the opportunities of the digital age. None of us wants to see any kind of digital gap anywhere in America. But, truth is, if we don't get our policies right, we could experience a 21st Century Digital Gap, in spite of the wonder of all these new technologies, greater than the one we experienced with plain old telephone service in the last century. The USF can do great things for America. It can help ensure that often unserved areas of our country are connected to vital education, public health, public safety, employment, and business opportunities. But we don't have the luxury of time to get this right because the rest of the world isn't planning on waiting for us.

I look forward to our conversation today to see how we maintain a robust, effective, and forward-looking Universal Service System that remains true to its essential mission and true to the mission of our country.

Thank you for your attention and for holding this hearing today.

The CHAIRMAN [presiding]. I thank you very much, Commissioner Copps.

Our next witness is a member of the Indiana Utility Regulatory Commission, the Honorable Larry S. Landis.

Commissioner Landis?

STATEMENT OF HON. LARRY S. LANDIS, COMMISSIONER, INDIANA UTILITY REGULATORY COMMISSION

Mr. LANDIS. Thank you, Mr. Chairman, Mr. Vice Chairman, members of the Committee.

Senator Inouye, I had the privilege of visiting your state this past year to witness the installation of my friend Chad Miles, CEO

of a small, but highly innovative, rural company, as President of OPASTCO.

Senator Stevens, I bring you special greetings from the city of your birth, Indianapolis. I also had the privilege of visiting your state last year, and had a chance to experience firsthand the unique challenges and opportunities which both traditional and advanced communications hold out for the people of Alaska.

I thank you for the opportunity to address the critical issues relating to Universal Service from the perspective of the Joint Board and the perspective of state regulators.

I want to underscore that I do not necessarily represent the views of all state regulators, which, like those of this body, sometimes diverge.

Given time constraints, I'd like to start by referencing the March 2, 2006, testimony of my colleague, North Dakota Public Service Commission Chairman Tony Clark, almost exactly a year ago today, on behalf of NARUC. His observations are still relevant. Today, we speak more about the distribution side of Universal Service. However, I do want to acknowledge the bipartisan effort which went into framing a solution to funding of Universal Service, which was incorporated into the proposed Communications Act of 2006 last year, and, as Commissioner Tate has already mentioned, is incorporated into a freestanding bill and other legislation again this year. The latitude which you incorporated into that plan, from a funding perspective, was useful, commendable, and, I believe, enjoys broad support from state regulators.

I want to limit my remarks about the important issue of the significant growth in the size of the high-cost fund. I share the opinion of my colleagues on the need for a cap on expenditures to give us breathing room to address the issues in a more comprehensive manner. It's critically important to the sustainability of the program and to its continued place on the public policy agenda. Chairman Martin has spoken to the issue forcefully. And my Federal and State colleagues have addressed, and will address, that issue here today.

In considering reform, we would do well to take a page from the Hippocratic Oath and first resolve to do no harm. Given the size, scope, and complexity of the current mechanisms, this is a considerable challenge. For example, high-cost loop support for rural companies is currently determined based on legacy investments; or, put another way, embedded costs. We need only look to Detroit to see the problems which legacy decisions can present for companies looking to move into the 21st century and to compete with companies which are not saddled with those decisions; decisions which seemed appropriate at the time, but now may create a challenge, a significant burden of competitive disadvantage. So, we need to encourage companies to look to the future rather than to a legacy past. But if we decide to sever those links to a legacy past, we also have a responsibility to offer a reasonable migration path to those companies which have based their business plans on that model, which we now may consider less relevant.

Another example may be found in the challenge presented by the growth in the number of competitive ETCs, primarily wireless companies. The FCC's guidelines on CETC designations, adopted in

2005 in response to a recommendation of this Board, define criteria and urge states to apply a public-interest standard. In Indiana, we've taken this challenge seriously. Other states have chosen a more permissive approach or, as is the case in North Dakota, were restricted in their ability to review ETC applications by a court decision. Those 2005 guidelines should be made mandatory, and, as states, we need to assume our share of responsibility.

At the same time, there are many rural areas where multiple wireless providers are active, where there is already competition. We need to make sure that we don't inadvertently advantage one company over the others which entered that market based on a competitive unsubsidized model.

Lurking just around the corner is the question of broadband buildout. The problem is that there is relatively little granular data which would tell us what form and how much should be devoted to buildout in those high-cost and very high-cost areas. Commissioner Copps has spoken to the need for better, more robust data, and I share and echo his concern.

I believe that states have an important and potentially growing partner role with the FCC as joint stewards in implementing your vision and seeing to it that Universal Service funds are appropriately disbursed, the legitimate needs are met, but that accountability and performance are audited and demanded.

Again, I thank you for the privilege of sharing our thoughts with you this morning. I look forward to any questions you may have.

[The prepared statement of Mr. Landis follows:]

PREPARED STATEMENT OF HON. LARRY S. LANDIS, COMMISSIONER, INDIANA UTILITY REGULATORY COMMISSION

Good morning, Mr. Chairman, Co-Chairman Stevens, and members of the Committee. I am Larry Landis, and I am a member of the Indiana Utility Regulatory Commission. I serve on the Telecommunications Committee of the National Association of Utility Regulatory Commissioners, NARUC, and was Vice Chair of NARUC's Intercarrier Compensation Task Force. I am also a member of the Federal-State Joint Conference on Advanced Telecommunications Services; and most pertinent to today's hearing, a member of the Federal-State Joint Board on Universal Service.

Thank you for the opportunity to address the critical issues relating to Universal Service from the perspective of state regulators. I want to underscore that I do not necessarily represent their views, which like those of this body, sometimes diverge.

Given today's time constraints, I would start by referring you back to the March 2, 2006 testimony of my colleague Tony Clark, Chairman of the NARUC Telecommunications Committee and of the North Dakota Public Service Commission, before this Committee almost exactly a year ago today. Commissioner Clark's observations then are still relevant today.

Commissioner Clark characterized Universal Service as being at a crossroads. Among the questions he posed:

- Should broadband infrastructure and services be explicitly funded?
- What is the optimal size of the Fund and does it need to be capped?
- Should it fund competition in high-cost markets?
- How many networks should be funded in high-cost markets?
- On what cost basis should carriers be reimbursed?
- How many access lines per customer—or household—should be funded?
- Is it intended for networks or for individuals?
- Should contributions be pegged to network usage, use of numbers, connections or some other methodology?
- Should Universal Service continue to be a shared Federal-State responsibility, or is there some other configuration which makes sense?

Today we speak more about the distribution side of Universal Service. However, I do want to acknowledge the bipartisan effort which went into framing a solution to funding of Universal Service which was incorporated into the proposed Communications Act of 2006 last year, and which I understand is incorporated into a free-standing bill again this year. The latitude which you incorporated into that plan from a funding perspective was useful, commendable, and I believe enjoys broad support from state regulators.

I will limit my remarks about the important issue of the significant growth in the size of the high-cost funds. I share the opinion of my colleagues on the need for a cap on expenditures to give us breathing room to address the issues in a more comprehensive way. It is critically important to the sustainability of the program and to its continued place on the public policy agenda. Chairman Martin has spoken to this issue forcefully and my Federal and state colleagues have addressed and will address that issue here today.

In considering reform, we would do well to take a page from the Hippocratic oath and first resolve to do no harm. Given the size, scope and complexity of the current mechanisms, that is a considerable challenge.

For example, high-cost loop support for rural companies is currently determined based on legacy investments, or put another way, embedded costs. We need only look to Detroit to see the problems which legacy decisions can present for companies which are looking to move into the 21st century and to compete with companies which are not saddled with those decisions. Those decisions seemed appropriate at the time, but now create a significant burden of competitive disadvantage.

Increasingly, facilities-based competition is coming to many rural local exchange companies. It is coming not only in the form of mobile wireless, but also VoIP delivered by cable modem, fixed wireless and broadband over power lines. But that competition is taking root primarily in the villages, communities, towns and small cities in those rural service areas. Often it doesn't reach out to the "truly rural" areas served by rural LECs.

We need to encourage incumbents—indeed, all providers—to look to the future rather than to a legacy past. But if we decide to sever those links to a legacy past for the RLECs, we also have a responsibility to migrate those companies which have based their business plans on a model which we may now consider less relevant. And we need to focus support in those areas where the costs are higher by an order of magnitude, and which in many cases are not contestable.

Another example may be found in the challenge presented by the growth in the number of competitive ETCs, primarily wireless companies. Some will assert that this growth is symptomatic of the problems of Universal Service. Others will argue that this is a reflection of the dynamic growth of the wireless sector. Regardless, the wireless sector has been the primary contributor to growth in the high-cost funds.

Under Section 214(e) of TA 96, State Commissions are delegated to help administer the Universal Service Fund by designating those companies which are eligible to receive support (Eligible Telecommunications Carriers, or ETCs) in each state. The FCC's guidelines on ETC designations and certifications, adopted in 2005 in response to a recommendation of this Board, define criteria and urge states to apply a public interest standard.

In Indiana, we have taken this charge seriously by fully adopting these guidelines and applying them to each new ETC applicant and each ETC who seeks annual certification for Federal Universal Service Funds. Other states have chosen a more permissive approach or—as is the case in North Dakota—were restricted in their ability to review ETC applications by a court decision. Those 2005 FCC guidelines should be made mandatory, and as states we must shoulder our share of responsibility.

At the same time, there many rural areas where multiple wireless providers are active. Some companies have entered some rural markets based at least in part on the assumption that they could receive Universal Service support. Other companies have entered rural markets based on a competitive, unsubsidized model. One proposal would hold reverse auctions in those areas where there are multiple wireless ETCs, with wireless ETC funding distributed on a winner-take-all basis. Where there is already competition, we need to make sure we don't inadvertently advantage one company over its competitors, which entered that market based on their assumption that it was contestable. Put another way, we need to make sure we are not inadvertently making it more difficult to compete, thereby perhaps reducing competition while reforming Universal Service subsidies.

Lurking just around the corner is the question of rural broadband buildout. The problem is that there is relatively little granular data which would tell us which of several solutions would be most cost-efficient in addressing the needs of the

unserved in any given geographical area. Once we know that, we are in a far better position to determine what form and how much should be devoted to buildout in those high-cost and very high-cost areas.

Where will tax abatements be sufficient incentive to encourage buildout? Where are costs so high that only a straight subsidy will work? In the latter cases, where the market isn't there, who will choose which technology is selected, and how large should the subsidy be? Commissioner Copps has spoken to the need for better, more robust data, and I share his concern.

I believe the states have an important and potentially growing partner role with the FCC as joint stewards in implementing your vision, and in seeing to it that Universal Service funds are appropriately deployed, that legitimate needs are met, but that accountability and performance are audited and demanded.

The CHAIRMAN. I thank you very much, Commissioner Landis.

And now, may I call upon a member of the Vermont Public Service Board, the Honorable John D. Burke.

STATEMENT OF HON. JOHN DOWNES BURKE, BOARD MEMBER, VERMONT PUBLIC SERVICE BOARD; MEMBER, FEDERAL-STATE JOINT BOARD ON SEPARATIONS; AND MEMBER, FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE

Mr. BURKE. Thank you very much, Mr. Chairman, Mr. Vice Chairman, members of the Committee. Thank you for giving us a chance to express to you our views, our beliefs, our desires, and our hopes for the Fund, going forward.

There's no doubt that the stated purpose of the Universal Service Fund, as stated in section 254(b)(3), was to provide comparable services at comparable rates to the higher-cost areas of America. I certainly hope that as we go forward we try to remember that is the primary goal that all of us have in mind.

The task becomes daunting. And one of the main reasons it's become daunting is in order to try to further that goal, the Fund has become substantially larger and more inclusive than it might have been originally anticipated to be. There's a slide and a graph, that we also used at the *en banc* meeting, that gives you an idea of where the pressure on the Fund really presently comes from.

Commissioner Tate mentioned the fact that there is a substantial growth in the CETC side of the Fund, the competitive side of the Fund. If you look at that growth, you can see that it's risen to an amount of almost a billion dollars. The idea of the growth in CETC does not end there. There are estimates and reasonable projections, part of which were part of our *en banc* presentation, that would indicate that by 2009 this particular portion of the Fund may have risen to as much as $2.5 billion, making the Fund no longer a $4 billion project, but a $6.5 billion project. It's the challenge of all of us—you, as legislators, us, as members of the Joint Board, recommending to the FCC, and, of course, the FCC—to do what we can to try to take pressure off that fund to the point that we are able to serve the people that need to be served, as defined in 254(b)(3), without getting to the point of the Fund getting so large that it implodes on itself.

The graph—it's not meant to be exact; obviously, estimates are estimates—but you can see that the pattern of growth is actually just following the trend that's existed for the past 4 years, up until today, and going forward for the next 2.

I also would like to take this opportunity to indicate that I have proposed a cap on the CETC side of the Fund, presumably with in-

flation adders to allow for the Joint Board and the Congress to consider alternatives that would take the pressure off the Fund and still allow it to handle its intended purposes under section 254(b)(3). I would hope that you would look at these alternatives and work with us in formulating methods of going forward to both control the Fund and allow it to succeed.

As we consider these alternatives, though, we should understand that there are other ideas and other concerns that exist with regard to supported services under the Fund. I agree with Commissioner Copps that broadband, especially in rural America, those areas that are harder to serve, is truly a crying need. In my own State, although it would appear that we're about 70-plus percent served by broadband, truthfully we only have one really major metropolitan area. If we remove Burlington from the mix, we really are less than 50 percent. For people today in rural areas, trying to do business on the web, or trying to make a living on the web, trying to keep informed on the web, broadband is truly a necessity, and I really believe that, as a supported service, it could move forward.

I applaud Senator Stevens for his idea and his concerns expressed with regard to broadband in his bill. I think that we have to move forward in broadband in ways that are creative, maybe with matching grants or in ways, with the states, that would allow the states to help target those areas in broadband most in need, and also help limit the size and the pressure on the Fund by having the states participate with a matching grant program, which would mean that they would be more likely to be targeting exactly the areas that are most in need, because their dollars would be invested, as well.

I thank you for the opportunity to have addressed you. I appreciate the fact that you have us here today. And I hope that all of us move forward in a cooperative way to try to do what we can for those areas of America that need to be served both by telephone service and by advanced services.

Thank you.

[The prepared statement of Mr. Burke follows:]

PREPARED STATEMENT OF HON. JOHN DOWNES BURKE, BOARD MEMBER, VERMONT PUBLIC SERVICE BOARD; MEMBER, FEDERAL-STATE JOINT BOARD ON SEPARATIONS; AND MEMBER, FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE

I. Introduction

I thank the Committee for the invitation to speak today. Federal Universal Service policy is of great importance to the Nation, and particularly to states, like Vermont, where it is expensive to provide telephone service.

To introduce myself, I have been a Member of the Vermont Public Service Board for 6 years. I have served on the Federal-State Joint Board on Separations since 2003. Last year I was also appointed as a Member of the Federal-State Joint Board on Universal Service. With Commissioners Baum of Oregon and Landis of Indiana, I have also served as one of five state NARUC Commissioners who oversaw the industry's development of the current Missoula Plan.

II. The Statute

The existing Universal Service law, Section 254, was passed in 1996. It was a significant step forward in establishing universal availability of telephone services in this country. Section 254 of the Act repeatedly imposes the duty on both the FCC and the Universal Service Joint Board to "preserve and advance" universal service.[1]

[1] *See* 47 U.S.C. § 254(b), 254(b)(4), 254(b)(5), 254(d), 254(f).

More specifically, the statute lists six goals, some of which apply primarily to distribution of Universal Service support, and some of which apply to collection. Notable in this list is subdivision (3), which requires that rural "access to telecommunications and information services," including "advanced telecommunications and information services" be "reasonably comparable to those services provided in urban areas." It also requires that the rural rates charged be "reasonably comparable to rates charged for similar services in urban areas."

Reasonably comparable rates is the heart of the high-cost support system, and the courts have taken this goal seriously. Twice, the Court of Appeals in Denver has remanded FCC decisions because the FCC had not shown how its programs satisfy that goal.[2] Developing a system in compliance with Section 254 should be an important priority for the Joint Board and the FCC.

A. Challenge—Competition and the Growth of CETCs

The most urgent problem for Universal Service is the rapid growth of funding for competitive telecommunications carriers. There is nothing inherently wrong with providing support to competitors, but our current policy is on a self-destructive path that could jeopardize the entire Universal Service system, and it is my opinion that subsidizing robust competition was never an underlying goal of this Fund.

Our current policy was adopted to promote "competitive neutrality," a seventh principle that the first Joint Board added to the list of goals for universal service. As we have applied it, this principle has led to the "equal payment" rule. Under this rule, carrier "A" who is an Incumbent Eligible Telecommunications Carrier (IETC), and carrier "B," who is a Competitive Eligible Telecommunications Carrier (CETC), receive equal support per line. This was seen as neutral, even though only carrier A must submit its costs.

This equal payment rule was originally conceived as a way to transfer support when a CETC wins a customer from an IETC. Review of the record shows that the Joint Board did not anticipate that households with one carrier and one telephone line would begin to have two or more carriers and multiple cellphone lines in addition to the classical Plain Old Telephone Service (POTS) line. Today, each of these lines may draw a quota of Universal Service support.

The equal payment rule never acknowledged the effects of economies of scale, one of the basic characteristics of networks. When two carriers divide a market that previously was served by one, the total cost of serving that area can go up, not down, particularly if the area served is high-cost and rural. As Chairman Martin has repeatedly pointed out, our current policy has the effect of supporting construction of multiple networks in areas where constructing the first network has been very expensive. This has understandably produced explosive growth in the support provided to Competitive ETCs. As Commissioner Tate's slides show, this support has been growing at 101 percent per year for the last 4 years, and is approaching $1 billion. Moreover, the number of new CETC applications suggests the growth will continue into next year and beyond. Even though support to ILECs has held fairly level during this period, rapid CETC growth creates risk for the entire Universal Service mechanism.

I have recommended an immediate CETC cap for all carriers whose support depends on the equal payment rule. I recommended that the cap apply by study area, so that areas without CETC support would remain that way until a new CETC support system is devised. In areas where there is already some CETC support, that amount would be divided among the competitive carriers that obtain designations.

Over the longer term, it is imperative that we develop clearer policies about how we expect existing networks to be supported in high-cost areas, how many networks we are willing to support, and how they will be selected.

B. Challenge—Uneven Support

One of the earliest decisions made after the 1996 Act passed was to create separate "tracks" for the Universal Service provided to rural and so-called "nonrural" carriers. That decision has continued to this day.

Today, rural and nonrural carriers have largely distinct support systems. The mechanisms differ in many significant ways, but the overall effect is that support for larger nonrural carriers is significantly less than support for smaller "rural" carriers. Today the average rural carrier receives $13.68 per line per month in high-cost support. The average nonrural customer receives 66 cents per line of high-cost support, and most of that goes for interstate cost and not for local rate reductions. In sum, customers of large carriers receive about five cents of high-cost support for

[2] *Qwest Comm. Int'l Inc.* v. *FCC*, 398 F.3d 1222, 1235 (10th Cir. 2005).

every dollar paid to benefit the customer of rural companies, not due to differences in need, but rather, to the size of the company that serves them.

This would be fine if nonrural carriers had no rural customers. In fact, the match between "rural carrier" and "rural customer" works fairly well in the Midwest where there are hundreds of rural companies. But the equation between "rural carrier" and "rural customer" does not work well in New England or in the Appalachian region, where Bell companies still serve large rural areas.[3] In truth, millions of rural customers are served by larger carriers. Among the so-called "nonrural" companies, more than one customer in five is actually a rural customer.[4]

The problem bites most deeply in states, like Maine, Montana, Wyoming and Vermont, where there are no large cities that can subsidize rural areas through retail rate averaging. These states suffer from a double disability: the absence of large cities eliminates the possibility of averaging high and low cost areas to develop lower average rates overall; and the absence of smaller "rural" telephone companies reduces the support available to rural customers.

The disparity between rural and nonrural companies has only become worse over time. Rural customers served by large companies today are not only likely to have higher rates, they probably have less access to broadband as well.

C. Challenge—Broadband

Broadband is probably the most important current challenge for universal service. Section 254 directs that access to advanced services should be provided in all regions of the Nation. Yet many states have large areas where broadband is available only by satellite. It has been widely reported that the United States is falling behind, year by year, in the percentage of our citizens who buy broadband.

The Joint Board should give serious consideration to adding broadband to the official list of supported services. Section 253 gives us detailed guidance for this decision. The statute recognizes that "Universal Service is an evolving level of telecommunications services." We must consider whether such broadband telecommunications services "are essential to education, public health, or public safety" and whether "a substantial majority of residential customers" have actually subscribed.[5] As Consumer Advocate Gregg has pointed out to us, a majority of residential customers may soon actually subscribe to broadband.

One possible problem is that Section 254 allows us to add only "telecommunications services" to the existing list of supported services. The FCC has declared that several kinds of broadband Internet services are actually "information service," not "telecommunications service." So, even though Section 254 tells us explicitly that "access to advanced telecommunications and information services should be provided in all regions of the Nation," we will need to examine carefully whether these FCC rulings bar use of Section 254 as a vehicle to promote broadband.

A second possible problem is that including broadband in the definition of Universal Service could inadvertently disqualify some existing carriers who provide "POTS" or "Plain Old Telephone Service." Section 254 does not specifically anticipate allowing funding for services that do not meet the minimum requirements for eligibility. We would need to move carefully to allow existing carriers a reasonable transition period to meet any new requirements.

Another concern is that to include broadband in the definition of Universal Service could greatly expand the size of the high-cost fund. This is a serious concern, but we should not assume that broadband services will be supported in the same ways that we now support POTS.

The Joint Board has recently sought comment on the use of auctions, and we are examining the potential for newer technologies to better target existing support. I believe that we should also examine matching grants. Many Federal agencies, from Transportation to Education, today promote good state policy through the use of such matching grants. If applied to broadband, a system of matching grants could easily be controlled fiscally by implementing an annual funding cap. Also, matching grants would be most likely to be effective. States generally know the most about their own broadband needs, and a mechanism that required a state matching share would be very likely to focus support in areas where a problem really exists.

Earlier this winter, Vermont Governor James Douglas outlined to our state legislature an initiative that would authorize state bonding to provide broadband in

[3] The converse problem also exists. A few so-called "rural carriers" actually serve low cost suburbs.

[4] Vicki M. Hobbs, and John Blodgett, *The Rural Differential: An Analysis of Population Demographics in Areas Served by Rural Telephone Companies*, Rural Policy Research Institute, 1999 at 2 (21 percent of large carrier customers are rural, based upon 1990 census).

[5] *See* 47 U.S.C. § 254(c)(1).

unserved areas. A Federal matching grant for broadband deployment would allow us to stretch our limited state dollars. It would greatly assist Vermont and other states that are still struggling to provide a first broadband connection to many of their citizens.

I also agree with Commissioner Copps that data quality is a problem for broadband. Data indicating which Zip Codes have broadband is misleading. Knowing that broadband is available somewhere within a zip code is little solace to an individual customer who can't buy it from anyone. The Joint Board should be collecting data on broadband at a much finer scale than it does now, and the technology clearly exists to do this.

D. Challenge—Limiting Fund Size

I have mentioned the need to equalize support for all rural customers and my desire to expand support to broadband. I also want to emphasize that a rational Universal Service policy can achieve these goals without unduly increasing the size of the national Fund, possibly without increasing it at all.

The existing Universal Service system has not been designed as a single system. Rather, it is a series of eight separate programs that were created incrementally over two decades.[6] A few programs have been modified, but none has ever been replaced. Each new program typically focused on some cost component or company characteristic that seemed relevant at the time.[7] But we have never taken a comprehensive and multi-jurisdictional view of carrier costs, and we have never replaced even one older program.

Another problem with the existing system is that it provides the most support to the smallest companies, not necessarily those with the highest costs. The most obvious example today is Local Switching Support, which does not even attempt to limit support to carriers with high costs.[8]

If we could design a comprehensive system, we could adopt a single definition of total cost, and we could find new efficiencies by eliminating support to carriers that do not have high overall costs.

As I mentioned above, matching grants can be another tool to maintain fiscal discipline. Federal matching programs in other policy areas routinely live within their budgets.

For these reasons, I believe that the existing fund size could be reduced, or we could broaden the scope of the Fund to cover broadband, without unduly harming rate payers and without violating any of the principles contained in Section 254(b).

E. Challenge—Intercarrier Compensation and Separations

I mentioned above that I have been privileged to serve on both Joint Boards and the NARUC Intercarrier Compensation project. This has convinced me that Universal Service is intimately tied both to separations and to intercarrier compensation.

---

[6] The first Universal Service program was the High Cost Loop program, and was created in 1984.

[7] For example, the High Cost Loop program addressed a 1984 change in the jurisdictional separation of loop costs. Today this program exceeds $1 billion, but there is no similar program for the interoffice transport costs of rural companies, costs that for some companies can be even larger than loop costs. Likewise, the Interstate Access Reform and Interstate Common Line Support programs were created in 2000 and 2001 to replace revenues lost through reform of interstate toll access rates.

[8] This support mechanism was created in 1987 when the FCC made a change affecting the separation of costs affecting the cost recovery for local "class 5" switches. Originally known as "DEM weighting," this mechanism allowed ILECs with 50,000 or less access lines to allocate a higher percentage of their local switching costs to the interstate jurisdiction. The greatest benefit went to ILECs that already had the largest interstate usage and to the ILECs that had the fewest lines, according to the following table.

Number of Access Lines in Study Area	Weighting for Interstate Dial Equipment Minutes Separations Factor
0 to 10,000	3.0
10,001 to 20,000	2.5
20,001 to 50,000	2.0
50,001 or more	1.0

See 47 C.F.R. § 36.125(f). While the FCC's rules for this program no longer explicitly differentiate based upon size, the program's 1996 support parameters were frozen in place by a reformulation that took effect on January 1, 1998, thereby indefinitely perpetuating the size-based distinction. *See* 47 C.F.R. § 36.125(f).

Separations has had a particularly close historical relationship to universal service. Before 1996, Universal Service programs were enacted in the form of separations rules. Although these programs were designed to reduce or avoid an increase in local rates, they acted through separations rules and created inter-jurisdictional cost transfers that ultimately raised interstate access and toll rates.[9] Even more recent programs, like the High Cost Modeling Program that applies to larger carriers, rely on separations factors to avoid the double-recovery of costs that have been separated to the interstate jurisdiction.[10]

Universal service also has a close historical relationship to intercarrier compensation. Several Universal Service programs were created solely as components in intercarrier compensation reforms. For example, the CALLS program, adopted by the FCC in May of 2000, reformed interstate access rates for large "price cap" carriers. The following year, 2001, the Commission adopted the "MAG" order that did essentially the same thing for smaller "rate-of-return" carriers. Each order created a new Universal Service mechanism. This year those programs—"Interstate Access Support" and "Interstate Common Line Support"—will cost $1.9 billion.

The current version of the Missoula Plan, now pending before the Commission, would add another layer. It proposes additional FCC payments of $2.5 billion to finance the reform of new kinds of intercarrier payments, such as intrastate access and reciprocal compensation.

The close interaction among these programs shows why two Joint Boards sometimes find it difficult to identify comprehensive solutions. One can seldom make a recommendation on any of the three topics without affecting the other two. Perhaps Congress should consider a new and more comprehensive mechanism for cooperation between the FCC and the states, particularly in policy areas requiring coordination of rates and cost assignments.

F. Improving the Uses of USF Dollars

Some carriers have criticized the existing support mechanisms for being insufficiently specific geographically. I agree that more detailed targeting of support for competitive carriers could possibly increase their investment in underserved areas. However, I think the Joint Board and the states have adequate tools now to address this issue. The Joint Board is looking at proposals from industry that would mandate greater disaggregation of existing support, with this result in mind.

We should not forget that states already have some tools to encourage carriers to invest in unserved areas. States annually must certify the proper use of Universal Service support. These certifications offer states a chance to review where Federal funds have been spent, and some states have required detailed investment plans as a condition of annual certification.[11]

The CHAIRMAN. I thank you very much, Mr. Burke.

And now, I'm pleased to yield to my colleague, Senator Rockefeller.

STATEMENT OF HON. JOHN D. ROCKEFELLER IV, U.S. SENATOR FROM WEST VIRGINIA

Senator ROCKEFELLER. Thank you, Mr. Chairman.

I'm very pleased to welcome Bill Jack Gregg back again before the Committee. He has served, with the distinction that is his, as the Director of the Consumer Advocate Division of the West Virginia Public Service Commission, since the office was created by a particularly brilliant Governor who happened to be presiding at that time.

[Laughter.]

The CHAIRMAN. You talk about yourself?

---

[9] The High Cost Loop (1984) and DEM Weighting (1987) programs were both codified in separations rules. Inter-jurisdictional cost transfers still exist. *See, e.g.,* 47 C.F.R. § 36.603 which describes the High Cost Loop program as a "loop cost expense adjustment."

[10] *See* 47 C.F.R. § 54.309 (support equals 76 percent of difference between cost and benchmark).

[11] Vermont also has used another tool, the designation process, to promote rural investment. Vermont's sole CETC has a designation as ETC that expires from time to time. Before the designation is extended, the Public Service Board reviews the carrier's investment history and the geographic areas to which it has extended service.

Senator ROCKEFELLER. Of course.

Over the years, he's provided—well, look, he's a visionary as to how this whole thing ought to work. He's spent his life on it. We're lucky to have him before us.

Welcome, sir.

STATEMENT OF HON. BILLY JACK GREGG, DIRECTOR, CONSUMER ADVOCATE DIVISION, PUBLIC SERVICE COMMISSION OF WEST VIRGINIA

Mr. GREGG. Thank you. Thank you, Mr. Chairman, Mr. Vice Chairman, members of the Committee.

As you've heard from the other speakers before me, there is amazing agreement amongst the members of the Joint Board as to what the current problems are with the high-cost fund. The current system is unsustainable. It's inconsistent, and incredibly complex. It's growing out of control. It's distributed poorly.

The sad fact is that the advent of competition into telecommunications has actually caused a substantial increase in the size of the high-cost fund, as you've seen visually on the slides presented by Commissioner Tate. This has increased the burden on all consumers, and it didn't have to be this way.

As noted in both the House and Senate reports on the Telecommunications Act of 1996, competition was supposed to lower the cost of Universal Service as providers competed for the Universal Service subsidy. The FCC initially kept true to the intent of the Act. Universal Service high-cost support, as modified by the Commission for the advent of competition, was a technologically and competitively neutral zero-sum game. That is, the Universal Service subsidy was portable to whichever eligible telecommunications carrier won the customer. The ETC gaining the customer won the subsidy. The ETC losing the customer lost the subsidy. The Commission's approach was upheld by the Fifth Circuit Court of Appeals in the case of *Alenco Communications* versus the *FCC* in 2000.

Unfortunately, without explanation, the Commission abandoned its rulemaking proceeding to define "captured" and "new lines" and deleted a section of its rules which had reduced support to an incumbent when a competitive ETC won a customer. As a result, the Commission began providing support for all lines of all ETCs serving high-cost areas.

In 1999, this did not seem like a big deal. Unfortunately, the unforeseen consequences of these actions have been dramatic. By deciding to support all lines of all ETCs in high-cost areas, the Commission opened the door to supporting multiple wireless networks in high-cost areas, which supplied supplementary, rather than substitute, services. Far from being a zero-sum game in which ETCs compete for the Universal Service subsidy while the size of the Fund stays relatively the same, the current system is a no-losers support system in which all ETCs receive support for all lines they serve in high-cost areas, no matter how duplicative or costly this additional support may be.

Under the current system, far more than affordable access to the telecommunications network is being provided. The high-cost fund now provides support to multiple networks in high-cost areas,

where, previously, none had been able to exist without an explicit subsidy. The current system of providing support to all lines of all ETCs in high-cost areas must be ended if we are to have a rational and sustainable high-cost support system. In fact, when multiple providers are able to offer service within the same area, it raises the question of whether that area should continue to receive high-cost support at all. Because of the complex, disparate, and often unrelated bases of the different high-cost support mechanisms, and the rapidly escalating size of the high-cost fund caused by increasing payments to competitive ETCs, the Joint Board has begun to look at new alternatives to bring rationality back to the high-cost fund, as you have heard this morning.

Unfortunately, while we contemplate these proposals, the Fund will continue to grow to an ever more unsustainable size. The high-cost fund has increased by a billion dollars, as you've heard, over the past 3 years, driven by new payments to competitive ETCs. In addition, the FCC currently has before it pending over 30 applications for ETC status from wireless carriers, including two from Cingular for the states of Virginia and Georgia. Cingular is the largest wireless provider in the United States. The FCC has estimated that, if it grants all of the ETC applications pending before it today, the high-cost fund will rise to five and a half billion dollars by 2009. And if Cingular continues to seek ETC status, Verizon Wireless, the second largest wireless provider, will be forced to follow suit. The result will be a high-cost fund surpassing $6 billion and approaching $7 billion. A fund of this size will not only impose unacceptable burdens on American consumers, it will also severely limit our ability to add new services, such as broadband, to the list of services supported by Universal Service.

In order to be stable and sustainable in the long-term, the Universal Service Fund must be configured like a pyramid. It must have a broad and stable base of contributions at the bottom and a narrow, but sufficient, distribution of support at the top. The current Universal Service Fund requires work on both ends of the structure. Issues related to the contribution base must be resolved. Since all benefit from Universal Service, all should contribute. In addition, the limited resources of the Fund must be properly distributed and targeted to carry out the purposes of the Act. In order to continue the public policy success of the Universal Service Fund, we must support access, not excess.

Thank you very much.

[The prepared statement of Mr. Gregg follows:]

PREPARED STATEMENT OF HON. BILLY JACK GREGG, DIRECTOR, CONSUMER ADVOCATE DIVISION, PUBLIC SERVICE COMMISSION OF WEST VIRGINIA

My name is Billy Jack Gregg and I am the Director of the West Virginia Consumer Advocate Division. My office is charged with the responsibility of representing West Virginia utility ratepayers in state and Federal proceedings which may affect rates for electricity, gas, telephone and water service. My office is also a Member of the National Association of State Utility Consumer Advocates (NASUCA), an organization of 43 state utility consumer advocate offices from 41 states and the District of Columbia, charged by their respective state statutes with representing utility consumers before state and Federal utility commissions and be-

fore state and Federal courts.[1] I am a former member of the Board of Directors of the Universal Service Administrative Company (USAC) and the Rural Task Force, and have served on the Federal-State Joint Board on Universal Service since March 2002. I greatly appreciate the opportunity to testify at this legislative hearing on the challenges currently facing the Federal Universal Service Fund (USF or the Fund).

I. Background

The most important issue facing the Federal USF today is adapting the Fund to a competitive environment and ensuring its long-term sustainability. As the telecommunications market changes rapidly, we must ensure that the USF is sufficient, predictable and affordable for all parties involved: fund recipients, telecommunications providers and consumers. Before I address the current problems facing the USF, I believe it is appropriate to review the Fund's achievements since the passage of the Telecommunications Act of 1996 (the Act).

The nation's commitment to Universal Service was codified in Section 254 of the Act. The purpose of Section 254 was to ensure that all Americans have access to affordable, quality telecommunications services.[2] Based upon the requirements of Section 254, the FCC, after consultation with the Federal-State Joint Board on Universal Service, created a new Federal USF in 1997 containing several distinct support mechanisms. Total USF funding has grown from $1.8 billion in 1997 to approximately $7.2 billion during 2007. While these support amounts are large, they must be kept in perspective. Total telecommunications revenues in the United States last year were in excess of $230 billion. By annually collecting and redistributing approximately 3 percent of these total revenues, we are able to: provide affordable access to phone service in all high-cost areas of the nation; support low-income customers; assist rural healthcare providers; and connect all classrooms to the Internet. Moreover, all states and territories benefit from the USF as shown on *Attachments 1 and 2.*[3] That's quite an accomplishment, and one that everyone involved in the USF should be proud of as we move forward to ensure the long-term sustainability of the Fund.

However, as with all things, somebody must pay for the Fund's benefits. That somebody is the American telecommunications consumer in every state and territory. Although all states benefit from the USF, some states pay far more into the Fund than they receive back in support, as shown on *Attachments 3 and 4.*[4] The concept of sustainability encompasses both the size of the Fund and the relative burden it imposes. In order to ensure that the USF is sustainable for the long-term, we must ensure that the USF remains affordable for the individual consumer and for the payer states. As I will discuss in detail later, the biggest threat to the long-term sustainability of the USF is the burden imposed by the unrestrained growth of the High Cost Fund.

II. The Long Term Sustainability of the Universal Service Fund

As previously mentioned, the Federal USF has grown from $1.8 billion to $7.2 billion since the Act was passed. During this same time the USF assessment factor, which is paid by all local, long distance and wireless customers in the United States based on interstate revenues, has more than doubled, from less than 5 percent to over 11 percent.[5] Almost everyone who addresses the issue of the long-term sustainability of the USF has the same prescription: broaden the contribution base and properly control the distribution of funds from the USF. However, depending on the

---

[1] NASUCA has the unique position of representing consumers in states which benefit from universal service, as well as consumers who must pay the cost of Universal Service. In most respects, my testimony reflects the positions taken by NASUCA, although there are some areas where NASUCA has not yet reached a consensus position.

[2] Section 254 of the Act enshrined and expanded Universal Service principles which had been followed by the FCC for decades.

[3] *Attachments 1 and 2* show actual disbursements to states during 2005 under each of the Federal USF support mechanisms. Attachment 1 ranks the states based on total support received. *Attachment 2* considers the number of access lines in each state, and ranks the states based on monthly support received per line.

[4] *Attachments 3 and 4* show the same disbursements as *Attachments 1 and 2,* but also include the USF payments made by consumers in each state during 2005. *Attachment 3* ranks the states based on total net support received, while *Attachment 4* ranks the states on net per line support received. Negative numbers indicate that states paid more in USF assessments than they received in USF benefits.

[5] The assessment factor was 9.7 percent during the first quarter of 2007 and is expected to rise above 11 percent for the second quarter.

interest group making the recommendation, the actual method of broadening the base and controlling the distribution of funds can vary wildly.

The FCC and Congress have wrestled with the issue of the funding base for over 4 years. Although numerous ideas and proposals to broaden the contribution base have been brought forth, none have been implemented. Many parties oppose broadening the contribution base on the grounds that it will only lead to more profligate spending of money paid into the USF. I am firmly convinced that unless we first bring the distribution of the High Cost Fund under control, no progress will be made on the contribution side.

In looking at the long-term sustainability of the Fund, we need to review the status of funds paid out by the individual support mechanisms which make up the overall USF. A quick review of the four funds making up the Federal USF—the High Cost Fund, the Low Income Fund, the Schools and Libraries Fund, and the Rural Health Care Fund—shows that the High Cost Fund is the most problematic. Set forth below are the collections for each of these funds in 2003 and projected for 2007.[6]

Change in USF Funding Mechanisms

[2003–2007]

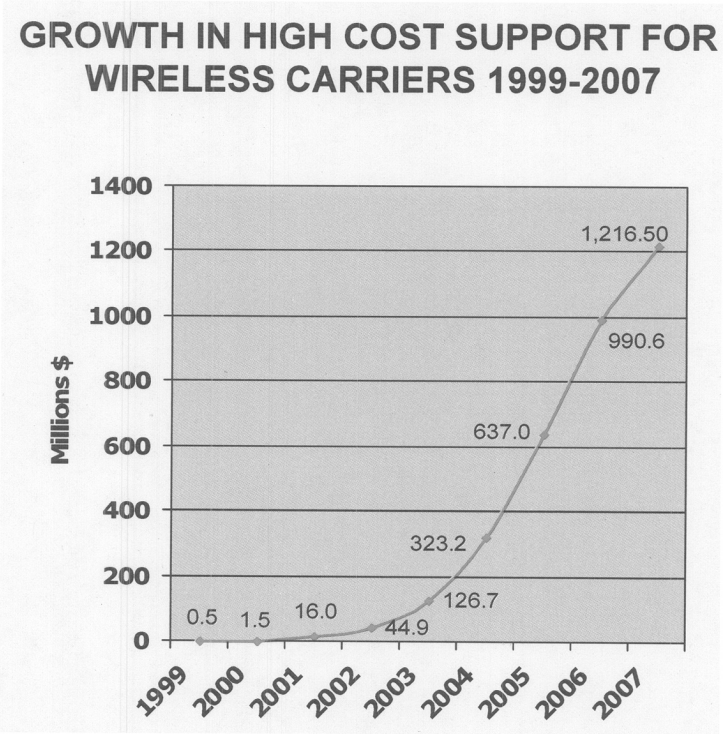
USF Fund	$ Millions		
	2003	2007	Change
High Cost Fund	3,261.1	4,270.8	1,009.7
Low Income Fund	712.9	766.8	53.9
Schools & Libraries Fund	2,184.0	1,988.5	−195.5
Rural Health Care Fund	27.9	160.0	132.1
Total	*6,185.9*	*7,186.1*	*1,000.2*

As can be seen, the High Cost Fund has grown by over a billion dollars since 2003, while the other funds have shown modest or negative growth in the same period. The Schools and Libraries Fund has been capped at $2.25 billion a year since its inception. The Rural Health Care Fund has likewise been capped at $400 million a year, although annual expenditures have come nowhere near that level. The Low Income Fund has been the focus of repeated state and Federal efforts to increase participation, yet funding has not grown substantially over the past 4 years. The High Cost Fund is clearly the main driver in the growth in the overall Fund and the USF contribution factor.

Within the High Cost Fund, support for competitive eligible telecommunications carriers (ETCs), and more particularly wireless carriers, has been the sole cause of growth since 2003. As shown below, payments to competitive ETCs have soared from $126.7 million in 2003 to $1.2 billion projected for 2007.[7]

[6] The 2007 figures are based on USAC demand projections for the first two quarters, with funding for the third and fourth quarter assumed to be the same as in the second quarter. A graphic display of the growth of each of the funds since 2000 is set forth on *Attachment 5*.

[7] Once again, the 2007 figures for CETCs are based on USAC projections for the first two quarters of 2007, with funding for CETCs for the third and fourth quarters assumed to be the same as the second quarter.



While USF support payments to competitive ETCs have increased tenfold, payments to both rural and non-rural incumbent ETCs have actually declined, as shown below.[8]

Change in Funding to ETCs

[2003–2007]

ETCS	$ Millions		
	2003	2007	Change
Rural Incumbents	2,467.0	2,415.5	−51.5
Non-rural Incumbents	767.9	689.8	−78.1
Competitive ETCs	126.7	1,220.2	1,093.5
Total	*3,361.6*	*4,325.5*	*963.9*

Payments to rural incumbents have been held in check by a cap on the High Cost Loop Fund. This cap does not apply to competitive ETCs. Payments to non-rural incumbents have been limited by loss of lines and a ceiling on the Interstate Access Support Fund.

It should not be surprising that funding for competitive ETCs has increased. After all, before the advent of competition incumbents received 100 percent of high-cost funding. It was expected that as competitors gained ETC status and won customers in high-cost areas, their high-cost funding would rise. What is surprising is that incumbent support has not dropped by an amount proportionate to the increase in competitive ETC funding. In other words, the advent of competition has actually

[8] The totals shown in the table differ slightly from the High Cost Fund totals shown in the table on page 24 because they are not adjusted by interest earnings, administrative costs and out-of-period adjustments.

caused a substantial increase in the size of the High Cost Fund, and increased the burden on all consumers. It did not have to be this way.

III. Competition and the Universal Service Fund

It has often been said that the twin pillars of the 1996 Telecommunications Act were competition and universal service. Competition would allow consumers to enjoy lower prices and better services, while Universal Service would ensure that all Americans, even those in rural and high-cost areas, would share in the benefits. Not only was the introduction of competition expected to lower prices of telecommunications services, it was supposed to lower the cost of Universal Service as providers competed for the Universal Service subsidy. As the House and Senate Reports on the Act stated:

> . . . as the current system of internal and external subsidies is replaced by a system consisting primarily of external subsidies, the total amount of subsidies collected from low-cost customers and passed on to high-cost customers would not change significantly. Over time, CBO [Congressional Budget Office] expects that the operating costs of telephone companies would tend to fall as a result of competitive pressures and the total amount of subsidies necessary would decline.[9]
>
> . . . competition and new technologies will greatly reduce the actual cost of providing Universal Service over time, thus reducing or eliminating the need for Universal Service support mechanisms as actual costs drop to a level that is at or below the affordable rate for such service in an area. . . .[10]

This view was echoed by Senator Stevens during debate on the Act:

> [The Act] opens up the local market to competition while still preserving the concept of universal service. It does so by taking advantage of new technologies which are intended to reduce the cost of all services, including universal service. In fact, I find it interesting that the Congressional Budget Office has said that this bill will reduce the cost of Universal Service from the existing system by at least $3 billion over the next 5 years.[11]

The High Cost Fund began in a monopoly environment prior to the passage of the Act. Since 1996 the FCC has struggled to adapt the USF to a competitive environment where multiple providers could offer the same or similar services to consumers. In implementing the Universal Service provisions of the Act, the FCC initially kept true to the Act's intent. In the First Report and Order on Universal Service, the Commission described its overall approach to universal service:

> . . . Universal Service will be sustainable in a competitive environment; this means both that the system of support must be competitively neutral and permanent, and that all support must be targeted as well as portable among eligible telecommunications carriers. . . . By following the principle of competitive neutrality, we will avoid limiting providers of Universal Service to modes of delivering that service that are obsolete or not cost effective.[12]

The Commission also dealt directly with the issue of which ETC would receive high-cost support:

> We adopt the Joint Board's recommendation to make rural carriers' support payments portable. . . . [A] CLEC [competitive local exchange carrier] that qualifies as an eligible telecommunications carrier shall receive Universal Service support *to the extent that it captures subscribers formerly served by carriers receiving support* based on the modified existing support mechanisms or adds new customers in the ILEC's study area. We conclude that paying the support to a competitive eligible telecommunications carrier that wins the customer or adds a new subscriber would aid entry of competition in rural areas. [Emphasis added.][13]

In short, Universal Service high-cost support, as modified by the Commission for the advent of competition, was a technologically and competitively neutral "zero sum

---

[9] House Report No. 104–204(I) (1995), Arnold & Porter Legislative History Pub. L. 104–104 *(A&P)* at 60.

[10] Senate Report No. 104–23, *A&P* at 254 (1995).

[11] 141 Congressional Record S7881 (1995), *A&P* at 210.

[12] *In re: Federal-State Joint Board on Universal Service*, CC Docket No. 96–45, Report & Order (May 8, 1997); as corrected by Erratum, FCC 97–157 (June 4, 1997) at ¶¶ 19 & 49; aff'd in relevant part sub nom. *Texas Office of Public Utility Counsel* v. *FCC,* 183 F.3d 393 (5th Cir. 1999). This order will be referred to as the "First Report & Order."

[13] First Report & Order, ¶ 311. *See also* ¶¶ 287–289; 312.

game:" the Universal Service subsidy was portable to whichever ETC won the customer. The ETC gaining the customer won the subsidy, the ETC losing the customer lost the subsidy. As part of this framework, the Commission revised its rules to add Section 54.307(a)(4) which stated:

> The amount of Universal Service support provided to such incumbent local exchange carrier shall be reduced by an amount equal to the amount provided to such competitive eligible telecommunications carrier.[14]

The Commission stated that this rule change was necessary to ensure that when a competitive ETC received support for a customer, ". . . the incumbent LEC will lose the support it previously received that was attributable to that customer."[15] The Commission's approach was upheld by the Fifth Circuit Court of Appeals in the case of *Alenco Communications, Inc*. v. *FCC*:

> The FCC must see to it that *both* Universal Service and local competition are realized; one cannot be sacrificed in favor of the other. The Commission therefore is responsible for making the changes necessary to its Universal Service program to ensure that it survives in the new world of competition. . . .
>
> . . . [T]he [FCC's universal service] order provides that the Universal Service subsidy be portable so that it moves with the customer, rather than stay with the incumbent LEC, whenever the customer makes the decision to switch local service providers. . . . The purpose of Universal Service is to benefit the customer, not the carrier. "Sufficient" funding of the customer's right to adequate telephone service can be achieved regardless of which carrier ultimately receives the subsidy.[16] [Emphasis in original.]

Unfortunately, in November 1999, without explanation the Commission abandoned its rulemaking proceeding to define "captured and new lines" and deleted Section 54.307(a)(4) of its rules which had reduced support to an incumbent when a competitive ETC won a customer.[17] Finally, in April 2000, the Commission effectively abandoned the distinction between "new," "captured," and "other" lines served by ETCs, stating ". . . a competitive eligible telecommunications carrier *receives support for each line it serves* based on the support the incumbent local exchange carrier would receive for serving the line."[18]

The unforeseen consequences of these actions have been dramatic. By deciding to support all lines of all ETCs in high-cost areas, the Commission opened the door to supporting multiple wireless networks which supplied supplementary, rather than substitute services. As previously discussed, this supplementary support to wireless ETCs has added a billion dollars to the High Cost Fund since 2003.[19] Far from being a "zero sum game" in which ETCs compete for customers while the size of the Fund stays relatively the same, the current system is a "no losers" support system in which all ETCs receive support for all lines they serve in high-cost areas, no matter how duplicative or costly this additional support may be.[20]

Under the current system, far more than affordable access to the telecommunications network is being provided. The High Cost Fund now provides support to multiple networks in high-cost areas, where previously none had been able to exist without a subsidy. If a customer in a high-cost area receives two landlines from the incumbent wireline ETC, and three wireless phones from a competitive ETC, all of these lines receive high-cost support. Even more bizarre, if the rural incumbent ETC actually loses lines, support for both the incumbent ETC and the competitive ETC will go up as a result of the equal support rule.[21] The result has been a rapid esca-

---

[14] *In re: Federal-State Joint Board on Universal Service*, CC Docket No. 96–45, Fourth Order on Reconsideration (Dec. 30, 1997) at ¶ 84; App. A, Item 6, 47 C.F.R. § 54.307(a)(4).

[15] *Id.*

[16] *Alenco Communications, Inc*. v. *FCC*, 201 F.3d 608, 615 & 621 (5th Cir. 2000).

[17] *In re: Federal-State Joint Board on Universal Service*, CC Docket No. 96–45, Ninth Report & Order and Eighteenth Order on Reconsideration (Nov. 2, 1999), at ¶ 90; App. C, Item 7.

[18] *In re: Federal-State Joint Board on Universal Service*, CC Docket No. 96–45, Order (April 7, 2000), at ¶ 16.

[19] In essence, the USF has created a $1 billion wireless infrastructure fund. This was done without any explicit policy decision or directive by either the Congress or the Commission. It just happened, based on the incentives created by the high-cost support rules.

[20] The fact that multiple providers are able to offer service within a particular area raises the question of whether that area should properly be able to receive continued high-cost support.

[21] The equal support rule, found in 47 C.F.R. § 54.307(a)(1), provides that a competitive ETC will receive per line support equal to the support received by the incumbent ETC. Because the High Cost Loop mechanism is designed to recover an incumbent's full revenue requirement re-

Continued

lation of support as competitive ETCs have rushed in to take advantage of the rules created by the FCC.

One outrageous example of the current system is found in the AT&T (BellSouth) service territory in Mississippi. AT&T as the incumbent non-rural carrier receives $101.2 million in High Cost Support annually. In addition, there are sixteen (16) other competitive ETCs receiving $118.5 million in High Cost Support annually for providing service in the same study area.[22] Most of this CETC support goes to wireless ETCs, including $59.1 million to AT&T's wireless subsidiary, Cingular. While there is no doubt that Mississippi is a high-cost area, the Act's requirement to provide affordable access does not require providing subsidies to multiple networks serving the same customers. The current system of providing support to all lines of all ETCs in high-cost areas must be ended if we are to have rational and sustainable high-cost support system.

Because of the complex, disparate and often unrelated bases of the different high-cost support mechanisms, and the rapidly escalating size of the High Cost Fund caused by increasing payments to competitive ETCs, the Joint Board has begun to look at new alternatives to bring rationality back to the High Cost Fund. One of these proposals is reverse auctions; another is newer, more sophisticated modeling and more precise targeting of support based on new mapping technology. These proposals will need much work before it is determined if they are ready to be implemented on a national or even a pilot project scale.

Unfortunately, while we contemplate these proposals, the Fund will continue to grow to an ever more unsustainable size. The High Cost Fund has increased by $1 billion over the past 3 years driven by new payments to competitive ETCs. In addition, the FCC currently has pending before it over thirty (30) applications for ETC status from wireless carriers, including two from Cingular for the states of Virginia and Georgia. The FCC has estimated that if it grants all of the ETC applications pending today, the High Cost Fund will rise to $5.5 billion by 2009. If Cingular, the largest wireless carrier, continues to seek ETC status, Verizon Wireless, the second largest, will be forced to follow suit. The result will be a High Cost Fund surpassing $6 billion and approaching $7 billion. A fund of this size will not only impose unacceptable burdens on American consumers, but will severely limit our ability to add new services, such as broadband, to the list of services supported by universal service.

As a result, the Joint Board is currently considering several proposals to cap the High Cost Fund while we consider long-term solutions on how to adapt the Universal Service system to the new competitive environment by properly targeting support and ensuring that the Fund does not grow to an unsustainable size. In fact, one of the difficulties confronting policymakers in this area is the lack of any upward limit on the Fund expressed by Congress. It is interesting to note that in the currently pending S. 101, the *Universal Service for Americans Act*, Section 202 creates a $500 million a year Broadband for Unserved Areas Program. This is similar to funding under the existing cap on the Schools and Libraries Fund. Moreover, Section 202 makes clear that distributions from the Broadband fund may only be made to one facilities-based broadband provider in each unserved area. Based on the wording of Section 202, policymakers know exactly how much they have to spend, and can then attend to the issues of how to equitably distribute the Fund in accordance with the principles established by Congress. While a limitless Universal Service Fund may have made sense when we were faced with making previous implicit subsidies explicit, eleven years after the passage of the Act it may be time for Congress to also express its opinion on the ultimate size of the High Cost Fund.

IV. The Contribution Base

Ensuring the long-term sustainability of the Fund will require not only controlling the size and distribution of the fund, but also broadening the contribution base. Moreover, until the distribution and sizing issues are solved, it is not likely that a consensus will develop concerning how to address the contribution base.

The funding base for the USF has not kept pace with the growth in the fund, resulting in higher and higher USF assessments on carriers and their customers. The contribution base problem stems in large part from the wording of the Act itself.

---

gardless of the number of lines served, the loss of lines by the incumbent will increase per line support, all other things being equal.

[22] Universal Service Administrative Company, *Federal Universal Service Support Mechanisms Fund Size Projections for the First Quarter 2007* (Nov. 2, 2006), App. HC01. Ironically, if AT&T's support in Mississippi was determined under the rural support mechanism, its support for 2007 would fall from $101.2 million to $24.7 million. *See,* National Exchange Carrier Association, *Submission of 2005 USF Study Results* (Sept. 29, 2006), App. E. Because of the equal support rule, the support paid to competitive ETCs would fall as well.

Section 254(b)(4) states that: "*All providers of telecommunications services* should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service." However, Section 254(d) states: "Every telecommunications carrier that provides *interstate telecommunications services* shall contribute on an equitable and non-discriminatory basis, to the specific, predictable, and sufficient mechanisms established by the Commission to preserve and advance universal service." In other words, even though the principle set forth in the Act is that *all* telecommunications providers should contribute to the fund, and even though the Fund benefits all areas of the country, Section 254(d) limits the obligation to support the Fund to a subset of telecommunications carriers—providers of *interstate* telecommunications services.[23]

In 1997 the FCC decided to base the funding for the high-cost and low-income support mechanisms on each carrier's interstate and international revenue, while the funding for schools and libraries and rural health support mechanisms were supported by assessments on all revenues, interstate and intrastate. The use of intrastate revenues for USF assessment purposes was struck down by the Fifth Circuit Court of Appeals in 1999.[24] Since that time the contribution base for the USF has been limited to only interstate and international revenues. As the USF has grown, and as the interstate revenue base has leveled off, the assessment rate has increased rapidly.

So long as interstate revenues grew at a reasonable rate, the ultimate impact of fund growth on the USF assessment rate and customers' bills was fairly moderate. However, beginning in 2000 interstate revenue growth began to flatten out, and during 2002 started to decline. The result has been a steep escalation in the USF assessment rate, from 5.7 percent in the fourth quarter of 2000 to 9.7 percent in the first quarter of 2007.[25] Based on the latest projections from USAC, the assessment factor for the second quarter of 2007 is likely to exceed 11 percent.

There are several alternatives available in order to broaden the USF contribution base. One alternative would be to retain the current system, but remove restrictions in current rules which artificially depress the existing interstate revenue contribution base. One such restriction is the so-called "safe harbors" which limit the contribution responsibility of certain classes of carriers, such as wireless carriers and Voice over Internet Protocol (VoIP) carriers. Another restriction limits the contributions from broadband providers, one of the fastest growing areas of telecommunications. Currently, providers of broadband are exempt from paying to support the USF.[26] If the Commission includes broadband in the list of USF supported services, it is obvious that broadband providers should also contribute to the Fund.

A second alternative would be to grant the FCC the authority to base contributions to the Fund on total telecommunications revenues. Shown on *Attachment 6* is a comparison of changes in the Universal Service Fund, the interstate revenue base, and total telecommunications revenues from 1997 to 2007.[27] As you can see, total telecommunications revenues currently amount to approximately $230 billion and would provide an adequate funding base for the USF. In fact, if total telecommunications revenues had been used as the funding base from the start, we would not be discussing this issue today. The growth in the Fund could have been accommodated while keeping the assessment rate around 3 percent.

Use of total revenues would also eliminate disputes about whether revenues are intrastate or interstate, and would equitably spread the obligation to support Universal Service to all providers and to all customers based on their use of the network. However, basing Federal Universal Service on total revenues would require a statutory change to clarify that the FCC has the authority to base contributions on all revenues, intrastate as well as interstate. In addition, a total revenues base could be susceptible to erosion in the future as more and more traffic, including voice traffic, migrates to the Internet and is classified as "information services," cur-

---

[23] As a practical matter, virtually all telecommunications carriers provide some sort of interstate service.

[24] *Texas Office of Public Utility Counsel* v. *FCC*, 183 F.3d 393 (5th Cir. 1999) at 448.

[25] These increases have been flowed through to most customers by means of line items. Beginning in the second quarter of 2003, carriers can no longer mark up these assessments, but can only flow through the assessment rate approved by the Commission.

[26] Digital subscriber line service (DSL) providers previously paid into the Fund, but were exempted by FCC action in 2006.

[27] On *Attachment 6* USF Funding and the Interstate Revenue Base are taken from USAC reports. The Total Revenue Base is taken from the FCC's Trends in Telephone Service reports. The funding base for 1997 is estimated. Beginning in the second quarter of 2003, the USF funding base has been based on carriers' projected revenue collections.

rently exempt from USF assessment.[28] Finally, in order to prevent any uncertainty concerning state authority, any statutory change to allow assessment of total telecommunications revenues for the Federal Fund should specify that states have the reciprocal right to use total revenues as the basis for assessments for state Universal Service programs.

A third alternative would be to base assessments on connections to the public switched telephone network, or on assigned telephone numbers. The FCC has considered several such proposals over the past few years. While these connection-based or numbers-based proposals do enlarge the base of the USF, and minimize problems with classification of services or revenues as information services, they do have several flaws: (1) each proposal radically shifts the funding of the USF among industry groups; (2) each proposal appears to exempt pure providers of interstate long distance from making any contribution to the Fund in contravention of the plain wording of Section 254(d); (3) each proposal requires capacity-based connection equivalents for high-capacity customers; and (4) each proposal shifts responsibility for payment of USF charges from high-use to low-use customers.

A final alternative, which my office has proposed to the FCC, would be a hybrid of the proposals described above. For example, the Commission could continue to base 50 percent of the Universal Service assessment on interstate revenues, and assess the remaining 50 percent on end-user connections to the public switched network. Such a hybrid would not require a statutory change and would ensure that all providers of interstate services, even those that did not provide end-use connections, would continue to contribute to support universal service. In addition, this 50/50 hybrid approach would mitigate impacts on low-usage customers, and result in contributions from various industry sectors that are very close to those produced by use of total telecommunications revenues.

In this regard, I should note that Section 101(a) of the *Universal Service for Americans Act* is particularly helpful. Section 101(a) empowers the Commission to assess for Universal Service based upon interstate revenues, intrastate revenues, connections, numbers, capacity or any combination of these methods. In short, Section 101(a) provides the Commission with a full set of tools to address different contribution circumstances that may arise as the telecommunications marketplace evolves.[29] Moreover, Section 101(a) also provides reciprocal flexibility for state commissions in assessing providers to support state Universal Service funds.

In finding a solution to the contribution base problem, I agree with Senator Stevens of Alaska who has previously said: "All companies that use the network, in my judgment, should contribute to universal service, regardless of the type of service they provide."[30] I believe we must expand contribution responsibility to encompass all revenues and all services that connect to the telecommunications network. Since all benefit, all should contribute.

V. Conclusion

In order to be stable and sustainable in the long-term, the USF must be configured like a pyramid: it must have a broad and stable base of contributions at the bottom, and a narrow but sufficient distribution of support at the top. The current Universal Service Fund requires work on both ends of this structure. Issues related to the contribution base must be resolved. Since all benefit, all should contribute. In addition, the limited resources of the Fund must be properly distributed and targeted to carry out the purposes of the Act. In order to continue the public policy success of the Universal Service Fund, we must support access, not excess.

---

[28] It should be noted that the FCC already has the discretionary power under 254(d) to require contributions from any other provider of interstate telecommunications "if the public interest so requires."

[29] For this same reason, I oppose Section 206 of the *Universal Service for Americans Act*, which prohibits the use of primary lines in distributing support. As discussed above, the major problem confronting the Fund currently is on the distribution side. Congress should broaden, not limit, the tools available to the Commission in addressing the problems of adapting the USF to competition.

[30] *TR Daily,* March 26, 2003.

ATTACHMENT 1

Federal Universal Service Support
[Ranked by Support in Each State]
[2005 Disbursements in Millions]

State	High cost support	Low income support	Rural health support	Schools & libraries support	Total support
	$ Millions				
1 California	98.9	304.7	0.5	220.8	624.9
2 Texas	230.0	72.3	0.1	274.2	576.6
3 New York	51.8	52.5	0.0	298.3	402.6
4 Mississippi	209.3	3.6	0.1	29.4	242.4
5 Oklahoma	120.2	32.4	0.1	44.0	196.7
6 Kansas	178.7	3.1	0.3	10.6	192.7
7 Georgia	111.7	8.3	0.1	50.1	170.2
8 Florida	91.5	17.8	0.1	53.4	162.8
9 Wisconsin	130.2	8.8	1.0	21.0	161.0
10 Arkansas	141.0	2.4	0.1	15.7	159.2
11 Alaska	120.3	7.4	14.9	15.9	158.5
12 Louisiana	111.2	2.4	0.0	41.5	155.1
13 Pennsylvania	65.5	19.2	0.1	67.1	151.9
14 Puerto Rico	133.8	13.3	0.0	3.0	150.1
15 Illinois	63.5	9.3	0.2	73.4	146.4
16 Alabama	109.3	3.2	0.0	28.0	140.5
17 Minnesota	113.4	6.0	0.8	19.9	140.1
18 North Carolina	80.2	14.5	0.2	37.0	131.9
19 Arizona	74.6	20.3	0.7	36.0	131.6
20 Washington	94.4	19.8	0.1	16.7	131.0
21 Ohio	37.8	35.0	0.0	57.4	130.2
22 Missouri	85.2	5.4	0.1	36.3	127.0
23 Tennessee	54.7	6.1	0.1	59.5	120.4
24 Kentucky	83.6	7.5	0.7	26.5	118.3
25 Virginia	87.3	2.3	0.3	25.2	115.1
26 South Carolina	76.3	2.9	0.0	27.6	106.8
27 Iowa	90.3	6.2	0.2	10.1	106.8
28 Michigan	53.6	11.4	0.7	34.7	100.4
29 Colorado	79.3	3.5	0.1	11.3	94.2
30 South Dakota	77.8	7.3	0.5	5.4	91.0
31 New Mexico	58.5	10.7	0.3	17.8	87.3
32 Oregon	68.5	7.3	0.0	11.4	87.2
33 Montana	76.7	2.6	0.5	3.8	83.6
34 Indiana	56.6	5.7	0.1	12.5	74.9
35 West Virginia	66.3	0.7	0.1	7.7	74.8
36 North Dakota	62.7	3.8	0.5	3.0	70.0
37 Nebraska	55.9	2.4	0.7	6.3	65.3
38 Idaho	55.1	3.9	0.2	2.8	62.0
39 Wyoming	56.6	1.4	0.1	0.7	58.8
40 New Jersey	1.3	14.5	0.0	39.4	55.2
41 Maine	28.8	8.8	0.1	9.1	46.8
42 Vermont	35.2	2.8	0.0	1.2	39.2
43 Massachusetts	3.6	14.3	0.0	21.0	38.9
44 Nevada	29.6	4.1	0.0	3.2	36.9
45 Utah	23.6	2.9	0.4	7.5	34.4
46 Hawaii	29.5	0.7	0.3	1.8	32.3
47 Connecticut	2.2	5.3	0.0	19.3	26.8
48 Virgin Islands	22.6	0.2	0.1	3.9	26.8
49 Guam	19.2	0.4	0.0	3.1	22.7
50 Maryland	4.3	0.5	0.0	12.7	17.5
51 D.C.	0.0	0.9	0.0	10.8	11.7
52 Rhode Island	0.0	4.6	0.0	6.9	11.5
53 New Hampshire	8.7	0.6	0.0	1.7	11.0
54 American Samoa	2.3	0.1	0.0	2.4	4.8
55 N. Mariana Is.	0.7	0.1	0.0	1.4	2.2
56 Delaware	0.3	0.3	0.0	0.4	1.0
Total	3,824.2	808.5	25.5	1,861.8	6,520.0

Note: Numbers may not add due to rounding. Annual support amounts less than 50,000 show as 0 due to rounding. Support amounts shown are actual amounts disbursed. Amounts assessed and collected may be higher.

Source: USAC 2005 Annual Report NECA 2005 Annual USF Filing.

ATTACHMENT 2

Federal Universal Service Support
[Ranked by Support in Each State]
[2005 Disbursements in Millions]

State	High cost support	Low income support	Rural health support	Schools & libraries support	Total support	Total lines	Monthly support per line
	$ Millions						
1 American Samoa	2.3	0.1	0.0	2.4	4.8	10,872	36.79
2 Virgin Islands	22.6	0.2	0.1	3.9	26.8	69,425	32.17
3 Alaska	120.3	7.4	14.9	15.9	158.5	414,396	31.87
4 Guam	19.2	0.4	0.0	3.1	22.7	67,059	28.21
5 South Dakota	77.8	7.3	0.5	5.4	91.0	348,183	21.78
6 Wyoming	56.6	1.4	0.1	0.7	58.8	289,052	16.95
7 North Dakota	62.7	3.8	0.5	3.0	70.0	347,899	16.77
8 Mississippi	209.3	3.6	0.1	29.4	242.4	1,328,966	15.20
9 Montana	76.7	2.6	0.5	3.8	83.6	506,462	13.76
10 Kansas	178.7	3.1	0.3	10.6	192.7	1,380,168	11.64
11 Puerto Rico	133.8	13.3	0.0	3.0	150.1	1,180,127	10.60
12 Arkansas	141.0	2.4	0.1	15.7	159.2	1,371,860	9.67
13 Oklahoma	120.2	32.4	0.1	44.0	196.7	1,732,719	9.46
14 Vermont	35.2	2.8	0.0	1.2	39.2	407,202	8.02
15 New Mexico	58.5	10.7	0.3	17.8	87.3	940,723	7.73
16 N. Mariana Is.	0.7	0.1	0.0	1.4	2.2	24,480	7.49
17 Idaho	55.1	3.9	0.2	2.8	62.0	714,999	7.23
18 Nebraska	55.9	2.4	0.7	6.3	65.3	815,003	6.68
19 West Virginia	66.3	0.7	0.1	7.7	74.8	980,333	6.36
20 Iowa	90.3	6.2	0.2	10.1	106.8	1,540,622	5.78
21 Louisiana	111.2	2.4	0.0	41.5	155.1	2,268,720	5.70
22 Alabama	109.3	3.2	0.0	28.0	140.5	2,275,897	5.14
23 Kentucky	83.6	7.5	0.7	26.5	118.3	2,003,264	4.92
24 Maine	28.8	8.8	0.1	9.1	46.8	808,894	4.82
25 Wisconsin	130.2	8.8	1.0	21.0	161.0	3,089,638	4.34
26 Minnesota	113.4	6.0	0.8	19.9	140.1	2,703,043	4.32
27 Arizona	74.6	20.3	0.7	36.0	131.6	2,577,209	4.26
28 Texas	230.0	72.3	0.1	274.2	576.6	11,590,562	4.15
29 South Carolina	76.3	2.9	0.0	27.6	106.8	2,174,893	4.09
30 Hawaii	29.5	0.7	0.3	1.8	32.3	665,486	4.04
31 Oregon	68.5	7.3	0.0	11.4	87.2	1,933,674	3.76
32 Missouri	85.2	5.4	0.1	36.3	127.0	3,247,315	3.26
33 Tennessee	54.7	6.1	0.1	59.5	120.4	3,085,923	3.25
34 Washington	94.4	19.8	0.1	16.7	131.0	3,419,234	3.19
35 Georgia	111.7	8.3	0.1	50.1	170.2	4,611,880	3.08
36 Colorado	79.3	3.5	0.1	11.3	94.2	2,606,818	3.01
37 New York	51.8	52.5	0.0	298.3	402.6	11,284,257	2.97
38 Utah	23.6	2.9	0.4	7.5	34.4	1,056,543	2.71
39 California	98.9	304.7	0.5	220.8	624.9	21,285,036	2.45
40 Nevada	29.6	4.1	0.0	3.2	36.9	1,267,684	2.43
41 North Carolina	80.2	14.5	0.2	37.0	131.9	4,596,547	2.39
42 Virginia	87.3	2.3	0.3	25.2	115.1	4,290,319	2.24
43 Rhode Island	0.0	4.6	0.0	6.9	11.5	491,107	1.95
44 Indiana	56.6	5.7	0.1	12.5	74.9	3,492,042	1.79
45 Pennsylvania	65.5	19.2	0.1	67.1	151.9	7,345,084	1.72
46 Ohio	37.8	35.0	0.0	57.4	130.2	6,372,077	1.70
47 Illinois	63.5	9.3	0.2	73.4	146.4	7,323,440	1.67
48 Michigan	53.6	11.4	0.7	34.7	100.4	5,688,091	1.47
49 Florida	91.5	17.8	0.1	53.4	162.8	10,356,878	1.31
50 D.C.	0.0	0.9	0.0	10.8	11.7	791,292	1.23
51 New Hampshire	8.7	0.6	0.0	1.7	11.0	754,305	1.22
52 Connecticut	2.2	5.3	0.0	19.3	26.8	2,135,021	1.05
53 Massachusetts	3.6	14.3	0.0	21.0	38.9	3,779,199	0.86
54 New Jersey	1.3	14.5	0.0	39.4	55.2	5,983,090	0.77
55 Maryland	4.3	0.5	0.0	12.7	17.5	3,606,266	0.40
56 Delaware	0.3	0.3	0.0	0.4	1.0	546,439	0.15
Total	3,824.2	808.5	25.5	1,861.8	6,520.0	165,977,717	3.27

Note: Numbers may not add due to rounding. Annual support amounts less than $50,000 show as $0 due to rounding.

Support amounts shown are actual amounts disbursed. Amounts assessed and collected may be higher.

Source: USAC 2005 Annual Report NECA 2005 Annual USF Filing.

ATTACHMENT 3

Net Universal Service Support Payments by State: 2005

[Annual Payments and Contributions in Thousands]

[Sorted by Net Support Received]

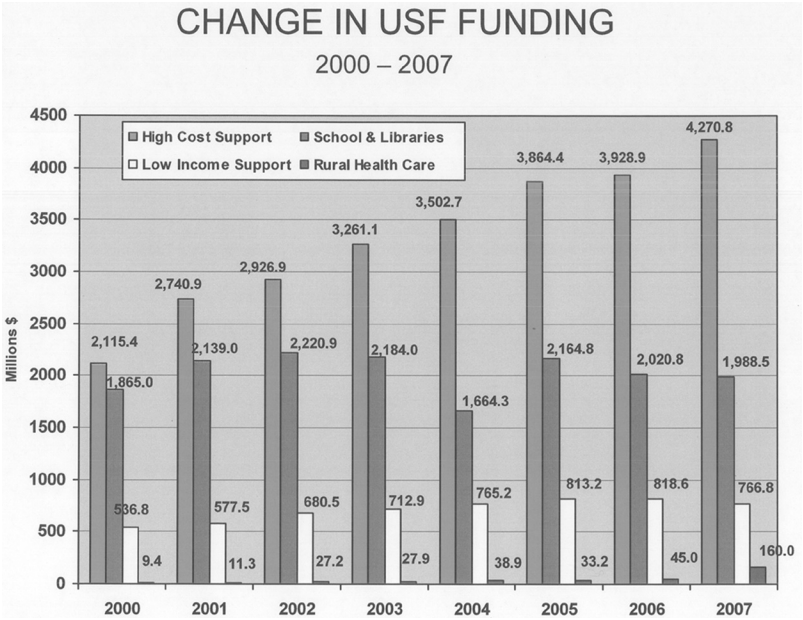
State or jurisdiction	Payments from USF to service providers*					Estimated contributions**	Estimated net dollar flow***
	High-cost support	Low-income support	Schools & libraries	Rural health care	Total		
Florida	$91,450	$17,761	$53,437	$107	$162,755	$474,550	−$311,795
New Jersey	1,332	14,530	39,404	0	55,266	246,120	−190,854
Maryland	4,327	502	12,644	0	17,473	147,285	−129,812
Pennsylvania	65,504	19,156	67,149	75	151,884	276,859	−124,975
Illinois	63,506	9,291	73,442	196	146,435	267,388	−120,953
Massachusetts	3,634	14,270	20,954	0	38,858	157,471	−118,613
Ohio	37,754	35,022	57,444	45	130,265	224,776	−94,511
California	98,866	304,668	220,789	456	624,779	716,580	−91,801
Michigan	53,575	11,425	34,722	694	100,416	187,795	−87,379
Virginia	87,312	2,257	25,263	299	115,131	193,412	−78,281
Connecticut	2,249	5,315	19,307	0	26,871	100,797	−73,926
North Carolina	80,179	14,504	36,946	149	131,778	200,447	−68,669
Indiana	56632	5,716	12,516	112	74,976	122,711	−47,735
Georgia	111,693	8,282	50,126	114	170,215	212,680	−42,465
Nevada	29,639	4,075	3,166	36	36,916	68,888	−31,972
Colorado	79,277	3,514	11,256	120	94,167	121,551	−27,384
Delaware	259	277	377	0	913	24,842	−23,929
New Hampshire	8,732	632	1,736	2	11,102	34,363	−23,261
Dist. of Columbia	0	893	10,840	0	11,733	31,241	−19,508
Utah	23,579	2,927	7,542	363	34,411	49,090	−14,679
Washington	94,387	19,823	16,679	64	130,953	145,534	−14,581
Rhode Island	44	4,622	6,925	0	11,591	22,577	−10,986
Tennessee	54,684	6,141	59,517	61	120,403	125,508	−5,105
New York	51,833	52,544	298,250	6	402,633	406,561	−3,928
Missouri	85,146	5,396	36,291	118	126,951	126,036	915
Northern Mariana Is.	668	85	1,364	0	2,117	1,056	1,061
Hawaii	29,525	694	1,812	277	32,308	28,039	4,269
American Samoa	2,318	60	2,421	0	4,799	184	4,615
Oregon	68,469	7,307	11,394	22	87,192	82,192	5,000
Arizona	74,550	20,310	36,008	675	131,543	125,949	5,594
South Carolina	76,322	2,869	27,579	41	106,811	95,834	10,977
Maine	28812	8,795	9,099	49	46,755	29,995	16,760
Guam	19,165	421	3,093	0	22,679	3,402	19,277
Virgin Islands	22,618	158	3,976	102	26,854	6,739	20,115
Vermont	35,244	2,842	1,236	20	39,342	16,024	23,318
Nebraska	55,890	2,406	6,254	746	65,296	37,675	27,621
Idaho	55,055	3,923	2,797	153	61,928	32,363	29,565
West Virginia	66,318	710	7,658	91	74,777	42,624	32,153
Minnesota	113,352	5,993	19,911	845	140,101	106,743	33,358
Kentucky	83,600	7,537	26,481	720	118,338	80,627	37,711
New Mexico	58,511	10,655	17,819	293	87,278	45,014	42,264
Wyoming	56,598	1,395	684	100	58,777	14,719	44,058
Alabama	109,343	3,224	28,023	19	140,609	95,271	45,338
Iowa	90,336	6,198	10,042	186	106,762	60,490	46,272
Wisconsin	130,225	8,829	21,021	940	161,015	111,194	49,821
North Dakota	62,718	3,804	2,956	503	69,981	14,669	55,312
Montana	76,731	2,631	3,807	542	83,711	23,456	60,255
Louisiana	111,241	2,414	41,487	5	155,147	90,833	64,314
South Dakota	77,788	7,280	5,434	469	90,971	15,846	75,125
Puerto Rico	133,786	13,286	2,966	0	150,038	52,930	97,108
Arkansas	140,997	2,369	15,662	120	159,148	58,606	100,542
Oklahoma	120,188	32,358	44,003	129	196,678	74,099	122,579
Kansas	178,684	3,149	10,545	290	192,668	58,672	133,996
Alaska	120,274	7,374	15,909	14,949	158,506	22,070	136,436
Texas	230,017	72,330	274,218	132	576,697	434,538	142,159
Mississippi	209,251	3,619	29,364	133	242,367	58,511	183,856
Total	$3,824,187	$808,568	$1,861,745	$25,568	$6,520,068	$6,605,426	−$85,358

ATTACHMENT 4

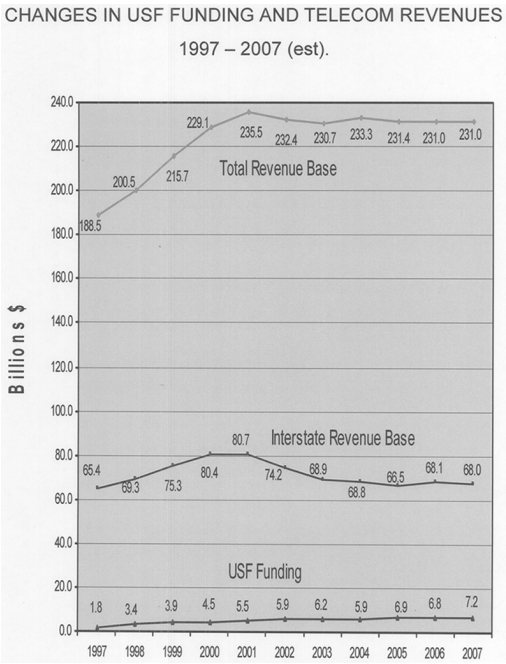
Monthly Net USF Payments per Loop 2005
[Sorted by Net Payments Per Loop]

State or jurisdiction	USF Loops	Net USF payments	Monthly net payments per loop
Delaware	530,802	−$23,929,000	−$3.76
Maryland	3,483,388	−129,812,000	−3.11
Connecticut	1,997,944	−73,926,000	−3.08
New Jersey	5,577,359	−190,854,000	−2.85
Massachusetts	3,529,151	−118,613,000	−2.80
New Hampshire	719,375	−23,261,000	−2.69
Florida	9,875,661	−311,795,000	−2.63
Nevada	1,248,633	−31,972,000	−2.13
Rhode Island	431,042	−10,986,000	−2.12
Dist. of Columbia	766,942	−19,508,000	−2.12
Virginia	4,097,788	−78,281,000	−1.59
Pennsylvania	7,034,040	−124,975,000	−1.48
Illinois	6,944,463	−120,953,000	−1.45
Michigan	5,105,300	−87,379,000	−1.43
Ohio	5,887,158	−94,511,000	−1.34
North Carolina	4,362,919	−68,669,000	−1.31
Indiana	3,317,961	−47,735,000	−1.20
Utah	1,022,713	−14,679,000	−1.20
Colorado	2,474,508	−27,384,000	−0.92
Georgia	4,416,698	−42,465,000	−0.80
Washington	3,259,380	−14,581,000	−0.37
California	20,610,893	−91,801,000	−0.37
Tennessee	2,987,705	−5,105,000	−0.14
New York	10,230,291	−3,928,000	−0.03
Missouri	3,081,156	915,000	0.02
Arizona	2,419,556	5,594,000	0.19
Oregon	1,855,141	5,000,000	0.22
South Carolina	2,073,761	10,977,000	0.44
Hawaii	632,638	4,269,000	0.56
Texas	10,945,498	142,159,000	1.08
Minnesota	2,565,929	33,358,000	1.08
Wisconsin	2,877,855	49,821,000	1.44
Kentucky	1,904,145	37,711,000	1.65
Alabama	2,196,302	45,338,000	1.72
Maine	767,662	16,760,000	1.82
Iowa	1,468,226	46,272,000	2.63
Louisiana	2,002,682	64,314,000	2.68
West Virginia	953,275	32,153,000	2.81
Nebraska	764,517	27,621,000	3.01
Idaho	694,630	29,565,000	3.55
New Mexico	909,041	42,264,000	3.87
Northern Mariana Is.	22,770	1,061,000	3.88
Vermont	397,603	23,318,000	4.89
Oklahoma	1,635,403	122,579,000	6.25
Arkansas	1,313,238	100,542,000	6.38
Puerto Rico	1,158,243	97,108,000	6.99
Kansas	1,284,666	133,996,000	8.69
Montana	480,860	60,255,000	10.44
Mississippi	1,250,753	183,856,000	12.25
Wyoming	273,429	44,058,000	13.43
North Dakota	332,667	55,312,000	13.86
South Dakota	333,770	75,125,000	18.76
Virgin Islands	68,956	20,115,000	24.31
Guam	65,044	19,277,000	24.70
Alaska	389,001	136,436,000	29.23
American Samoa	10,956	4,615,000	35.10
Total	151,029,353	−$85,358,000	

ATTACHMENT 5



ATTACHMENT 6



STATEMENT OF HON. DANIEL K. INOUYE, U.S. SENATOR FROM HAWAII

The CHAIRMAN. I thank you very much, Director Gregg. And I thank the panel very much.

We will begin our questioning with Vice Chairman Stevens.

Senator STEVENS. Well, thank you very much, Mr. Chairman. You haven't made your opening statement. Do you want to make the opening statement?

The CHAIRMAN. It will be made part of the record.

Senator STEVENS. I'll make mine part of the record, too, then.

[The prepared statements of Senators Inouye and Stevens follow:]

PREPARED STATEMENT BY HON. DANIEL K. INOUYE, U.S. SENATOR FROM HAWAII

Today's hearing on Universal Service returns the Committee to familiar territory. Indeed, it was just over a decade ago that we created Section 254 of the Communications Act, which provided the Federal Communications Commission with statutory authority to create a system of explicit support to preserve and advance the goals of universal service.

While it may be familiar territory, today's Universal Service system faces new challenges, brought on by shifts in the way that Americans communicate and by the steady emergence of new communications platforms.

Without question, when it comes to Universal Service reform, we face a difficult task in balancing competing equities to promote the goals of Universal Service in a manner that will achieve a fair result. These issues are complicated, and radical solutions often promise more than they can deliver.

If we are to move forward in fashioning a system that is both flexible enough to adapt to changes in the marketplace and rock-solid in its commitment to promoting reasonably comparable communications services at reasonably comparable rates, then all of us—industry, regulators, and Members of this Committee—will need to roll up our sleeves, and work toward proposals that will result in meaningful progress and a firmer footing for the stability and sufficiency of the Universal Service Fund.

I am hopeful that today's hearing, featuring two distinguished panels, will begin this constructive discussion.

PREPARED STATEMENT OF HON. TED STEVENS, U.S. SENATOR FROM ALASKA

I would like to thank the Chairman for scheduling this hearing. Senator Inouye has been a great leader and friend with respect to Universal Service ever since we began working together to achieve the same phone rates in Alaska and Hawaii as in the rest of the country.

As communications technologies advance and evolve, the mission of Universal Service continues. The 1996 Telecommunications Act locked in certain aspects of the Universal Service program that made sense in 1996 but that now need to be revisited. Chief among these is how the program is supported.

Last Congress, this committee worked in a bipartisan fashion to reach consensus on how to update Universal Service contributions and ensure that all communications carriers are covered. S. 101, the USA Act, reflects the work that the Committee engaged in last year. This would result in a more rational approach with a smaller fee on most consumer phone bills. For the elderly, who could have been disproportionately impacted, we created an exception. The bill also ensures that no technology is excluded from being able to receive Universal Service funds. While there seems to be consensus relative to Universal Service contributions, there are a number of issues before the FCC relative to distributions that do not yet have consensus. I expect that we will hear about proposals for reverse auctions and other ways to limit Universal Service spending today, and I look forward to that discussion.

Fiscal controls are important, so long as they do not undercut Universal Service's mission to deliver communications service to rural America. I will listen today to understand how any proposal ensures that the network costs of rural carriers will be sufficiently supported. In addition, I hope witnesses will explain what mechanisms will exist to allow carriers to make new investment to bring new and essen-

tial services to rural America. Unless these and other concerns are addressed, I do not see how the FCC can move forward to implement some of these proposals.

I look forward to working with my colleagues to address contribution reform in this Congress, and to better understand what options the FCC is looking at to address the distribution methodology in a way that will not disadvantage rural America.

Senator STEVENS. I congratulate the panel. You really have presented the viewpoints of your own entities and yourselves on probably the most difficult problem we face. And it does seem to me that somehow or other we have to devise a way to have an adjustment period to get back to the point where there is just one subsidy involved in these areas of very high cost. Has anyone got any idea how to do that? Now, you've heard my comments before. I think reverse auctions will just do no more than bring in national concerns that'll absolutely wipe out all the local carriers who have pioneered these lines in the past, which I think is very unfair. But, on the other hand, I also think that those legacy carriers have got to adjust, and they've got to have some way to become broadband providers. Some of you have suggested that that be on the basis of grants. So, let me ask all of you. Would you envision those grants would come from the Fund?

Mr. BURKE. I think I was probably the one that fired that idea, Senator. And the way I had envisioned, to this point in time, is that, certainly, the Fund could be used as the vehicle. I felt that a matching type of grant, using the states as the bellwether, would be a particularly good way of doing it, because, number one, it would give the states an incentive to be targeting extremely well; and, number two, the states probably are the best vehicle to target. Whether or not it was through the Fund or through a separate entity, I really have no particular opinion. But I do think, if you did do it through the Fund, that a matching grant proposal at least has the attraction of being focused, targeted, and, therefore, limited in scope by that close targeting, in conjunction with the states, and allow, therefore, the pressure on the Fund to be not undue.

Mr. GREGG. Senator Stevens, I think that the approach that was set forth in the Universal Service for Americans Act, S. 101, section 202, which set up the broadband fund of a half a billion dollars, was the appropriate concept that we could use for the high-cost fund, as well. As set forth in section 202 of the Universal Service for Americans Act, the support is limited to a single facilities-based provider per unserved area. That is a rational way to target and maximize the benefit of that type of program. I would conceive that this broadband fund should be a part of the overall Universal Service Fund. And I also endorse the approach given by Commissioner Burke; having the states have to pony up their own money, so that it's a joint State-Federal effort to bring broadband to all Americans, I think, is a very good idea.

Obviously, policymakers deciding how much they have to spend for a particular policy, and establishing principles to guide its distribution, is the way we're used to working. One of the things that's unusual about the high-cost fund is, there's no limit. That might have made sense in 1996, when we knew we were going to have to make implicit subsidies explicit, but 11 years down the road

now, it may be time for this Congress to express its opinion as to what upward limit there should be on the high-cost fund, as well.

Senator STEVENS. What do you think about that, Mr. Copps?

Mr. COPPS. I think if we're going to go down that road of general grants, which is not a bad idea, we have to talk, first of all, about coordination with other programs that are out there, because we already have initiatives like Rural Utility Service grants and things like that, so there has to be a strategy for all of this. But I think if we just look at the Fund and how to make it credible, if we would go to the intrastate funding that I was talking about, if we would have broadband paying in, as well as receiving, thereby greatly expanding the revenue base of the Fund, and given that we've already tried to true-up wireless and VoIP and do the oversight—I think we would have a fairly viable approach to Universal Service.

Senator STEVENS. Would you change the Commission's current position that the broadband carrier would receive support based upon the cost of the legacy carrier?

Mr. COPPS. I think that's something we can look at. I just want to make sure rural carriers and rural consumers have access to what they need. So, can we maybe look at that basis? Yes. But, you know, it really concerns me to see so many of the large companies selling off rural exchanges. That puts the burden on any company coming in and really put broadband out to rural consumers. The burden falls on these rural carriers. So, yes, I'm alive to having the oversight and making sure that the distribution is disciplined, but there has to be that ability to cover the legitimate costs of getting advanced telecommunications to all consumers in all states.

Senator STEVENS. Mr. Landis, thanks for your comment about my Hoosier background, but what do you think about this comment about the concept of having the states and the Federal agencies in a partnership, in terms of bringing on this broadband conversion?

Mr. LANDIS. Mr. Vice Chairman, I would agree with my colleagues. And I would add that I think there's strong agreement among all of us on the Joint Board in that regard. I think in many states the Governors are looking at broadband as an economic development tool. So, in addition to just looking at it as a communications tool, it becomes an economic development tool. I believe the states would readily opt into the opportunity to add to and to grow funds to develop those areas that are underserved and most difficult and most costly to reach. In Wyoming, for example, they've undertaken a very extensive study at a very granular level to determine not only the cost of serving all unserved areas in the state, but to determine the least-cost mode of doing so for each unserved area. If you coupled that, for example, with an auction which allows all intermodal competitors to bid, but set a ceiling on the cost, which is the lowest cost, then you have a level playing field opportunity for all intermodal competitors and, at the same time, secure build-out for the least amount of funds expended to get to those highest-cost areas.

Senator STEVENS. Thank you very much. My time's up. I don't know that other areas have the same problem we do. Our tele-medicine, our tele-education, out tele-conferencing for disasters are all tied to this system that currently is supported by Universal Serv-

ice. Any disruption in that would disrupt the healthcare system, the education system, and the overall survival system, in terms of disasters. So, we're very worried about this transition in our area, to make sure that it doesn't dislocate the existing service as it tries to bring on a new service.

Thank you, Mr. Chairman.

The CHAIRMAN. I thank you, sir.

Senator Dorgan?

STATEMENT OF HON. BYRON L. DORGAN, U.S. SENATOR FROM NORTH DAKOTA

Senator DORGAN. Mr. Chairman, thank you very much.

First of all, thanks for your testimony. Senator Stevens has introduced a broadband bill. Senator Smith and I have reintroduced our broadband bill. Both, I think, are reflective of what might have been possible in the last Congress. I, kind of, view both as a starting point. I'm much more interested in what is required than what is possible. I think we ought to stretch what is possible to what is required. And I want to just ask a couple of questions about that.

As I understand it, the Commission defines broadband as 200 kilobits. Is that correct?

Mr. COPPS. That's correct.

Senator DORGAN. That's almost unbelievable to me, frankly. You know, you take a look at a number of foreign countries, they're getting 20 times our speed for half our cost, because they've developed much more aggressive public policy, deciding that they wanted the buildout of advanced services more universally.

I was here in 1996, with my colleagues, when we wrote this bill, and we talked about, in this legislation, that we wanted to provide consumers in rural and high-cost areas with access to telecommunications and information services that are reasonably comparable to those services and rates provided in urban areas. And so, what we said was, "Individuals in rural, insular, and high-cost areas should have access to basic and advanced services at rates that are reasonably comparable to rates charged for similar services in urban areas." I don't understand, I would say to the two Commissioners, why the Commission has described that provision in law as not including Universal Service support for broadband.

Mr. Copps, could you respond to——

Mr. COPPS. I agree. I think we have the charge, under the Telecommunications Act, to be addressing that and bringing advanced services to rural areas. As I said in my statement, I don't know that we have a consensus on that particular challenge, but I'm certain that we need to meet it. This is the infrastructure of our future. I'm convinced that some of those rural citizens in North Dakota are just not going to get high-speed broadband, really competitive high-speed broadband, unless we develop a national strategy and use this Fund in a more effective fashion to bring that kind of advanced telecommunications to all of the citizens of your State, and the other states, too.

Senator DORGAN. Commissioner Tate?

Ms. TATE. You know, I share your concerns. I think we all do. We are very concerned about getting these services out to the rural parts of America. I think that, really, Commissioner Landis hit the

nail on the head, in that this is really about economic development for our whole country. So, we look forward to working with you as we move forward.

Senator DORGAN. But my question wasn't about my concern. I think all of us have the concern. My question was about the way we wrote the law. We specifically included, in the law, advanced services. We weren't sure what those advanced services were, but we understood what we wanted Universal Service to mean; and that is, people in rural areas would be able to get reasonably comparable services at affordable prices. And so, I think the way this is worded—you know, I went to a high school where I had a senior class of nine students. We didn't have a foreign language. So, I couldn't read it if it were a foreign language. But this is not a foreign language. As I read this, it says advanced telecommunication and information services shall be accessible, "in all regions of the Nation," and then we talk about access to advanced services at rates reasonably comparable. I don't understand how that can have been misread for so long by so many, Mr.——

Mr. GREGG. Senator Dorgan, 254(c) of the Telecom Act sets forth how Universal Service, or those services that will be supported by the Universal Service Fund, are to be determined. "Universal Service" is defined as an evolving level of telecommunications services. And there are set forth a number of criteria which the Joint Board has to evaluate in determining whether to add services to the list of supported services. Currently, there are, I believe, 13 separate services, which basically make up plain old telephone services, that are supported. One of the criteria that we have to look at in deciding whether to add broadband is whether it is subscribed to by action of market forces by a substantial majority of residential customers. The last time we examined this, in 2002, only 12 percent of residential customers actually subscribed to broadband. The verdict of the Joint Board then was, "It's coming, but it's not yet there." Right now, we are almost at 50 percent. The time to move is now, under the existing law.

Senator DORGAN. You know, the Joint Board, that's a different subject, perhaps for another day. I know it relates to this, but the Joint Board's been talking about primary line restriction for rural areas, and so on. What that is, is a carve-out for a disadvantage for rural areas. So, I have minimum high regard for some of those recommendations, I might say.

Let me ask, my understanding is, the FCC currently says that broadband is "deployed," in an area if one customer in a Zip Code is served. Is that correct, Commissioner Copps?

Mr. COPPS. That is correct. It's almost like saying if one person in your town drives a Mercedes-Benz, everybody must drive a Mercedes-Benz. But that's the methodology we've used. I think the Commission is on the verge of trying to tee up a little more sophisticated approach to this, but that involves notice and comment on a proceeding, and we're about 15 years too late to be heading down that road.

In answer to the previous question, though, a further factor that you need to take care of is, we've been doing our dead-level best—not me, but the Commission, generally—to exclude some of these systems, some of these technologies, from Universal Service by re-

classifying them as information service. So, the plain old telephone service of the last century, yes, we're supporting that, the POTS. But we don't support the PANS, which is the Pretty Awesome New Stuff. And I think America needs the POTS and the PANS in the 21st century.

Senator DORGAN. Well, first of all, this is horribly complicated; I understand that. I mean, just trying to think through all of this, and understand it—it's horribly complicated. But, I've got to tell you, I think we're really tiptoeing, and have been tiptoeing for a long while; and, in some cases, been tiptoeing on not very solid ground. I think some serious mistakes have been made in implementation of the law. No question, we have to broaden the base. All of us understand that. And there have been previous decisions that should have broadened the base, that did not. We have to do that.

But, more than that, I think both the Congress and the Commission have to decide on how broad these goals are going to be, and how aggressive we're going to be in meeting them. And I sense a reluctance here in the panel and also with respect to the witnesses, a reluctance to really describe what is required. Because I come from a town of 300 people. I'm just telling you, lots of places are getting left behind and are going to be permanently left behind.

Mr. Landis, you talked about this being economic development. Well, I'll tell you where economic development is not going to happen, certainly if the Joint Board would have had something to say about primary line. I mean, you will not have any crack at economic development in areas where you live on the wrong side of the digital divide.

So, Mr. Chairman, thank you for holding this hearing. I think this is a starting point, and I'm much more interested in what is required——

Senator STEVENS. Would you yield for just one——

Senator DORGAN. I certainly would.

Senator STEVENS. Senator, if you pick up the phone and want to make a reservation in one our major hotels, you're talking to someone in India. That system could be in North Dakota or in Alaska, in many parts of rural America, but for the absence of this kind of service. I really think it is economic development, and bringing home some of the stuff that's gone overseas, because of the lack of the communication network we needed to keep up.

Senator DORGAN. Well, I agree with that. All I'm saying is, I don't think any of us—the Congress, the Commission—none of us can afford to be timid. I mean, we've got to move. It's been 11 years now since we passed this bill.

The CHAIRMAN. Yes.

Senator DORGAN. And, as I said, I read it, and it's in English, and I understand what is possible. I want the FCC to broaden its capability to read this in a way that does what is possible to give all Americans the same opportunities.

Mr. COPPS. Can I make just one comment? Because I don't want anybody ever to think that I'm the least bit reluctant about this. I believe that this is absolutely integral to the future of our country. I believe this is the central infrastructure challenge that the United States of America has. As you look throughout our history,

we've had infrastructure challenges. When we first started this country, settled the new lands, the question was, how do you get products to markets? So, we decided, as a country, to build roads and turnpikes and river improvements and canals and all the rest. Then we built regional railroads. After the Civil War, we're a continental power, how do we bring the country together? We committed to the infrastructure, we built the transcontinental railroad. Even in the Eisenhower years, we built the interstate highway system. This generation's rendezvous with destiny is to get these modern telecommunication systems out to all of our citizens. It's economic development, it's individual opportunity, it's individual fulfillment. And I think it's the future of the country.

Senator DORGAN. Mr. Chairman, my time is up, but I—the interstate highway issue is exactly the point. They probably wouldn't justify building an interstate highway through North Dakota, East to West, except as it connects our Nation and as a bridge. The same is true with respect to the digital interstate highway that we have to build everywhere in this country.

The CHAIRMAN. Thank you very much.

Senator Pryor?

STATEMENT OF HON. MARK PRYOR, U.S. SENATOR FROM ARKANSAS

Senator PRYOR. Thank you, Mr. Chairman.

Interesting discussion today. I want to thank the panel for being here. When you look at the future of telecommunications, to me it seems like it's wireless and broadband. I don't think there's any doubt about that. I mean, that's the way everything seems to be going. And I'm glad we're having a broadband discussion here today, because it's essential. It's like what everybody has said in the room. There are some challenges in figuring it out, but we have to do it the right way to make sure that all Americans—within reason, but all Americans have access to broadband.

Let me switch gears just for a moment, about wireless, because I do feel like America is going wireless. Clearly, that's just the trend that things are going, the direction things are going. For example, in Arkansas, we have 47,000 farms. Those farms support about 287,000 jobs in the ag sector. Farmers need wireless communications. Someone told me, yesterday, they'd rather sit on their tractor and transact business—it's not easy for them to get off and go in the farmhouse and do all that—and do that. And that's the way it is everywhere. And everybody ought to have access to that. And—for example, a farmer—broadband is important to them; wireless broadband. They can check commodity prices. They can transact their business when they're out there in the fields and taking care of other business. And they ought to have that same access that other people have, as well.

So, Ms. Tate, let me start with you, if I can, and really ask the whole panel about the new rules for high-cost support that will continue to support wireless. Is that what we're committed to doing, is to make sure the future is wireless and broadband?

Ms. TATE. Well, I think that you're right, that there are short-term issues and solutions that we've tried to lay out here today. And then, there are also longer-term solutions. And, as Senator

Stevens says, we've got to think about the transition in between, so that companies who have been reliant on some of these funds have the opportunity to, as they are learning new business plans and reengineering their business plans for all the new technology, also have to realize whatever is going to happen with the Fund. So, I certainly recognize the need, and we want to be supportive of all the new innovative technological changes, and I appreciate exactly what you're saying.

Senator PRYOR. You know, one of the challenges, being from a rural State—and pretty much all of us are from rural states here today, or states that have a large percentage of rural population—one of the challenges in the traditional wireline—by the way, I think there's always going to be a market for wireline, the traditional telephone. I don't see that going away. I don't think we'll go 100 percent wireless. But one of the challenges has always been, in rural America, to string that copper wire out the miles and miles and miles you have to, to get to a few customers; whereas, you have a densely populated area, where you have to string it maybe a block, and you get ten times the customers that you would get with several miles out in the country. But I would like to hear from the rest of the panel about your commitment to making sure that wireless is a real option for rural America.

Mr. Copps?

Mr. COPPS. Well, I agree with that, too. I think what wireless has already done is fantastic, and the future is boundless. That being said, I think we are under a charge to observe some semblance of technology neutrality at the Commission. The reality of the situation right now is that 98 percent of the people who are getting broadband today, are getting it through DSL and cable modem. So, our hope for the future is that wireless will play its rightful role. I think we will see a lot of innovations. We already are. And I think the one obligation of the Commission is to encourage that, to provide the right kind of incentives that don't disadvantage another technology in the process, but that really open the frontiers for these industries to develop.

Senator PRYOR. Right.

Commissioner Landis?

Mr. LANDIS. I would agree with my Federal colleagues that wireless has to play an important role in the process. The challenge is to address it in such a way that we don't inadvertently make the wrong decisions. In——

Senator PRYOR. Tell us what——

Mr. LANDIS.—many cases——

Senator PRYOR.—tell us what you mean by that.

Mr. LANDIS. In many cases, in hundreds of areas across the country there are already multiple wireless companies present. In many of those cases, those entries occurred based on a competitive model; that is, they entered the market to serve a customer base that they saw that they could do without support. In other cases, companies have built their entry premised on Universal Service support. And whatever we do, in terms of the solutions that are developed, we want to make certain that we don't inadvertently advantage one company in an environment which may be largely competitive. The challenge, of course, is in separating those two out and determining

where a truly competitive situation has been the motivating factor behind entry, and those areas where entry really does require support.

Senator PRYOR. Actually, just a comment on that. I love competition. I think that's healthy. But we've all heard the terms like "cream-skimming" or "cherry-picking." We've all heard those terms. But, you know, we all know that the investment, by and large, is going to follow the population. I mean, that's just the way it is. I mean, because that's where the money is, that's where the preliminary investment is. So, I just think we need to make sure that the proper amount of investment is going out to rural America to serve those needs, as well.

Did you have a comment?

Mr. BURKE. Senator, I come from a State, too, where the "C" I worry about a lot isn't necessarily competition, but, instead, is coverage. And——

Senator PRYOR. Right.

Mr. BURKE.—I understand——

Senator PRYOR. We have some that——

Mr. BURKE.—your concern.

Senator PRYOR.—yes.

Mr. BURKE. The only thing I will say, though, is that I believe that the Universal Service Fund should have some limit as to where the line would be drawn between subsidizing competition and making sure that rural America has a reasonably comparable service. That's a challenge. I'll freely admit that. Because both sides of that coin can readily be seen. I think that maybe that's what we have to focus on. Maybe the focus ought to be, where do we draw that line? And I think that that's a challenge.

Today, my son has no idea what a wireline is. He thinks just electric service runs through those wires and poles——

Senator PRYOR. Right.

Mr. BURKE.—outside his door.

Senator PRYOR. Right.

And, Mr. Gregg? Thank you.

Mr. GREGG. Senator, your question about wireless raises some of the issues with the problems of the high-cost fund today. We have created a *de facto* $1 billion wireless infrastructure fund through the operation of current high-cost fund rules. Nobody planned it that way, nobody intended it, nobody is looking at it that way today. But that is, in fact, what it is. The problem is, it is not distributed evenly. The wireless carriers are flocking, obviously, to where the money is, like Willy Loman, in talking about robbing banks. They're doing what is economically rational under the current rules.

If we want to support wireless buildout in rural areas, if this Congress wants to support wireless buildout in rural areas, they should say so. Like the broadband fund in S. 101, there probably should be set up a wireless broadband fund, as well, with some principles to guide distribution. Otherwise, we're going to continue to have it pocketed away in certain discrete areas instead of equitably distributed throughout the United States.

Senator PRYOR. Mr. Chairman, thank you.

Senator DORGAN. Mr. Chairman, might the Senator yield to me just for a moment?

Senator PRYOR. Sure.

Senator DORGAN. I did not mention that Senator Pryor is, of course, a part of Senator Smith's and my Universal Service bill——

Senator PRYOR. Thank you.

Senator DORGAN.—and has played an integral role in that.

Senator PRYOR. I'm proud to be part of it.

Senator DORGAN. I neglected to mention that. I apologize.

Senator PRYOR. Thank you.

The CHAIRMAN. Thank you.

Senator Smith?

STATEMENT OF HON. GORDON H. SMITH, U.S. SENATOR FROM OREGON

Senator SMITH. Back to the same bill. I'm proud to be with my colleagues on this bill. Enough may have already been said about it, but it does create a $500 million account within the Fund, and it specifically targets broadband deployment.

I think you've all answered this generally in agreement that the Universal Fund should be used to promote broadband deployment. But I'm wondering, are there other ways we can encourage broadband deployment to rural Americans? And I'm really thinking, should the Universal Service Fund be tied to minimum broadband speeds? Does anybody have a thought on that? Should that be a standard?

Mr. COPPS. Well, I know it shouldn't be tied to 200 kilobits up and down, as we currently define broadband. You've got to find a way to incentivize it. And you'll hear a lot of talk today about the wonderful job we're doing with broadband deployment and penetration. But so much of it is at speeds that are not going to make us competitive in the world, are not going to make rural America competitive with urban America. So, having some benchmarks like that, I think, is an important part of an incentivizing system that's really going to get this stuff out.

Senator SMITH. Well, you know, to Senator——

Mr. COPPS. I mean, the devil's in the details, but I think the concept is certainly worth looking at.

Senator SMITH.—to Senator Stevens' point, if we're going to bring the jobs back from India to Alaska and North Dakota—I'd throw in Oregon, too, and Arkansas—it's got to be comparable, doesn't it? Yes.

Certainly, one of the goals of the Fund is to reform the control and growth of that fund. And, you know, Senator Stevens has mentioned that the reverse auctions may or may not be a good idea. I don't know. I think he's opposed to that. I have no firm position on that, especially. But I'm wondering, are there other ways we might control the growth of the Fund, short of capping it or reverse auctions?

Mr. GREGG. There are any number of ways you can limit the Fund. The Fund has a number of discrete inputs that result in what finally comes out of the Fund. Decisions that were made early on, as I said in my opening statement, have resulted in the system we have now. We could have gone to a system similar to that de-

scribed by Commissioner Burke for the whole high-cost fund, where we simply allocated a certain amount of money to each State, said, "If you match this, you get the Federal share. You then decide how to allocate it. Your states are closer to it. You know where the money needs to go. You know where the high-cost areas are. You know where the unserved and underserved areas are. Go to it, subject to audit after the fact." You could have, even within the context of the current Universal Service Fund, limited receipt of Universal Service subsidies to only one facilities-based provider for each study area in the United States. All of those would have constrained the size of the Fund, but yet provided adequate support to do everything we want to do.

Senator SMITH. Is there a consensus that the best way to direct is through the states, as opposed to a certain provider?

Mr. GREGG. I think the states have an obvious role. In fact, the Tenth Circuit Court of Appeals, in the Quest I decision, said that section 254 describes a cooperative State-Federal effort to promote and advance Universal Service. So, states will always be involved.

Senator SMITH. Any other thoughts on that?

Mr. COPPS. Well, I would hope we would always have a constructive Federal-State relationship. I think we've kind of gotten away from it in some of the FCC preemptive activities that have taken place over the last few years. The genius of America is having that balanced partnership.

You asked about specific steps to control the growth of that fund. You know, one that several observers have talked about, and I think I mentioned, is doing something about the identical support system. Yes, we want to encourage all of these multiplicity of technologies, but we want to do it in a realistic fashion and allow for the recovery of legitimate costs. But this fund is under too much pressure to go beyond that and to be adding any monies that don't need to be in it. So, that's one way that we could do it.

Senator SMITH. Thank you.

Mr. BURKE. Senator, I would only mention, and only add, that I think that there are other ways besides just an auction that can be viewed. In fact, we've heard, from several presenters, issues on disaggregation and better targeting the areas that need help. There's no particular answer that seems to be an absolute given at this point in time. And one of the reasons for the caps—I just want to make sure you don't think that the idea of a cap was an ultimate solution—as a matter of fact, it clearly is a Band-Aid, trying to give us the ability to work toward that point where we can come up with a more permanent answer.

Senator SMITH. Thank you very much.

The CHAIRMAN. Senator Rockefeller?

Senator ROCKEFELLER. Thank you, Mr. Chairman.

I just want to make a point, since I came in late, and then I have two questions within 7 minutes.

The just-departed Senator, Olympia Snowe, and I had an event the other night, which many people should have been at, which was about the E-Rate. And you can't possibly expect me to be in the Commerce Committee on this subject without talking about the E-Rate. I think it's probably received more oversight than any government program ever conceived. And that's been a good thing. We

have not paid the same level of attention to the high-cost fund. We're facing serious challenges in trying to adapt Universal Service to, as Commissioner Copps has said, an entirely different telecommunications environment.

I share Billy Jack Gregg's concern that the growth of the Fund is becoming increasingly financially burdensome to the consumers. If we do not adopt policies that limit the growth of the Fund, we will know that, as the Honorable Mr. Burke has indicated, that a cap will be inevitable, but not at this point.

I would prefer that the FCC adopt policies that would limit the growth—and this will lead to a question to the two Commissioners—to limit the Fund of the growth so that the cap is not necessary. But I know—that was a very thoughtful statement by Mr. Gregg—supporting the cap, at least in the short term, because of Congress's and the FCC's inability to make hard decisions, what it amounts to. Senator Dorgan was talking about that. I think it's unfortunate it got to this point.

The FCC and the Joint Board are facing short-term tough decisions to limit the growth of the Fund. We all must begin the long process. I believe there are three main points. I believe that broadband providers must begin to pay into the Universal Service system if we're going to have a long-term sustainable base of revenues, called a "pyramid base." Two, we should demand that recipients of Universal Service Fund resources that get those things, that they be required to transition their networks into the next-generation broadband network. That has not been necessarily advanced toward them, but I think it's critical. It does not make sense to continue subsidizing the deployment of networks that are becoming obsolete. We have been told, third, for 2 years, that broadband is the future of all communications. I agree with Senator Dorgan again. We talk, we talk, we talk, we talk. I think I've been on 12 bills in the Finance Committee to do with broadband, none of which get it. They all get 75 cosponsors, and nothing ever happens. So, we've been told for 2 years that broadband is the future of all communications. We've got to make sure that rural Americans fully participate in this future.

Now, my questions, to all panelists; in a previous hearing, Chairman Martin said that the FCC has the authority to broaden the Universal Service program to include broadband, but, he said, it didn't have the money. In Mr. Burke's statement, he states that current law may not allow the FCC to include broadband in the program. I would like to ask each of the other panelists, or all of the panelists, starting with Commissioners Tate and Copps, their thoughts on whether they believe the FCC has the authority to add broadband to the list of supported services to the Universal Service Fund.

Ms. TATE. Well, Senator, I think that whether we have the authority or not also has to be balanced with whether or not you utilize that authority or not, and the continued pressure that that would put on the Fund. So——

Senator ROCKEFELLER. You know, I'm already off track with you. The answer is not, Can you afford it? Do you have the authority? That's all I'm asking.

Ms. TATE. Yes, sir, I think that we do——

Senator ROCKEFELLER. OK.

Ms. TATE.—have the authority.

Senator ROCKEFELLER. Commissioner Copps?

Mr. COPPS. I think we have the authority. I think the 1996 Act makes plain that we are supposed to consider evolving advanced technologies. I think that translates into broadband, and can only translate into broadband. So, yes, I think the Commission has that authority.

Mr. BURKE. Senator, I think that the concern that I had was simply, as you read the Act—and as the newest member of the Joint Board, you tend to just go back and read the Act itself before you go anywhere else—and the concern that I had was that, in fact, there is, implicit in the subsequent section to the (b) section, that there be a take rate of a majority of the residential households. I'd like to think that actually, however, that's almost a nonquestion for us now, based on the definition we have of "broadband services." Even if you do look at that, and the take rate does have to be 50 percent to sustain a challenge, we're there, or will be there so quickly that, by the time we're able to do anything with regard to supported services, even if we were able to do it in a matter of just a few months, we're already going to have a 50 percent take. So, hopefully that's a question we don't have to answer, anyway.

Senator ROCKEFELLER. Thank you.

Mr. GREGG. The answer to your question is yes, even though the FCC has defined many of the broadband services as, quote, "information services," they have also said that each of those services—cable modem, DSL—have a telecommunications component. As a result, 254(c) would apply in determining whether they should be added to the list of supported services. As I indicated in response to Senator Dorgan a while ago, the problem with adding broadband to the list of supported services and bringing it under the umbrella of the Universal Service Fund is a problem with the wording of the Act. We are going to start moving on adding broadband, but it will take 2 years to get it finished. If you want it done faster, Congress needs to change the wording of the Act.

Senator ROCKEFELLER. Is that on the record?

[Laughter.]

Senator ROCKEFELLER. Thank you.

Mr. Landis?

Mr. LANDIS. Yes, Senator.

Senator ROCKEFELLER. The answer is yes?

Mr. LANDIS. Yes.

Senator ROCKEFELLER. OK.

[Laughter.]

Senator ROCKEFELLER. I thought you were just recognizing that I was sitting here.

[Laughter.]

Senator ROCKEFELLER. I wasn't sure.

Mr. LANDIS. Both.

Senator STEVENS. Ask Mr. Gregg for a draft of the amendment he would like to——

Senator ROCKEFELLER. Yes, that's a very good idea.

You got an amendment?

Mr. GREGG. You could just change 254(c) to say it does include broadband, as defined by the FCC.

Senator ROCKEFELLER. The Clerk has recorded that.

Mr. BURKE. Or with faster speeds than the FCC.

Mr. GREGG. I'm assuming that the FCC is going to evolve that definition. 200K may have made sense back in 1998, when they first started recording the advance of broadband. It now probably is something closer to 768K or 1 meg. In a few years, it'll probably be closer to 10 to 100 megs.

Senator ROCKEFELLER. I've got to do my final question.

Commissioner Tate, last year the FCC relieved DSL providers from paying into broadband. At the same time, the FCC required VoIP companies to contribute to the Universal Service Fund. This mandate is currently being challenged in court, where it could lose. Again, last year the FCC increased the percentage of wireless consumer bills subject to USF assessment. Now, how have these decisions impacted the flow of revenues into the Universal Service Fund? Is the FCC collecting more, or are they collecting less, revenues because of some of these decisions that they have made? It's my understanding that wireless carriers are paying less in USF obligations than the industry did before you increased their safe harbor. What will the FCC do if the courts strike down the requirement relating to VoIP, as set forth by the FCC?

Ms. TATE. Well, Senator, I don't think that I have the numbers with me today to absolutely answer exactly what you're asking and what the exact figures are. I think that we tried to make those decisions, because they were the right decisions. I—the DSL decision was made before I got——

Senator ROCKEFELLER. OK.

Commissioner Copps?

Mr. COPPS. I think the practical effect of the mistaken decision that the Commission made to exclude broadband was really to create a shortfall which is probably somewhere in the area of $350 million to $500 million. Now, that doesn't mean the Fund is suddenly deficient, because it's USAC that sets the size of the Fund. It means it skews everything. It means you have to go out and raise the monies from somewhere else. Different businesses, different consumers feel the impact. But there's no question in my mind that it had an unhealthy effect. And if we're really going to go down this road of broadband that everybody's talking about, certainly we have to reverse course and make sure that it's going to be contributing.

Senator ROCKEFELLER. With the Chairman's permission, I think that—Senator Dorgan, did you have a comment?

Senator DORGAN. No, I'll defer.

Senator ROCKEFELLER. OK.

Senator DORGAN. Thanks.

Senator ROCKEFELLER. Thank you.

The CHAIRMAN. Senator Snowe?

STATEMENT OF HON. OLYMPIA J. SNOWE, U.S. SENATOR FROM MAINE

Senator SNOWE. Thank you, Mr. Chairman.

I want to welcome all of you here today. And obviously these are, you know, complex issues, and some are more timely than others. And I just want to be clear on the question that was posed by Senator Rockefeller, on the question of changes in the existing telecommunications law with respect to broadband. So, which would come first? Would you be proceeding with any action in broadband under the Universal Service Fund? Would you be pending any action by Congress? Or would you be taking your own action eventually on this question? I'm not clear on that.

Mr. COPPS. I would be in favor of going ahead and taking actions under authority that I think we have. Whether I can get three votes to do that——

Senator SNOWE. Right.

Mr. COPPS.—at the Federal Communications Commission, I don't know. But I think that's the road that I would like to go down, that kind of initiative.

Senator SNOWE. Commissioner Tate?

Ms. TATE. Yes, I'm trying to say this in a very thoughtful way, but I think that, at the same time that we think that we have the authority, and that we do believe that this is the direction the country needs to move ahead, we have some pretty stark and dramatic rises in this Fund that we have to weigh in what we have to do first. I think the growth of the Fund has got to be stemmed. But, yes, I think that we should look at broadening the definition to broadband.

Senator SNOWE. So, would that be contingent on action taken by Congress, on that question? I mean, I think that that's obviously an important issue, in terms of time frame here, as well, because I agree with you, Commissioner Copps—and I think all of you probably share the same thought—I mean, there is a timeliness question and an urgency when it comes to broadband deployment, ultimately. I mean, because we can't afford to wait, given, you know, our standing in the world, for example. I mean, you know, we rank 19th or 20th in the world in terms of broadband deployment. In my home state of Maine, 73 percent of households don't have access to it. So, I think that's a major issue, in terms of time frame and what the schedule is going to be, in the final analysis. And so, would you be taking a vote anytime soon on this question? I mean, exactly what——

Ms. TATE. I think we——

Senator SNOWE.—what's the plan?

Ms. TATE.—encourage the Chairman to put that before us.

Senator SNOWE. OK.

Mr. GREGG. Senator Snowe, as——

Senator SNOWE. Yes?

Mr. GREGG.—as I said earlier, it all depends on the FCC taking action under current law. They have to act first, refer it to the Joint Board. But that's a 2-year process. If you want it to move faster——

Senator SNOWE. And that's what you were——

Mr. GREGG.—it's going to——

Senator SNOWE.—saying.

Mr. GREGG.—be up to Congress.

Senator SNOWE. I see. So, if you want to do it sooner, then we have to take Congressional action. I see. Because it's the FCC first.

In terms of broadband deployment overall, Senator Stevens obviously has, in the telecommunications rewrite, a $500 million Fund for unserved areas. What are your thoughts on that question? In terms of trying to, you know, target and limit, you know, the deployment, because we want to contain the costs, is that a way to go about it? If we use specific geographical information, as some have recommended, as a way of trying to contain the growth—if we were to include broadband deployment?

Ms. TATE. I think you're probably going to hear from some presenters later, in the next panel, that are going to talk more about targeted approaches, and I think that's something that we heard at the *en banc*. We haven't even had a chance to talk about the *en banc* held last week, and we are still discussing that. We haven't discussed them as FCC Commissioners yet. But I think those are interesting proposals. I do think it's important to recognize there are a lot of states that have incredible initiatives going on that are using their own State tax incentives, for instance, and other incentives, to try to encourage broadband in their states. Kentucky is one. Tennessee has a task force. So, I think that the states are doing a lot.

Senator SNOWE. Commissioner Copps?

Mr. COPPS. I think a targeted approach is fine in the world in which we live, but I think, in the final analysis, it comes down to, how ambitious do we want to be in having a national broadband strategy? And in terms of Universal Service, does that really mean everybody? It seems to me it does. Does it mean reasonably comparable service at reasonably comparable prices? I think, yes. So, I think the ultimate goal has to be every citizen of this country having access to this kind of technology and service.

Senator SNOWE. Thank you.

Yes?

Mr. LANDIS. Senator, I think one of the things, which we've already addressed, and which you'll also hear from the second panel, is the need for more precise information with regard to the cost of doing so. In reality, there are multiple ways in which we can encourage it. If the cost of buildout to unserved areas is not too great—and don't ask me to put an exact number on it—it may well be that tax incentives at the State level would prove sufficient to promote broadband buildout. If you look at the Wyoming experience, for example, where they have projected costs based on a model for those areas that are currently unserved, the tenth docile costs over $10,000 per household for buildout. And so, tax incentives are not going to prove sufficient in that situation. Clearly, there needs to be a subsidy if we are going to move forward, and if we have the will to actually make that a reality.

Senator SNOWE. I see.

Mr. LANDIS. But the first step, it seems to me, is getting a handle on the actual costs of doing so, at a much more granular level.

Senator SNOWE. I see.

Mr. BURKE. Senator, I think that states are really aware of their shortcomings with regard to broadband and advanced services. I think you're aware that Governor Douglas, in Vermont, has indi-

cated his plan to make Vermont an E-State in its entirety by 2010. Obviously, incentives are on the minds of states. And that's one of the reasons why, it seemed to me, that to help both the Congress and states target the matching-funds type of grants might make sense. I think that it allows for a solid distribution. Because I think, although this Fund is very laudable, the devil's going to be in the details, and the targeting is going to be extremely important.

Mr. GREGG. The market itself will ultimately make broadband available to about 85 to 90 percent of all the households in the United States. It's going to be that remaining 10 to 15 percent of households where it is not economically feasible to have broadband made available, absent some sort of explicit subsidy. Obviously, adding it to the Universal Service Fund is a piece, tax breaks and incentives are a piece, the RUS program of low-interest loans and grants is a piece. There's going to be a multiplicity of sources that go into making broadband available to that final 10 to 15 percent. And that is where our efforts should be focused.

Senator SNOWE. Thank you.

And finally, I would like to ask, since, we're, celebrating the 10th anniversary of the E-Rate, and one of the issues that obviously emerged was the Antideficiency Act, and Senator Rockefeller and I supported a permanent exemption. Commissioner Tate, what's your response to that? Because, otherwise, I don't know what guarantees there are that we could stabilize the E-Rate, under the circumstances, if the ADA were to apply.

Ms. TATE. Yes.

Senator SNOWE. You agree with that. They should be a permanent exemption. That's the only way to address it.

Ms. TATE. Well, I'm not sure that I would go so far as to say it's the only way. But I appreciate your efforts to——

Senator SNOWE. Yes.

Ms. TATE.—stabilize that fund.

Senator SNOWE. Yes.

Any others? Commissioner Copps?

Mr. COPPS. I certainly support the——

Senator SNOWE. Yes. OK.

Mr. COPPS.—permanent exemption.

Senator SNOWE. Right. OK.

And finally, when it comes to, you know, broadband deployment within the school systems and classrooms in America, do we have any information with respect to E-Rate. Because I happen to believe that we should make the E-Rate adaptable to, you know, the technologies of the future. And that includes, obviously, broadband deployment and the bandwidths and platforms. Do we have any current information with respect to how many classrooms in America that might have access to, you know, broadband deployment?

Mr. COPPS. I think we're up in the 93 or more percent of classrooms connected, but then you've got to ask yourself, what's the——

Senator SNOWE. Right.

Mr. COPPS.—speed of the connection? And are kids in rural America going to expect a dial-up connection to the rest of the world, or a true high-speed connection? So, I think the future of the E-Rate is every bit as important as the past. It's got a long way

to go. These are evolving and changing standards, and we have to make sure that the E-Rate program accommodates those changes and brings that level of communications to our kids.

Senator SNOWE. OK.

Thank you. Appreciate it.

Senator STEVENS. Mr. Chairman, could I ask just one question?

The CHAIRMAN. Sure.

Senator STEVENS. It's my understanding that in order to utilize satellite delivery to consumers in isolated rural areas, you'd need a change in the law. Do you agree with that, Mr. Copps?

Mr. COPPS. Not that I'm aware of. I have seen broadband delivered by satellite. I've seen it in——

Senator STEVENS. I mean, Universal Service payments, though.

Mr. COPPS. Oh. I am not aware of there being a problem. I'll be happy to look into it and——

Senator STEVENS. Thank you.

Mr. COPPS.—see if there is, but I do not believe there is. I believe it should accommodate all of those different technologies.

The CHAIRMAN. I'd like to thank the panel very much.

I think it's obvious to many that I'm a member of the crystal-set radio generation.

[Laughter.]

The CHAIRMAN. And, as a result, I'm convinced of the dynamic and ever-changing evolutionary character of communication. I am one of those who worked upon the Telecommunications Act of 1996. And, I think, 3 months later it was obsolete. We used the word "Internet" twice in the whole bill. Now it's part of our vocabulary.

I will be submitting questions to all of you, because time is of the essence, and we have a whole panel waiting.

But this panel reminded me of an early time in my life when I had a nice chat with a gentleman called Henry J. Kaiser, who was making millions every day. And I asked him what is his secret, and he said, "It's very simple. I never use phrases like, 'This is an impossible task,' or I never uses phrases like, 'This is too complicated.' That's a cop-out." And I'm glad that none of you have copped-out, in the panel here, the Committee has not copped-out.

The Vice Chairman has suggested, and I agree with him, that we should have a special, in-depth briefing on broadband, because, in order to cope with this problem, we'd better have a real good understanding of the potential, the limitations of broadband. And we're going to do that.

And so, with that, I'd like to thank all of you for your contribution. It's been a great session for me. But I'd like to submit my questions, if I may.

Thank you very much.

Our next panel consists of the following: the Executive Vice President of North Dakota Association of Telecommunications Cooperatives, Mr. David Crothers; the Director-Policy/Regulatory Economist, Department of Law and External Affairs of the Embarq Corporation, Dr. Brian K. Staihr; the Executive Vice President, Corporate Secretary, and General Counsel of Alltel Corporation, Mr. Richard N. Massey; the Executive Vice President, Public Affairs, Policy, and Communications of Verizon, Mr. Thomas J.

Tauke; and the Vice President of Public Policy, Midcontinent Communications of Sioux Falls, South Dakota, Mr. W. Tom Simmons.

Gentlemen, I thank you very much for your patience. I'd like to first recognize the Executive Vice President of the North Dakota Association, Mr. David Crothers.

STATEMENT OF DAVID CROTHERS, EXECUTIVE VICE PRESIDENT, NORTH DAKOTA ASSOCIATION OF TELECOMMUNICATIONS COOPERATIVES

Mr. CROTHERS. Mr. Chairman, we thank you for the ability to appear before you today, sir.

The status of Universal Service is quite possibly the most important issue facing our industry today. Restructuring the Universal Service program properly will be critical to determining whether all Americans will have the opportunity to participate in the 21st century economy.

Our Nation, however, finds itself in a dilemma. Even though it is acknowledged by all that Americans increasingly rely on more sophisticated communications services and bandwidth for economic, healthcare, and educational opportunities, some are looking to limit the growth and mission of the program. While other countries are making the investment to ensure ubiquitous broadband coverage for their citizens, the United States remains a second-tier nation, in terms of making a genuine commitment to broadband deployment. It is our position that rather than contemplating ways to cap the Fund, or to otherwise limit the program, policymakers should, instead, be looking for ways to enhance it and help accelerate such deployment.

Mr. Chairman, NTCA developed a national communications policy course that would move the Nation in that direction. The plan is forward-looking and addresses our Nation's communications needs, especially those in high-cost rural areas of our country. The plan envisions the Universal Service program having an ongoing mission.

To see what the Universal Service program has accomplished, I ask that you look at North Dakota. We believe the state is a perfect example of everything that is right with the Universal Service program. Ours is a very low-density state. Independent rural telephone companies serve over 96 percent of its geographic territory. That wasn't always the case, however. In 1996, large out-of-state telephone companies began selling their highest-cost exchanges. In total, some 90 exchanges were sold in the State over a 5-year period. Locally owned, locally operated telephone companies stepped up and bought every one of those exchanges. The result has been greater levels of investment and greater technology for rural residents in North Dakota. Today, high-speed broadband is provided in 290 communities through a variety of technologies by independent telephone companies.

Rural communications providers have worked hard to ensure that rural America will not be relegated to being a communications backwater. This approach is a stark contrast to the array of interests that wish to mold the program into something that it was never intended to be: a mechanism to ensure competitive neutrality

or to create government-subsidized competition where there would otherwise have none existing.

This blind pursuit of competition for competition's sake has allowed the Universal Service program to be accessed by those who have no real commitment to the policy of Universal Service. Even FCC Chairman Martin and Verizon, both proponents of alternative approaches to controlling the program's growth, have acknowledged the cause of the growth is the CETC segment of the industry. Consequently, the Fund's growth has been rapid, and, some say, politically unsustainable.

Today, there are countless plans under consideration to control the growth of the Universal Service program. Most of them, including the auction concept proposed by Verizon, ignore the real root of the problem. NTCA's approach makes far more sense, in our judgment: expand the base of USF contributors, strengthen the public-interest requirements for ETC designation, and eliminate the identical support rule. Each of these proposals could easily be implemented and would absolutely control the program's growth.

Just last week at an FCC forum, the subject of reverse auctions was once again cited as the solution to many of the Universal Service Fund's programs. The concept of reverse auctions is to limit support to the lowest-cost provider. This argument is the antithesis of Universal Service. Auctions will lead us down the road of supporting the lowest common denominator. It is truly a race to the bottom.

Rural communications providers have a quality-of-service approach to network construction, and it has allowed the people of rural America to enjoy a state-of-the-art infrastructure at affordable rates. Alternatively, the other technologies and services, such as wireless voice technologies and VoIP, are built and operated at far less stringent standards, and use the infrastructure of others. The great misconception continues to exist that wireless handsets are communicating directly to another wireless handset or to a tower, or through a tower to another party. Mr. Chairman, wireless needs wires. Universal Service support ensures that there is a state-of-the-art underlying network upon which all these services can rely. Reverse auctions will not ensure this.

We ask, are we willing to risk allowing the almost limitless bandwidth capacities associated with wireline to be undermined? And what will happen, we ask, with reverse auctions, when a carrier other than the incumbent wins the auction? Without this stream of support, the rural incumbents, in many cases, will no longer be functional. And we fear, when repeated winners of those auctions replace one another over and over, and the lack of investment that will follow. Sadly, it will be the American citizen who suffers the consequences of these short-term fixes.

Mr. Chairman, today we are on the cusp of fully moving into a world where data, video, and mobility are the primary objectives of consumers. The technologies of tomorrow, though, will still be reliant on the underlying wireline voice network of today.

Mr. Chairman, thank you for allowing us to appear before you today.

[The prepared statement of Mr. Crothers follows:]

PREPARED STATEMENT OF DAVID CROTHERS, EXECUTIVE VICE PRESIDENT, NORTH DAKOTA ASSOCIATION OF TELEPHONE COOPERATIVES

Mr. Chairman, you have convened us here today to consider the status and future of our national Universal Service policy and its underlying support mechanism. The discussion surrounding this venerable policy is nothing new and indeed has persisted, and evolved, much as the program itself has, and should. While this conversation has at times been exhausting, and at others outright exasperating, the Nation's small and rural community based communications providers welcome and embrace it nonetheless. We do so because such dialogue only serves to strengthen and improve this long-standing national policy—a policy that plays a critical role in maintaining and expanding the communications infrastructure that is so necessary to our national and economic security. So thank you Mr. Chairman for your ongoing efforts to ensure the goal of Universal Service remains the solid cornerstone of our national communications policy that it has always been.

Do we still need this program? The answer to that question is an emphatic yes! More and more Americans rely on communications every day to meet their commerce, security and entertainment needs. The bar for the 21st century communications has been raised. More bandwidth must be deployed in our networks so all American households, urban and rural alike, can benefit from education, healthcare, and economic opportunities that are dependent upon a robust communications platform.

Other countries of the world understand the need to make a financial commitment now to ensure adequate bandwidth in their communications networks. This will provide their citizens with opportunities for economic growth and global participation. Rather than working on ways to cap Universal Service Funds, particularly to wireline network providers that have deployed critical backbone infrastructure, the Congress should be looking for ways to expand the fund, thereby encouraging an accelerated deployment of broadband facilities throughout America.

Some question the continued need for universal service. To these doubters, I invite you to visit my state of North Dakota and see the incredible accomplishments of this program for yourself. I can, without question, assure this committee that the Universal Service Fund is more necessary today than ever before.

It is important when discussing Universal Service to approach it from the proper perspective. Detractors and supporters alike cannot deny that the Universal Service system is a shining example of successful national policy. This program is largely responsible for the extremely high communications connectivity our Nation enjoys today. It is due to Universal Service support that virtually any American that wishes to have voice connectivity is able to. Likewise it is largely due to this program that such connectivity is uniform in price and scope regardless of where you live.

For more than a decade now our industry has been exposed to an operating environment marked by competition and deregulation. These concepts are in many ways in direct conflict with the policy of universal service. Universal Service of course is about developing the appropriate policy environment to ensure all Americans have access to communications services of an equitable price and scope. The very nature of the Universal Service concept does not allow for the "let the chips fall where they may" theory associated with competition and deregulation.

The rural segment of the industry has always understood the reality that the policies of competition and deregulation will be ineffective if simply broad brushed across all spectrums of the marketplace. Yet, when confronted with the policies, we have simultaneously embraced and/or tackled them with vigor. This response is in stark contrast to the array of entities from the private and public sectors alike that continue trying to mold the Universal Service program into something it was never intended to be—a mechanism for ensuring competitive neutrality. Herein lays the debate about where this program stands today, and where it should go in the future.

Unfortunately, while the Congressional intent of the Telecommunications Act of 1996 that led to the emergence of these conflicting policies was quite clear the manner in which it has been interpreted is quite another story. Competitors, state regulators, the Federal Communications Commission (FCC), and yes even some of your Congressional colleagues have upset the delicate dichotomy that was to have existed between the distinct concepts. The result is a disastrous situation where, under the guise of establishing an environment of competitive neutrality, the program is being accessed by many that have no real commitment to the policy of universal service. Consequently, its growth has been rapid and is currently at a politically unsustainable rate which is the root of why we are here today.

Mr. Chairman, so often throughout the course of this debate, people have directed the industry, and particularly small rural carriers, to "think outside the box" in our search for solutions to the fix we find ourselves in today. The comment might be

amusing were it not so completely oblivious to our way of thinking and operating each and every day of our existence. If I do nothing else here this morning, it is my overarching desire to ensure that everyone participating and listening to this discussion ultimately leaves with the recognition and understanding that rural carriers do and always will "think outside the box." Truly, they have no other choice.

What segment of the industry was the first to have completely converted to digital switched systems? What segment of the industry was a pioneer in providing wireless options to their hardest to reach customers? From what segment of the industry did the first company to deploy an all fiber system come? What segment of the industry was the first to offer distance learning and tele-health applications? What segment of the industry was an early leader in providing cable-based video, then satellite video, and now IP video to their markets? What segment of the industry quickly moved into Internet service provision in the early stages of the Internet's public evolution? And what segment of the industry continues to lead in the deployment of high-speed broadband capable infrastructure?

Mr. Chairman in every instance the answer to those questions is—the small rural segment of the industry. Many might be asking why these carriers care or have this unique perspective and approach to their mission. The answer to that question is relatively simple. Because these systems are owned and operated by the members of the community in the case of cooperatives, or by members from the community in the case of commercial systems. Clearly as a result they are entrepreneurs. Clearly they are continually "thinking outside the box."

But, does thinking outside the box mean we should automatically discount the obvious? Frankly, it is astounding to us at how great the zeal of some is to do just that. Today there are countless plans under development and already on the table directed at how to control the growth of the Universal Service program. They are Byzantine in their detail and approach to eventually get to the end-point desired.

Even worse, such plans also completely ignore the most obvious, basic, and easy to implement responses. Expanding the system's assessment base—strengthening the requirements for receiving eligible telecommunications carrier (ETC) status—eliminating the identical support rule which provides competitors with inflated support—all concepts that could easily be implemented and that we know for certain would produce the desired result.

Evidently not in the minds of many as was evidenced just last week at an FCC forum as well as during the course of the NARUC meeting. A great many voices continue to sing the praises of the reverse auction concept. This approach seeks to limit support to the lowest cost and/or most efficient technology. This argument is the antithesis of the goal of Universal Service which I mentioned is to ensure ALL Americans have access to communications services that are comparable in price and scope.

Auctions would presumably lead us down the road of supporting the lowest common denominator. Again, the exact opposite of what Universal Service was structured to accomplish. Traditionally, rural communications system have been built and constructed to extremely exacting standards. While the law requires that rural Americans *receive* no less, the Universal Service system and other cost recovery programs, as well as private financiers *demand* no less. This Quality of Service (QoS) approach to network construction and management is the formula that has allowed our industry to build and maintain the infrastructure that is an integral part of the premiere communications system our Nation enjoys today.

However, today, many alternative technologies and services to traditional wireline voice service are built and operated according to far less stringent standards. For example, it is a well accepted fact that wireless voice technologies generally do not approach the QoS standards of wireline calls. Another example is Voice over Internet Protocol (VoIP) oriented service which is even further away from meeting the QoS standards of wireline voice service.

There is one more critically important reason for the inferior nature of some of these alternative technologies. They do not consist entirely of their own infrastructure. For example, with regard to wireless service, a great misconception continues to exist among policymakers and the public alike, that wireless hand sets are communicating directly to one another or directly to a wireless tower and directly from that tower to another party. This is simply not the case. Wireless needs wires Mr. Chairman. Whether it's the wires to complete a wireless to wireline call or a wireless to wireless call, there are wires involved at some point in the call's path. The great majority of these wires are owned and operated by the incumbent voice providers.

Likewise with the VoIP voice services we hear so much about today, these systems rely almost entirely upon the infrastructure of others, and to this point that infrastructure has generally been the last mile connections of wireline carriers and

the Internet system. An interesting point to make here is that due to ineffective statutes and regulations, services such as this are allowed to utilize this infrastructure that belongs to others without paying for such use. They are using the facilities of rural providers, and are not paying to do so. Without such compensation, the ability of network owners to continue to invest in their networks is put in jeopardy. Without such investment we will eventually reach the point at which such facilities will not function. Without such facilities being able to effectively operate, many applications such as wireless and VoIP services would be unable to operate.

Which bring us back to reverse auctions. Universal service support ensures the continuum of the underlying network upon which all other services rely. Auctions fail to ensure that such support will continue to be provided. Are we willing to risk allowing the almost limitless bandwidth capacities associated with a wireline network to be undermined simply because policymakers choose to make an easy policy decision with wide-ranging long-term implications rather than buckling down and confronting the real underlying issues associated with universal service? There are other questions with the reverse auction concept as well. How will efficiency be determined and measured? Providing support to the system with the lowest upfront costs may appear efficient today but what about over the long-term?

What happens when a carrier other than the incumbent wins the Universal Service support? Without this stream of cost recovery, most rural incumbents would be hard pressed to remain operationally functional. What becomes of their underlying infrastructure that is necessary to the operations of alternative technologies? What happens in the future when other providers consistently and repeatedly emerge that are lower cost than the prior? Do we find ourselves stuck in a process of unending churn of providers? Wouldn't such instability destine such providers to never being able to secure the long-term financing that is so necessary to this capital intensive business?

Finally, are policymakers themselves really up to the challenges that reverse auctions present. It's easy to talk about a lowest cost bidder approach saving money. However, we think parties to such an initiative would quickly realize the fallacies behind this concept were it ever implemented. No American, whether rural or urban based, would be well served by reverse auctions. Indeed, I would like to submit for the record a far more extensive paper on this subject. It was prepared at the request of the National Telecommunications Cooperative Association by Dale Lehman who is the Director of the Executive MBA in Information and Communication Technology at the Alaska Pacific University.

No, Mr. Chairman, as I alluded earlier, there are far better, more reasonable, more realistic, and more workable options that will best ensure the proper application and future operation of the Universal Service system. Indeed, many such ideas and concepts were contained in the Universal Service section of the Communications Act of 2006 that this committee marked up late last year. That legislation was the product of input from many policymakers and many sectors of the industry. Please allow me to just highlight its stronger provisions:

- Establishing a new definition of "communications service" that alleviates the arbitrage of certain carriers wiggling out from under their Universal Service responsibilities;
- Expanding the base of contributors to the Universal Service Fund (USF) which will lower the overall USF assessment for all consumers;
- Providing flexibility in how the FCC assesses providers for their contributions, which allows consideration of new technologies and services as well as modern modes of communications;
- Giving states new flexibility for their appropriate management of their state Universal Service funds;
- Codifying new minimum guidelines for receiving the eligible communications carrier status necessary to receive Universal Service support;
- Permanently prohibiting the FCC from limiting Universal Service support to a single primary line, which ensures rural America's small businesses remain competitive;
- Permanently exempting the program from the Anti-Deficiency Act and permanently removing the private fund from the Federal budget process which would preclude the program from experiencing future short falls or spikes in Fund assessments;
- Clarifies an entity is not exempt from contributing to the system solely on the basis that it does not receive support from the program;

- Establishing that equivalent services must live up to the geographic toll rate averaging provisions that are in current law;
- Ensuring a smooth conversion resulting from any new regulations or statutes affecting the program by requiring the FCC to adopt transition mechanisms of not less than 5 years for any changes in the Universal Service distribution process.

Were there areas that could have been stronger? No question, after all, the entire bill, as in most legislative instances, was a conglomeration of compromise. Yet there was one key area that was initially stronger that was weakened as it moved through the mark-up process. The earliest drafts of the bill directly set the stage for the Universal Service system to begin formally supporting the deployment of broadband and advanced services capable infrastructure. This is a key issue.

Today we are on the cusp of fully moving into a world where data, video, and mobility are the primary objectives of consumers and voice will be secondary, or even an afterthought. Remember my earlier discussion that pointed out how most alternative technologies are reliant upon the underlying wireline voice network. Well the same holds true here. Regardless of whether consumers are focused on voice or some other form of communication, they will still require the underlying infrastructure to ensure their communication gets to its destination. The only difference is that with regard to broadband and advanced services capable infrastructure, the costs and subsequent need for support are even greater than they are for voice only infrastructure.

There was one other omission with regard to the legislation that would have gone a long way in controlling the growth of the program and that was the elimination of the identical support rule. For those of you that are unfamiliar with this issue, the FCC's rules currently allow competitive ETCs to receive Universal Service support based on the costs of incumbent carriers. So in the case of a carrier with extremely high costs, a competitor can secure a Universal Service designation for that market and receive the exact same dollars per consumer even if their costs are a fraction of the incumbents. It is a terrible waste of funds and is a rule that should have been changed yesterday.

Mr. Chairman, as a concluding thought I would just like to reiterate what many of us already know Universal Service is not. Universal service support is neither a subsidy nor a tax. Universal service support is an industry funded cost recovery mechanism that offsets the higher cost to build and maintain vital communications networks in rural, sparsely populated, and insular portions of our Nation. No Federal monies are appropriated for this purpose.

America stands at a crossroads between a narrowband and broadband world. The choice is clear. I can assure you that I and the entire rural segment of the industry that is associated with NTCA and the other rural communications associations are ready to work with you to move forward aggressively with a national plan to bring broadband to all Americans as is envisioned by so many. Thank you.

ATTACHMENT A

The Use of Reverse Auctions for Provision of Universal Service—Dale E. Lehman, Ph.D.[1]

This paper reviews the theoretical and applied literature on the use of reverse auctions (also called minimum subsidy auctions or competitive auctions) for provision of universal service. It reveals that reverse auctions are feasible, and have met with some success, for provision of new infrastructure/services into previously unserved areas, or for the upgrading of existing infrastructure and/or services. In contrast, the U.S. environment is one in which there are multiple existing service providers, using a diverse set of technologies, in most supported areas. Existing infrastructure requires (i) a transition mechanism to recover past prudent investments made to serve high-cost areas; and (ii) increases the difficulty of creating an auction that is not biased in favor of any set of current infrastructure providers (particularly if they utilize different technologies). Unfortunately, there is scant empirical evidence on which to determine the feasibility or desirability of reverse auc-

[1] Dale E. Lehman is Director of the Executive MBA in Information and Communication Technology at Alaska Pacific University. He has taught at a dozen universities, and held positions of Senior Economist at Southwestern Bell Telephone Company and Member of Technical Staff at Bellcore. He has a B.A. in Economics from SUNY at Stony Brook, and M.A. and Ph.D. degrees in Economics from the University of Rochester. He has published widely in the area of telecommunications economics and policy, including a number of previous papers on behalf of NTCA.

tions relative to alternative methods of providing Universal Service under these conditions.

The use of auctions to award provision of utility services can be traced back to Demsetz (1968). Demsetz introduced the notion that franchise bidding could replace traditional public utility regulation. Particular use for provision of universal service, or carrier of last resort (COLR) responsibilities, was first explored by Milgrom in his 1996 Nobel lecture in honor of William Vickrey, and was first suggested for examination by the FCC in 1995. Considerable academic and practitioner work has been conducted on auctions since that time, especially in conjunction with the widespread use of auctions for awarding the right to use spectrum resources. In addition, there is a lengthy literature surrounding the use of competitive bidding for awarding contracts (*e.g,* Defense Department procurements, public works construction, etc.) which are a discrete form of an auction (in which a single project or set of projects is awarded on the basis of a competitive bidding process).

The use of competitive processes has a number of general beneficial properties: they promote incentives for cost-reducing innovation, they mitigate against informational asymmetries between funding entities and entities contracted to provide services on their behalf, auctions can be used to ration scarce resources to those that value them the most, and they can permit market forces to play a role in the determination of the quality of services provided. Competitive contracts are not a panacea, however. Victor Goldberg (1976) points out that competitive procurement and alternative regulatory mechanisms should be compared under realistic conditions related to the nature of the service that is being provided.

Goldberg provides the example of a university food service that might be contracted out on the basis of a competitive bid, or could be provided internally by the university itself. The latter is meant to approximate the conditions under which a regulated utility operates. Regulators must monitor the quality and cost of service provision, and face a number of potential inefficiencies inherent in monopoly provision by an agent with better information than the principal. Competitive bidding reduces only some of these problems, and creates some new issues. Quality of service must still be monitored, and there are administrative costs associated with both the awarding and oversight of contracts.

Goldberg points out that administered contracts, traditional regulation, or any other regulatory mechanism must balance the right of consumers to be served and the right of providers to serve. Universal Service is a statement of the public's right to be served (at comparable rates for comparable services, in high cost and insular areas, and for consumers of low income), and regulators become the agent of these consumers' rights. At the same time, providers have the right to an opportunity for a competitive return on their investments.

Goldberg's key insight is that the nature of the service itself, and not the particular way in which contracts are awarded (competitive bidding or regulated monopoly, for example), is what determines the key issues that must be dealt with. Significant investment costs raise issues associated with the need to establish long-term contracts. Volatile operating costs (*e.g.,* fuel costs) would raise issues of risk, regardless of the regulatory mechanism that is adopted.

This principle is pertinent to the use of reverse auctions for provision of universal service. Provision of Universal Service entails significant investment costs (sunk costs to a degree that depends on the technology deployed) under conditions of continual technological progress. Services are provided to consumers for which the demand falls short of the provisioning costs.[2] In the U.S. there are few unserved areas: instead, there are multiple networks, using different technologies and with different quality attributes, and serving different parts of rural areas. There are also a variety of regulatory restrictions placed on existing rural service providers. The potential use of auctions must be evaluated against a backdrop of these characteristics.

This paper will review the theoretical literature and applied evidence, and is organized according to a number of related issues that must be resolved in order to implement reverse auctions for universal service. These include:

- Definition of the service to be auctioned.
- Size of areas to be defined.
- Number of COLRs to be subsidized.
- Time period for contract awards.

[2] This can either result from consumer unwillingness or inability to pay the full cost of provision, or from public policy that limits their price to be less than these costs. In either case, market provision will be insufficiently forthcoming, absent some form of support.

- Transition/stranded investment issues.
- Bidder eligibility.
- Type of bidding to be conducted (sealed or open, single or multiple round, combinatorial, etc.)
- Basis for determining winning bids.
- Pricing and service flexibility accompanying awards.
- Monitoring and enforcement issues.

Each topic has a number of feasible alternatives. In a comparison of reverse auctions and cost proxy model-based USF, Sorana (1998) states that "it can be easily seen that the two mechanisms cannot be ranked on purely theoretical grounds."[3] Similarly, theory alone cannot determine the desirability of reverse auctions for universal service.

I examine the theoretical guidance and empirical evidence that is available from the applications of reverse auctions in telecommunications (and some limited relevant experiences in other industries). A recurring theme will be that the complexity of these decisions increases significantly in the presence of an existing infrastructure (rather than a "green-field" application), and when competing service providers use different technologies (with different cost and quality characteristics).

Service Definition

The definition of Universal Service will need to be specific in terms of service quality, coverage, and capabilities. In particular, it will need to specify whether equal access is to be included, appropriate service quality standards (*e.g.,* system reliability), and what data speed is to be supported. This is one area in which auctions may be less desirable than the current USF mechanism.

Under current rules, the delivery of services can outpace the definition of universal service: for example, higher broadband speeds may be available, even while broadband is not included within the definition of universal service. An auction mechanism may not permit this outcome—the carrier's business case will need to support the service delivered. If policymakers want to see faster deployment, then they will need a specific auction for their desired rate of deployment.

Broadband is not part of today's Universal Service definition, and the FCC's definition of broadband service is relatively slow by today's standards. Many rural carriers provide broadband speeds well in excess of 256k, and often in the absence of sufficient market demand to justify the deployment costs of these higher speeds, on a narrow profitability criterion. The justification for providing these services rests on their economic importance to the rural community served, and the ability to provide these services is facilitated by USF.

It is precisely because of the strong cost-reducing incentives of reverse auctions that the service definition must be precise. This means that regulators must predict service needs at least as far into the future as the time period that the franchise will cover. The need for such regulatory foresight undermines some of the principal theoretical advantages of reverse auctions—that they potentially replace regulatory fiat with market processes.

Coverage is another key part of service definition. It is not feasible to define Universal Service as availability to 100 percent of the population. Reduced targets, such as 90 percent, however, do not sound like *Universal* Service. For many years, telephone companies have operated under state-specific requirements to provide service to any location within X miles (usually a fairly small number) of their current network facilities. Special construction charges apply to locations that exceed X, with the costs usually borne by the party requesting service. Given that this practice has been built into construction plans, it seems that continuing this practice would be least disruptive to consumers.

Size of Areas

A fundamental principle for an auction to be efficient is that the item being auctioned must be the same for all bidders (their individual valuations may differ, but the item being auctioned must be the same if the bids are to be compared). This means that the coverage area must be the same for all COLR bidders.

Theoretical work also suggests that there may be subtle strategic effects as geographical coverage differs across competing providers. If one provider is obligated to serve all customers at the same price, and the other carrier can serve a subset of customers, the COLR carrier must be reimbursed for reduced profits on the contested part of the market as well as the higher costs of serving the uncontested con-

[3] Sorana (1998) at page 18.

sumers [Hoernig and Valletti (2003)]. The strategic considerations go further and can "raise the subsidy substantially, and even may leave both firms with higher profits than if they were just serving the urban market."[4] More generally, differential serving areas and COLR obligations create strategic incentives which will influence the level of competition between carriers. Theoretical work has thus far been constrained to the case of an incumbent competing with a new entrant—the case of competing existing COLRs has not been modeled. Strategic considerations and information asymmetries have yet to be analyzed in this environment.

The next question is whether these areas should be large or small. When there are potentially significant cost complementarities (costs depend on the specific combination of areas that a service provider will serve), then there are two options: (i) auction a large enough areas to include most of the significant complementarities; or (ii) auction many smaller areas, but permit for combinatorial bidding so that significant complementarities can be realized. There appears to be some dispute about the feasibility of (ii) [Kelly and Steinberg (1998) claim that complex combinatorial auctions are feasible, but Hultkrantz (2004) cites Kelly and Steinberg's work, but concludes that "the consensus in the economic literature seems to be that combinatorial auctions have several desirable properties but are too difficult to be used;" Sorana (1998) claims "it must be ultimately recognized, however, that the theoretical and experimental properties of multi-unit auctions, combinatorial or otherwise, are not well understood," and Luander and Nilsson (2004) provide experimental evidence that combinatorial auctions may be more efficient and make collusion more difficult than one shot sealed auctions].

Large area auctions would appear to favor larger carriers, or would require smaller carriers to bid jointly in order to compete.[5] Larger areas that make sense from a network perspective may also require a mixture of areas currently served by rural and nonrural carriers. This would exacerbate the complexity of designing joint bids to serve large areas. It may also increase the size of the Fund by including high-cost areas (currently served by nonrural carriers) that do not presently receive support.

In general, smaller areas should involve more precise and larger Universal Service funds, *ceteris paribus.* Larger areas involve more averaging of relatively high and relatively low cost customers, tending to decrease the overall fund size, but failing to provide full support for high-cost areas [Lehman (2000)]. Smaller areas necessarily involve the complexities of combinatorial bidding.

The averaging effect can be substantial. At the extreme, imagine a single national service area being auctioned off—a subsidy would probably not be required to serve the high-cost areas along with the low cost areas. This result, however, is a move away from decades of efforts aimed at increasing competition in the industry. If auctions are designed to accommodate large areas *and* competition within these areas, then the overall Fund cost will be driven upwards, as discussed below under the number of COLRs.

Determination of geographical areas to be auctioned is complicated by the presence of multiple existing network infrastructures. For example, suppose that the COLR includes service to 100 percent of the customers within a current ILEC serving area and that a wireless carrier wishes to bid, but their network only covers 80 percent of the population in that area. The wireless carrier would be required to arrange to resell the incumbent's service or provide an alternative infrastructure for the 20 percent of customers that it does not currently reach.

Conversely, suppose the service area is defined as the wireless carrier's service area, and that this extends beyond any single ILEC's service area. This would require several ILECs to combine their bids to match the service area of the wireless carrier. In either case, transactions costs and uncertainty will increase when existing infrastructures do not match.[6]

---

[4] Hoernig and Valletti (2003) at page 91.

[5] Current spectrum auctions highlight this issue. Joint bidding is permitted, but the bidders cannot subsequently use the spectrum rights individually, under their separate business identities. Auction design should avoid dictating market structure—it should reveal when joint bidding is most efficient, but it should not force carriers to consolidate operations. Forced consolidation presupposes that regulators know the most efficient market structure to begin with, undermining the potential of auctions to substitute market processes for regulatory processes.

[6] The 1999 NPRM cited the use of competitive bids for COLR in Hawaii. The first such award went to TelHawaii. In order to transfer the assets from the previous COLR, GTE Hawaiian Tel, the Public Utilities Commission of Hawaii condemned some of the assets of GTE Hawaiian Tel. Several court battles later, a state court overturned the condemnation as unconstitutional. Rather than continue the legal battles, TelHawaii pulled out of the market after spending millions of dollars attempting to enter [*Honolulu Star-Bulletin*, July 20, 1999]. Regardless of the ultimate

It is difficult to design an auction that will be technologically neutral under these circumstances. To avoid bias, areas would need to be smaller than anybody's current service area, thereby placing a similar burden on all potential bidders. However, such small areas would greatly increase the complexity of the combinatorial auctions that would be required.

Number of COLRs

Closely related to defining the geographic COLR area is the issue of whether there will be one winning bid or more than one within each area. At a fundamental level, there is a tradeoff between competition *for the market* (favored by a single winning bidder) and competition *within the market* (promoted by multiple winning bidders). *A priori*, it is not clear which type of competition would lead to greater economic efficiency.

It is clear that total subsidies will be larger with multiple winning bids than single winners. This is evident from the GTE reverse auction proposal submitted to the FCC [Weller (1998)]. Weller proposed that bidders submit two bids—one for sole provision of COLR within an area and the other assuming shared provision of COLR responsibilities. Preliminary evidence was that reducing a carrier's market share by 50 percent would increase unit costs by 52 percent. This is due to the fact that network investment is not proportional to the number of customers, particularly in sparsely populated areas. Serving half of the customers may entail nearly the same infrastructure as serving all of the customers.

It should be noted that some technologies may be more tolerant than others of multiple winning bidders. Wireless technology does not have the same sunk cost characteristics as wireline technology, so per unit subsidies may not increase as dramatically for wireless carriers. This need not cause a problem as long as the wireline bidder can receive a subsidy adequate to serve a partial market share. If high-cost support is capped at current per-subscriber levels, adequate support would be impossible, however. So, it is important that there be no caps on bids if multiple COLRs are to be awarded.

Single COLRs does lead to reduced USF costs in one way—it eliminates the problem of multiple supported services (wireline and wireless) without the administrative problems that accompany proposals to limit individual support to a single service (to households, or locations, etc.).

Sorana (1998b) examines an auction mechanism (based on the 3rd lowest bid) that permits multiple COLRs. He points out that "there could be much higher cost involved if the auction rules are not carefully crafted." This results from the vulnerability to collusion. While careful auction rules can avoid this (by making the number of COLRs dependent on the bid amount) "it may still be unable to generate enough incentives for high-quality service."

Laffont and Tirole (2000) provide an extended theoretical analysis of reverse auctions, focused principally on the issue of multiple COLRs. They conclude:

> "We are unaware of formal analyses of Universal Service auctions with endogenous market structure. We have tried to provide a framework within which analysis of such auctions can begin. The first insights thus gleaned do not build as strong a case for the introduction of competition as we had expected." [7]

One salient point is that endogenous market structure increases uncertainty for bidders, thereby requiring an extra risk premium in their bids. Laffont and Tiorle also echo the complexities raised by existing infrastructure in high-cost areas,

> "Much of the discussion on Universal Service auctions proceeds as if all competitors were building their network from scratch. This may be a fine assumption for newly settled areas or when substantial network upgradings are contemplated. In practice, however, many high-cost areas are already partly covered by a wire-based incumbent operator able to provide the supported services with its existing technology. While the incumbent operator's network may have been very costly to build, once in place it has a low (short-term) marginal cost. And so facilities-based entrants (*e.g.,* offering wireless services) may find it hard to compete with the incumbent. In our view, more attention should be devoted to this aspect of Universal Service provision." [8]

In the U.S. environment, the issue is doubly complex since there is existing wireless infrastructure in many high-cost areas. The theoretical performance of auctions

---

merits of the legal dispute, problems like this are likely to accompany bids that require use of other carrier's facilities in order to satisfy the COLR obligations.

[7] Laffont and Tirole (2000) at pages 254, 260.

[8] Laffont and Tirole (2000) at page 260. This point was also made by Milgrom (1996).

has not yet been studied under these circumstances. Nor is there much empirical evidence to provide guidance.

Duration

There is a tradeoff between long and short duration of COLR franchises. Short time periods enhance the ability of Universal Service costs to adjust to changes in technology or changes in service definition. However, this comes at the cost of inhibiting investments that have longer time horizons.

It is notable that cable franchise awards (where competitive bidding is used) are quite long—typically 8–15 years. It is difficult to reject a renewal application upon expiration. Federal law places the burden of proof for failing to renew a cable franchise on the community—they must show that the carrier is either unable to continue providing the service or will be unable to provide the service that the community requires in the future [Kramer (2003)]. In fact, in the 1980s, only 7 out of 3,516 cable refranchising decisions resulted in replacement of the existing franchise owner [Zupan (1989)].

There is a relationship between contract duration and the number of winners. Even with single auction winners, issues arise concerning whether the incumbent winners should have any special treatment in subsequent auctions, or whether there are benefits to opening future auctions to carriers other than the prior winners. Laffont and Tirole (2000, page 261) reach the conclusion that,

> "the incumbent may be shut out of the market. The transfer of the incumbent's capital to winning entrants (either through rentals or through an acquisition) may give rise to the usual concerns about the impact of "second sourcing" on the incumbent's incentives to invest in the quality of its network."

Previous work by Laffont and Tirole (1988) explored the case where incumbent's investments are observable (*i.e.,* where they can be acquired by others—an example of unobservable investment is the buildup of knowledge within the human capital of the firm's managers: it seems that most rural incumbent investment is observable, such as the physical capital of the infrastructure). They reach "a relatively pessimistic assessment of the virtues of second-sourcing (or takeover) when substantial investments are at stake." (page 532) This is due to the potential that some of the value of the incumbent's investment may flow to future auction winners. This externality causes the incumbent to under-invest, and calls for future auctions to be stacked in the incumbent's favor. Indeed, this is a rationale behind the burden of proof in cable refranchising that falls on those that do not want a franchise renewed.

Universal Service minimum subsidy auctions in South America have typically used lump-sum payments with 5 year exclusive franchises [ITU (2002)]. The subsidy is paid in stages, according to established milestones (*e.g.,* upon installation of half of the required payphones), but it is not a recurring payment. That is, the subsidy is geared to recover the full cost of the investment (unless the bidder is willing to bid for only partial recovery during the 5 year period). Carriers can decide how much risk they wish to bear by bidding for less than full recovery during the 5 year period. Given that these South American auctions (and new ones proposed in Africa) take place in green-field environments, there is often a business case for ultimate expansion into these unserved areas, so bidders may be willing to accept less than full cost recovery from the subsidy mechanism. It is unclear how relevant these circumstances are to the U.S. rural environment (where many rural areas are not growing).

Sorana (1998) points out that "sufficiency" of USF is not assured by good auction design, and neither is voluntary provision of universal service. He constructs a model to compare reverse auctions with cost-proxy models, finding that auctions may involve lower subsidies than accurate cost proxy models, but his model *assumes* that the funds from the auction are sufficient for the intended purposes. He notes that this is not assured.

Competitive bidding is used in the Essential Air Service program, but with only a 2 year horizon. Airplanes, however, are quite mobile, unlike telecommunications infrastructure. These examples suggest that the time periods would have to be relatively long, if there is to be sufficient incentive to invest in telecommunications infrastructure.

Transition

Existing infrastructure complicates the picture. Suppose the incumbent loses the auction but has investment that was prudently incurred, but has not yet been fully recovered. It is possible that the winning bidder may want to purchase this infra-

structure.[9] This creates legal and policy issues, but it also impacts economic efficiency. If regulators establish a precedent for truncating recovery of prudent past investments, then future investment will be affected. It is unlikely many investments will take place with payoff periods longer than the duration of the franchise.

The World Bank (2000, pages 6–26) cites competitive bidding as a feature of a good universality fund, but "As previously discussed, the process is more difficult where an incumbent is already providing the designated universal services." The embedded network may provide the incumbent with an advantage bidding against new entrants (as was the case in India and Australia, discussed below), or may force the incumbent to fail to recover its past investments, despite regulatory oversight deeming those investments to be prudent.

Despite these complications, the World Bank does claim that auctions are still possible—they cite transfer of assets to the lowest bidder, subcontracting, joint ventures, etc. as mechanisms that can deal with embedded infrastructure. While such developments can enhance efficiency, there are costs associated with each of these avenues (as demonstrated in the Hawaii case in footnote 6).

The only way to avoid bias either for or against incumbent networks is to fully recover the incumbent's investment prior to enacting the reverse auction. It is not surprising that the most successful reverse auctions (Chile, Peru, Guatemala, Columbia, and the Dominican Republic) involved previously unserved areas or significant upgrades to the existing infrastructure within these areas [ITU (2004)].

The need to address stranded investment is well-recognized in the area of electricity deregulation. The Congressional Budget Office (1998) reviewed the stranded cost issue, concluding,

> "For reasons of fairness and political reality, utilities are likely to be compensated for some or all of their losses. Determining the correct figure for stranded costs, deciding how much of them to compensate, and figuring out how that compensation should be paid are difficult issues, which are slowing progress toward restructuring in many states."

Volumes have been written and disputes continue over measurement and recovery of stranded electric generating costs, but it is an issue faced by all attempts at deregulation.

For example, in Texas, there is a provision for "true-up" charges:

> "These 'true-up' proceedings are designed to provide commission authorization for an electric utility to begin recovery of its costs for power plants built to meet customer demand for electricity prior to the start of retail competition, which cannot be recovered in the competitive marketplace. These costs are said to be 'stranded.'"[10]

Reverse auctions potentially render the incumbent's network less valuable (if they lose the bid or forego full cost recovery in order to win the bid). Given that these were prudent investments undertaken precisely to fulfill the COLR, there is a strong case for recovery of these stranded costs. To the extent that new technologies (*e.g.,* wireless) cause this decrease in value, the case for recovery is strengthened (since the investments were prudent at the time they were made, and were often recovered through overly long depreciation schedules). Resolution of this issue is of political, legal, and economic importance (the latter through its affect on future investment incentives).

Eligibility

Bidders must be financially and operationally capable of fulfilling their COLR responsibilities. The FCC has considerable experience with ensuring bidder eligibility, although there have been problems, particularly with small bidders. The goal should be to have enough bidders to ensure a competitive bidding process, while limiting future problems with failure to deliver the required services.

The 1999 Peru auctions illustrate this problem [ITU (2004)]. The winning bid was 20 percent of the available subsidy, but the winning company then could not meet its targets. The ITU presents this an example of excessively low bidding and points out that most Latin American auctions have attracted bidders without much operational experience, and have failed to attract large international operators or incumbents.

---

[9] Although this may entail problems such as those encountered in the Hawaii case discussed above.

[10] Described at *http://www.aep.com/newsroom/resources/docs/TrueUp.pdf#search=%22stranded%20investment%20auctions%22.*

Summary on Geography, Size, Numbers, and Eligibility

The discussion thus far can be summarized as a spectrum of choices that would govern the intensity of competition for the COLR subsidy. International experience can be placed on a continuum from lack of competition to healthy competition. The Latin American examples [World Bank (2000), ITU (2002), ITU (2004), Intelecon (2005), Scherf (2006)] appear to have had truly competitive bidding in their reverse auctions. Savings of 50 percent (compared with the maximum potential subsidy level) are commonly cited, but these "savings" are based on comparison with a cost proxy model of unknown accuracy. There is no evidence concerning the relative costs of reverse auctions and other Universal Service mechanisms in any of these countries. Still, the auctions were administratively feasible and resulted in multiple bidders for the COLR.

The extreme example of a lack of competition for the market is India [Malik and Silva (2005), Noll and Wallsten (2005)]. Reverse auctions were held for infrastructure upgrades to a number of rural areas. The incumbent, BSNL, won almost all of the bids and bid the maximum subsidy available in each case. Critics of the Indian auction point out that the eligibility rules essentially predetermined this outcome. Only providers with current infrastructure in these regions could bid; technologies were limited to wireline and fixed wireless, and bidders were required to install infrastructure to reach everyone within these regions but without any wholesale regulation of the incumbent to provide for interconnection, unbundling, or resale. As a result, in 19 of the 20 areas, there was only a single bidder (BSNL) and they bid the maximum subsidy available. The rules were designed to promote neither entry nor efficiency.

The other end of the spectrum can be envisioned as the U.S. While competitive bidding has not been utilized, support on a predetermined per line basis (*i.e.,* without uniform coverage requirements) has been offered to multiple ETCs. The fact that many rural areas have witnessed multiple carriers willing to accept the offered support level, suggests that there would be multiple bidders if the auction were conducted on a per-line subsidy level, and without requirements to serve everybody within the same service areas with the same quality characteristics. In this sense, the current rules for the high-cost fund are designed to promote entry, but not efficiency.[11]

Australia provides an interesting data point [Department of Communications, Information Technology and the Arts, Australia (2004), ITU (2006)]. Two pilot regions were selected for reverse auctions. These included the most remote 80 percent of Australia, and $150 million was available for introducing unlimited local calling with these areas. The goal was to find "a simpler way of determining a reasonable level of subsidy de-linked from a calculation of costs."[12] The auction was designed for a single winner. No competitive tenders were received. In fact, since 1991, carriers other than the incumbent (Telstra) have been free to apply to be COLR, but none have applied. The ITU report concluded "However, while the experiences with designating Universal Service providers on the basis of competitive tendering in some countries has been encouraging (*e.g.*, Chile and Peru), there has been some less positive experience in Australia."

Australian regulators did follow-up analysis to determine the causes for lack of competitive interest. Major factors cited were: difficulty competing with Telstra, meeting the obligation to serve all customers, and difficulty identifying other revenue opportunities to help support COLR responsibilities. It is also possible that the investment climate at the time of the pilots was unfavorable. The regulator concluded that higher subsidies might induce entry, but they were not worth the significant increase in costs. They recommended preserving the reverse auction option, but not continuing it at this time. One benefit they cite from the pilots is the determination that Telstra was not being overcompensated for COLR at current subsidy levels.

Another example is provided by electricity deregulation in Maine [Maine Public Utilities Commission (2002)]. Maine claims to have the most robust retail competition for electricity customers in the Nation. Significant competition (more than half of the market) has developed for large customers. Virtually no retail competition has developed for small residential and business customers (with the single of exception

[11] Parties differ in the source of inefficiency that they see, but virtually all agree it is inefficient. Some parties point to the support of multiple carriers based on incumbent costs as leading to unnecessary duplication of infrastructure and unnecessary support for CETCs. Others believe the waste is caused by the cost plus nature of determining support levels. In any case, nobody claims the current environment is particularly efficient.

[12] ITU (2006) at page 14.

of a small area in northern Maine, which the Commission discounts for a number of region-specific reasons).

State legislation eliminated the obligation to serve, with "standard offer service" available for those who could not find a suitable competitive supplier. The Commission was instructed to strive for at least 3 suppliers of standard offer service in every areas, "but only if multiple suppliers would not cause rates to be significantly higher."

Early attempts to solicit competitive bids for standard offer service did not result in retail suppliers for all customer classes. Later attempts were somewhat more successful. Still, the Commission notes that "there is virtually no retail competition for residential and small commercial customers, either in Maine or elsewhere." Their research concludes that prices should not be increased in the hope of attracting suppliers (consumer input was strongly against paying higher prices in exchange for increased competition). Standard offer service does extend some of the benefits of competition to individual small customers through the aggregation inherent in a standard offer available throughout the state. In the telecommunications context, this is akin to requiring geographical averaging of retail prices across broad geographic regions. This is closer to the old system of implicit support in which lower cost customers pay higher prices in order to support lower prices for the high-cost customers. Such a system is not feasible in a truly competitive environment.

What these examples reveal is that regulators have wide discretion in determining the extent of competition for the market that results from a reverse auction. They can design auctions that preclude entry (such as in India) or they can promote entry, regardless of attendant inefficiencies (the U.S.). It appears to be feasible to get reasonable entry and efficiency in a green-field environment. This is what the Latin American examples show. It is more elusive in environments with existing providers.

The political economy of regulatory policy must be considered when evaluating reverse auctions. In the absence of strong policy direction, it will be difficult to design a reverse auction that does not either deny CETCs their current support or deny rural ILECs recovery of their existing investments. The result could well be a *managed* competitive reverse auction, with few of the benefits that reverse auctions potentially offer.

To avoid a managed outcome, regulators must set a clear goal in terms of how much entry they want, and what efficiency cost they are willing to bear. A concrete example is the choice of serving area. Very small geographical areas can promote entry (per-subscriber subsidy bids is the extreme example), but jeopardize the ability to realize cost complementarities and at the risk of unnecessary duplication of support. The trouble is that regulators must know a great deal about what is most efficient before they can design the reverse auction (for example, they must know how many COLRs are efficient, and which technologies are most efficient, and how to define Universal Service over the length of the franchise contract). It is the absence of such knowledge that is one of the major benefits of using reverse auctions to begin with—the market is supposed to provide these answers.

It is the existence of current infrastructures that complicates this design. Rules cannot be chosen that will satisfy all interests, so the regulator is required to know what the efficient outcome looks like before the auction can be designed. In a green-field environment, by definition the COLR that is being auctioned is one that the market has not found profitable—hence, there are fewer interests at stake in the creation of the reverse auction mechanism. The evidence supports this conclusion: green-field reverse auctions have been fairly successful, while there are no clear examples of competitive bidding in more developed settings.

Auction Mechanics

There are a number of subsidiary design questions that deal with the mechanics of how a reverse auction would actually operate.

Type of Bidding

Most reverse auctions have utilized simple one-shot sealed auctions. Most spectrum auction design has been multiple-round, open, combinatorial auctions. The underlying issues concern the importance of cost/value complementarities, bidder risks, and opportunities for collusion. These have been extensively studied in the general auction literature. A few particular considerations apply in a Universal Service setting. Cost complementarities are potentially important, so the auction must either be combinatorial or involve fairly large geographical areas. Both pose problems. In addition, in an environment in which there are existing infrastructure providers, sealed bidding would appear to impede much necessary negotiation about joint bids, outsourcing arrangements, etc. Some research suggests that sealed bidding may ac-

tually facilitate collusion [Luander and Nilsson (2004)]. On balance, it would appear that combinatorial bidding is more appropriate in the U.S. environment, but the feasibility and complexity of the required auction is in some dispute.

Determination of Winner(s)

It is clear that more than price must be considered in determining winning bids. None of the international examples (or domestic examples from other industries) entail a price-only selection. What the literature does say, however, is that the rules for determining winners must be specified precisely and unambiguously in advance [ITU (2002), World Bank (2000)]. That is, the process must avoid subjectivity. This is the same problem encountered in many procurement contracts—the rules must be clear and objective.

Current costs, under the U.S. high-cost fund, are controlled via a number of oversight mechanisms, the lack of full cost recovery (high-cost funding only supports a percentage of the costs above the national average), and competitive pressure from other services (*e.g.,* VoIP, wireless usage substituting for wireline usage, etc.). The high-cost fund, itself, is not designed to necessarily minimize costs. It does not contain cost-reducing incentives as strong as would an auction mechanism. While this can lead to inefficiency in terms of costs, it also permits more flexibility in terms of services offered (*e.g.,* broadband speeds). This flexibility has value—particularly, if regulators do not have sufficient information to project Universal Service definitions into the future.

Post-Award Flexibility

Reverse auctions in developing countries have relied on additional service revenues to reduce the cost of public subsidies. Permitting COLRs to market value-added services, in addition to the contracted COLR, can result in their bids being less than the cost of providing solely the COLR. Some countries have specifically permitted retail prices in rural areas to exceed those in urban areas by predetermined amounts. In some auctions (*e.g.*, the Essential Air Service Program) there are no restrictions on post-award pricing at all.

It is clear that bidders will bid lower in a reverse auction to the degree that they have post-award flexibility. However, flexibility endangers the concept of universal service. Once again, there is a tradeoff. The more flexibility that is provided, the lower the expected subsidy required, but the less assurance there is that Universal Service objectives will be met.

It is also worth noting that the "successful" Latin American reverse auctions rely, in part, on asymmetric interconnection fees to support rural providers. For example, the largest Chilean rural operator gets 60 percent of its total revenues from such charges; Columbia has recently introduced asymmetric fees, and Peru plans to [ITU (2004)]. They also permit higher rural prices and lower license fees in rural areas. Uganda has recently introduced a reverse auction for service to 154 communities that no operators were willing to serve, and part of the mechanism was permitting voice service rates in rural areas to be up to 50 percent above rates in Kampala (as well as higher termination fees in rural areas) [Intelecon (2005)].

Monitoring and Enforcement

Performance under the franchise award must be monitored. Most countries have specific penalties for failure of winning bidders to meet their performance targets. Removal of a COLR, either through failure to perform adequately or through carrier bankruptcy, poses particular problems for reverse auctions for universal service. How is service to be guaranteed for rural customers in the event that their winning bidder does not (or is unable to) meet its obligations? Scherf (2006) cites this as a weakness in the build-out requirements that accompany licenses in many developing countries: it is cheaper to pay the penalties than fulfill the requirements.

Bankruptcy risks are somewhat mitigated under the current USF by the historic regulatory compact in which rural ILECs have been able to recover their past investments. When cost recovery becomes more uncertain, and when awards are based on low subsidy bids, these risks increase.

Scherf (2006) says that "the regulatory environment has to be credible and sustainable to the eyes of investors," (page 12) and discusses issues associated with enforcement mechanisms, particularly in developing countries. He cites problems in Peru, where some very low bids had been submitted, with subsequent renegotiation under the threat of carrier bankruptcy. He also mentions Uganda, where the regulator has not even asked for the performance data it would need to monitor performance. These concerns are more pronounced in countries with less developed political institutions, but they also arise in the U.S. In addition, we have the issue of the appropriate jurisdictional responsibility for monitoring and enforcement.

Conclusions

In a definitive work on the theory and practice of auctions, Klemperer (2004) concludes,

> "In conclusion, the most important features of an auction are its robustness against collusion and its attractiveness to potential bidders. Failure to attend to these issues can lead to disaster. And anyone setting up an auction would be foolish to blindly follow past successful designs: auction design is *not* 'one size fits all.' . . . In the practical design of auctions, local circumstances matter and the devil is in the details." [13]

Auctions have a number of desirable properties. The ITU states that,

> "The use of well-designed competitive tenders can (in certain circumstances) help to generate incentives to contain costs, innovate, and reveal the true cost of delivering Universal Service (thus helping to minimize the subsidy required." [14]

We have seen that auctions can be feasible and effective for provision of Universal Service in unserved areas, if they are properly designed. Their success depends on an appropriate definition of the objective for universal service. Reverse auctions have been most successful where the objective can be clearly defined and does not require long-range forecasting: *e.g.,* provide payphone service in specified rural villages (Chile, Peru, Columbia, Guatemala).

Reverse auctions in the U.S. are a different matter. There are multiple existing infrastructures, utilizing different technologies, providing different services, and with different serving areas. Universal Service is an evolving set of service requirements that is difficult to forecast. The performance of auctions in this setting is theoretically and empirically untested. The limited evidence suggests that these are difficult problems.

Auction design will need to address competition within the market as well as for the market, potentially large cost complementarities between high-cost areas as well as between high-cost and low-cost areas, and provide for investment incentives with significant sunk costs and technological uncertainty.

Much of the theoretical appeal of reverse auctions is dissipated under the actual conditions under which Universal Service will be provided. Regulators will need more foresight than they would like. They will need to specify Universal Service requirements far enough into the future to allow for the required investment incentives. They will need to know more about the most efficient market structure (single COLR, multiple, which technology, etc.) than they would like. Auctions are supposed to permit the market to make these determinations, not regulators. But, this benefit can be illusive. Can the market pick the technology if the auction design cannot put different technological platforms on an equal footing?

One clear beneficiary of a reverse auction system is the economics profession. Their expertise lies in auction design and the devilish details contain plenty of interesting work. How consumers of Universal Service and providers will fare, is less clear.

The Joint Board Discussion Proposal

The Discussion Proposal (The *Proposal*) provided with the Joint Board Public Notice provides a good illustration of the difficulties of applying reverse auctions in a nongreenfield environment. The *Proposal* does not appear to be derived from any theoretical efficiency properties, nor does it follow the reverse auctions that have been implemented elsewhere. Instead, it seems to be driven by the need to accommodate the fact that we are currently supporting multiple networks using multiple technologies in rural areas.

Separate support for broadband and mobility services in rural areas for 10 year periods, takes a particularly static view of technology. It provides support to two sets of services, neither of which are included in the current definition of universal service—mobility and broadband. The *Proposal* does attempt to address the transition issue by offering an initial phase-in whereby rural ILECs can elect to receive support (at current levels plus inflation) for the first 10 year period for broadband service. This is recognition that past prudently incurred investments need to be recovered.

But, what happens after 10 years? What will govern future network investment? Here, the *Proposal* is silent on the details that will ultimately determine future Universal Service in rural America. The *Proposal* says that ETCs would be required to

[13] Klemperer (2004) at page 122.
[14] ITU (2006) at page 25.

relinquish essential facilities at "fair market value" at the end of the contract term. After 10 years of trying to determine "fair market value" for unbundled network elements under the Telecommunications Act of 1996, the task of determining "fair market value" for essential rural network facilities will be daunting.

The *Proposal* defines geographical coverage as 90 percent or more of the households, without specifying how ETCs would acquire the services needed to reach the remainder of the households (echoing some of the problems in the Australian and Indian reverse auctions discussed above). Basic geographical units would be counties, with the exception of rural ILECs, and counties could be bid on in bundles or separately. This does not address the complexity of the combinatorial auction that would be required (the U.S. Census Bureau lists 3,141 counties or county-equivalent administrative units), nor does it address the issue of whether the mobility support would extend to all counties, including those served by nonrural ILECs. There is the potential for a significant growth in the fund, if it includes currently unsupported areas.

Upon review of the past "successes" with reverse auctions, they appear to deliver tangible benefits when used to support delivery of services where current infrastructure is not in place. While many rural areas see significant competition among wireless carriers, there is still a need for more extensive build-out of rural networks. The mobility USF could be aimed at this goal, by tying support to specific infrastructure targets.

The *Proposal* illustrates the complexity of applying reverse auctions in the existing mixed technology infrastructure of the United States. The devil *is* in the details, but the details are not in the *Proposal*.

References

Australia, Department of Communications, Information Technology and the Arts. 2004. "Review of the Operation of the Universal Service Obligation and Customer Service Guarantee."

Congressional Budget Office. 1998. "Electric Utilities: Deregulation and Stranded Cost."

Demsetz, H. 1968. "Why Regulate Utilities?" *Journal of Law and Economics*, Vol. 11, 55–66.

Goldberg, Victor. 1976. "Regulation and Administered Contracts." *Bell Journal of Economics,* Vol. 7, 426–452.

Hoernig, Steffen H. and Tommaso M. Valetti. 2003. "The Interplay between Regulation and Competition: The Case of Universal Service Obligations." Chapter 6 in *Spectrum Auctions and Competition in Telecommunications,* edited by Gerhard Iling and Ulrich Kluh, The MIT Press.

Hultkrantz, Lars. 2004. A fresh start on universal-service policy. Paper presented at the Swedish National Post and Telecom Agency Conference.

Intelecon. 2005. "Universal Access and Universal Service Funds: insights and experience of international best practice."

International Telecommunications Union (ITU). 2002. Model Universal Service/Access Policies, Regulations and Procedures. Part II: Minimum Subsidy Competitive Auction Mechanisms for Funding Public Telecommunications Access in Rural Areas and Tariff/Interconnection Regulation for the Promotion of Universal Service/Access. Paper prepared by Edgardo Sepulveda for the Global Symposium for Regulators, Hong Kong, December 7–8, 2002.

International Telecommunications Union (ITU). 2004. "Leveraging Telecommunications Policies for Pro-Poor Growth Universal Access Funds With Minimum-Subsidy Auctions." DAC Network on Poverty Reduction, Development Co-operation Directorate, Development Assistance Committee.

International Telecommunications Union (ITU). 2006. "What Rules for Universal Service in an IP-Enabled NGN Environment?" Background Paper for ITU Workshop, Geneva, March 23–24, 2006.

Kelly, Frank and Richard Steinberg. 1998. "A Combinatorial Auction with Multiple Winners for Universal Service." Subsequently published in *Management Science:* 46(4), 586–596, 2000.

Klemperer, Paul. 2004. *Auctions: Theory and Practice*. Princeton University Press.

Kramer, Jonathan. 2003. "Leveling the Playing Field for Cable-TV Franchise Renewals." *Public Management*; 85, 11.

Laffont, J.J. and Jean Tirole. 1988. "Repeated auctions of incentive contracts, investment, and bidding parity with an application to takeovers." *RAND Journal of Economics*, Vol. 19, No. 4.

Laffont, J.J. and Jean Tirole. 2000. *Competition in Telecommunications*. The MIT Press.

Lehman, Dale E. 2000. *Who Will Serve Rural America?* white paper for the National Telephone Cooperative Association.

Luander, Anders and Jan-Eric Nilsson. 2004. "Combinatorial Procurement Auctions—A Collusion Remedy?" Unpublished Manuscript.

Maine Public Utilities Commission. 2002. "Standard Offer Study and Recommendations Regarding Service after March 1, 2005."

Malik, Payal and Harsha de Silva. 2005. "Diversifying Network Participation: Study of India's Universal Service Instruments." WDR Dialogue Theme 3rd cycle, Discussion paper WDR0504, *regulateonline.org* and LIRNEasia.

Milgrom, Paul. 1996. Procuring Universal Service: Putting Auction Theory to Work. Lecture at the Royal Swedish Academy of Sciences.

Noll, Roger G. and Scott Wallsten. 2005. "Universal Telecommunications Service in India." AEI-Brookings Joint Center, Related Publication 05–25.

Scherf, Thorsten. 2006. "Policies for universal Access to Telecommunications in Rural Areas of Developing Countries—A comparative Analysis." Unpublished paper, available at *http://zeus.econ.umd.edu/cgi-bin/conference/download.cgi?db_name=IIOC2006&paper_id=544#search=%22scherf%20universal%20service%22*

Sorana, Valter. 1998a. "Some Economics of Carrier of Last Resort Auctions." Paper presented at the Telecommunications Policy Research Conference.

Sorana, Valter. 1998b. "Auctions for Universal Service Subsidies." Unpublished manuscript, Stanford University.

Weller. 1998. "Auctions for Universal Service Obligations." Paper presented at 12th biennial conference of the International Telecommunications Society.

Westerveld, R. and C.F. Maitland. "Technical and policy advances in rural telecommunications." Unpublished manuscript.

World Bank. 2000. *Telecommunications Regulation Handbook: Module 6, Universal Service*. Edited by Hank Intven, McCarthy Tetrault.

Zupan, M.A. 1989. "Cable franchise renewals: do incumbent firms behave opportunistically?" *RAND Journal of Economics* 20, 473–482.

The CHAIRMAN. Thank you very much, Mr. Crothers.

May I now recognize Dr. Staihr?

STATEMENT OF BRIAN K. STAIHR, PH.D., REGULATORY ECONOMIST, EMBARQ™ CORPORATION

Dr. STAIHR. Thank you very much.

I'm Brian Staihr. I'm an Economist for Embarq. Very happy to be here today.

Now, Embarq is the country's largest independent wireline telephone company. We have about 7 million customers across 18 states. And if you look at the picture that Brian's showing you over here we serve some very wonderful rural areas, like Possum Kingdom, Texas, and Pretty Prairie, Kansas.

[Laughter.]

Dr. STAIHR. And because we're very rural, we appreciate the time and the effort that this committee has put into the subject of Universal Service. Already this year, Senator Stevens has introduced the USA Act, which addresses many important issues. And we look forward to working with all of you in the future.

Now, quickly to reiterate two facts, we all know that the Federal Fund has grown significantly in the past few years and the FCC is looking at ways to control this growth, including auctions. We also know, if you look at this graph, that the source of the growth is receipts that have gone to competitive carriers rather than to incumbents that serve as carriers of last resort. Now, this difference is significant, because when a company is a carrier of last resort, it has an obligation to serve all the customers in an area, including the high-cost customers that nobody else wants to serve. Competitive carriers and wireless carriers don't have this obligation even when they get USF.

Now, to see why this difference is significant, I want to show you a picture of Meadowview, Virginia. The different colors in the picture on the left represent different population densities. Yellow and red show high density, which is low cost. The green shows low density, which is high cost. Embarq, as the carrier of last resort, has to serve the whole thing, the yellow and the green parts.

The second picture shows you the wireless coverage in Meadowview. As you can see, the wireless coverage pretty much stops where the high-cost parts start. The wireless carrier doesn't have an obligation to serve the high-cost area; and, even if it receives USF, it doesn't have this obligation.

Now, this picture illustrates a key problem with the Fund as it exists today. Before we had competition, a company like Embarq would serve Meadowview, and we could count on the low-cost areas offsetting the high-cost areas. If we lost money serving the green part, that was OK, because we served the yellow part, too, and, on average, we were all right. But, after 1996, competition developed, and, in a place like Meadowview, it developed just in the yellow areas. As a result, we could no longer count on that low-cost offsetting the high cost, because we'd lost half the customers in the low-cost area.

The point here is, the Federal Universal Service Fund has not kept pace with this competitive reality, because, when the current system looks at a place like Meadowview, it assumes that Embarq can continue to use the low-cost areas to offset the high cost, and we can't do that anymore.

In addition, under the current system, this competition creates a very strange kind of chain reaction. Competitors come into the low-cost areas, they get the same support per line as the incumbent. This support draws more competitors into those same areas. That means the competitors serve low-cost customers, the incumbent serves high-cost customers, the incumbent's costs go up, the support goes up, we end up oversupporting the town center and basically shortchanging the outlying areas.

The way to fix this is to target support more granularly, to reexamine the area that we look at when we determine the need for Universal Service support, particularly to consider the town center and the outlying areas differently.

What will this do? Three things. First, it'll stop that chain reaction. Second, it'll target the support to where it's really needed. And, third, it will eliminate this reliance on these unsustainable cross-subsidies, while not necessarily increasing the size of the Fund.

Now, I've got one more picture to show you. This is Fort Meade, Florida. Every green dot on that picture is a customer location. You can see there's a very clear downtown area. That area is pretty low-cost. The outlying areas are much higher-cost. All right? The outlying areas don't see competition, in general. When we see competition in Fort Meade, it's, just like Meadowview, in that downtown area. As a result, the outlying areas can't be subsidized by the downtown. The outlying areas need support. And, under the current system, they don't get any.

Targeting USF would bring rationality to the USF distribution system. And it's not mutually exclusive with other policy consider-

ations that we're looking at today. We can talk about reverse auctions. We can talk about support for broadband. We can talk about eliminating identical support. We can talk about more granular support, in conjunction with any of those. Or we can talk about more targeted support, apart from any of those. It works both ways.

Now, to wrap things up, 11 years ago when the Act was passed, we didn't have much competition in rural America, we didn't have the capabilities or the tools to calculate support specifically for these outlying areas. Today, we have the capability, we have the tools, and we have one more thing—we have the incentive, going forward, to do it right.

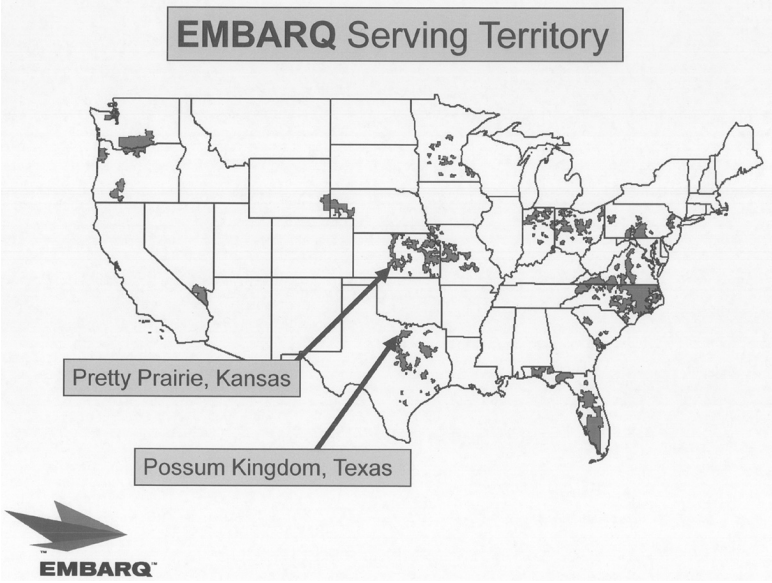
So, with that, I'll stop. I appreciate the time today and look forward to any questions you may have.

[The prepared statement of Mr. Staihr follows:]

PREPARED STATEMENT OF BRIAN K. STAIHR, PH.D., REGULATORY ECONOMIST, EMBARQ™ CORPORATION

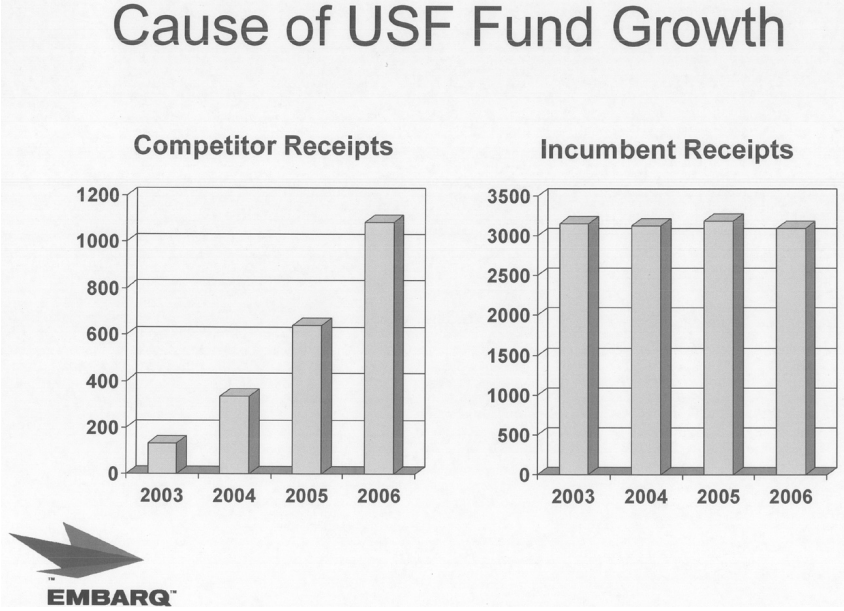
Good morning, Mr. Chairman, Vice-Chairman Stevens, and members of the Committee. My name is Brian Staihr, I work as an economist for Embarq, and I appreciate the opportunity to testify before you today.

Embarq is the largest independent wireline telephone company in the country, serving nearly seven million customers across eighteen states [Fig. 1]. We serve some of the most rural portions of the country, places like Possum Kingdom, Texas; Pretty Prairie, Kansas; and Crater Lake, Oregon. And because we serve rural America, we are well aware that this Committee has put tremendous time and effort into the subject of universal service. Already this year, Senator Stevens has introduced the USA Act which addresses a number of important issues such as exempting the Universal Service Fund (USF) from the Antideficiency Act and stabilizing the contribution base while preserving State Universal Service programs. We look forward to working with Chairman Inouye, Vice Chairman Stevens and all the members of this Committee going forward as you sort through the complex issues involved in laying a solid foundation for the next generation of universal service. Getting these issues right is a matter of vital importance not just to the stakeholders around this table, but to the economic competitiveness of every rural community—and those in more populated areas who benefit by connecting to rural America.



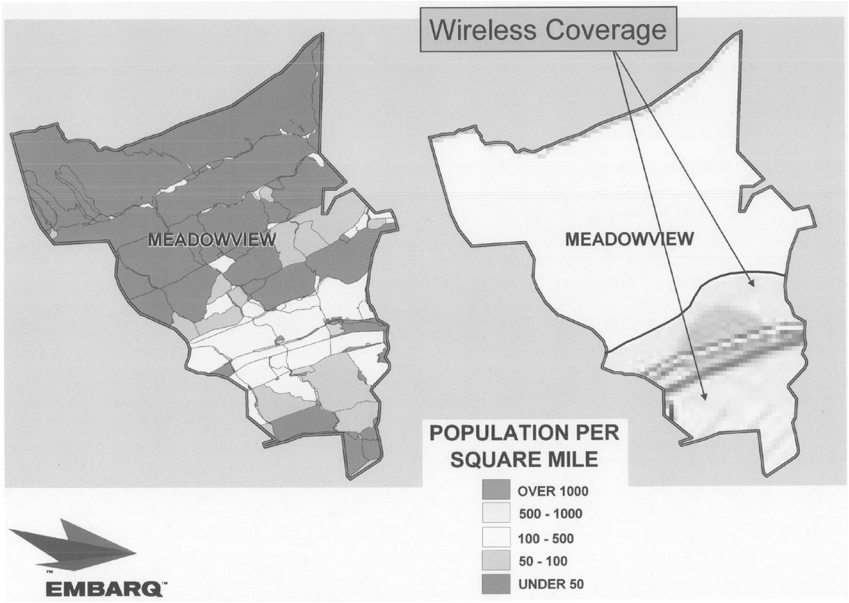
I want to start out today by highlighting two established facts: First, we know that the Federal Universal Service Fund has grown dramatically in recent years. As a result of this growth, the FCC is investigating various ways to control the size of the Fund, including the use of reverse auctions, which I will talk more about in a moment.

Second, as the graphs before you illustrate [Fig. 2], we also know this growth has been driven by the increasing participation of second and third *competitive* carriers in the Fund, as opposed to the incumbent carriers that shoulder the core carrier-of-last-resort responsibilities.



This difference is significant. When a company such as Embarq is a carrier-of-last-resort, that company has an obligation to serve *all* customers, including the customers in very high-cost areas that no one else wants to serve. Competitive carriers and wireless carriers do not have these same carrier-of-last-resort obligations, even when they receive USF dollars.

To illustrate why this difference is significant, I've included a picture here of a rural area that Embarq serves called Meadowview, Virginia [Fig. 3]. The different colors on the left picture represent different population densities, with red and yellow showing the highest densities and green showing low density. As you can see, the southern portion of Meadowview is actually fairly populous; the northern part is less populous, very rural, and very high-cost to serve. Embarq, as the carrier-of-last-resort, serves the entirety of Meadowview, the yellow parts and the green parts.



In contrast, the picture on the right shows the coverage area of the major wireless provider in Meadowview. As you can see, wireless coverage essentially stops where the high-cost areas start. Strange as it may sound, the wireless company has no obligation to serve the high-cost portions of Meadowview, even if it receives USF dollars.

These pictures actually illustrate three related concepts that lie at the heart of the challenges that Universal Service faces today.

First, before competition, a company like Embarq could serve an area such as Meadowview and count on the fact that the lower-cost portions would offset the higher-cost portions. It didn't matter if a company lost money serving the green areas, because the company also served the yellow areas and, on average, the company could cover its costs.

Second, this changed with the passage of the 1996 Telecom Act. We have seen competition develop everywhere, but in places like Meadowview the competition is limited to what we see here: the more densely populated areas. Competitors—both wireline and wireless—most often target the low-cost areas, and avoid the high-cost areas. As a result, we can no longer count on those lower-cost areas to offset the highest-cost regions because in many cases we've lost half the customers in the low-cost areas to competition.

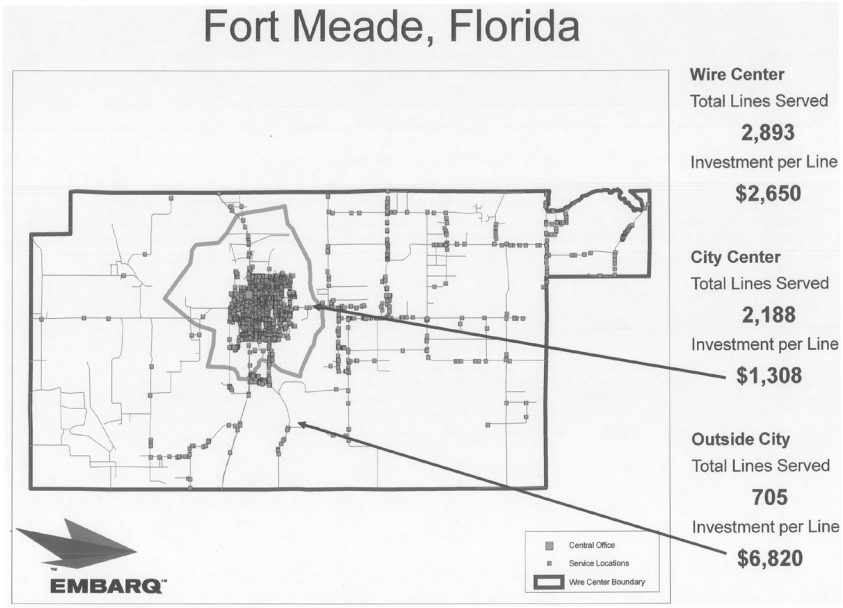
Third, and most importantly, *the Federal Universal Service Fund has not kept pace with this competitive reality*. When the current USF mechanism evaluates an area like Meadowview, the system assumes that Embarq can continue to use low-cost areas to offset the higher-cost ones. In fact, the current system assumes that Embarq can use low-cost *areas anywhere in the state of Virginia* to offset the cost of serving the high-cost portions of Meadowview.

In addition, by allowing competitive carriers to receive support while serving only the parts of a rural study area they choose, the current system creates dysfunctional incentives that lead to an unfortunate chain reaction:

- New entrants gravitate to the town center area and receive support at the same per-line rate as the carrier of last resort, creating a windfall opportunity;
- Drawn by the windfall, multiple competitive providers apply for support in the same geographic area;
- Bereft of its low-cost, offsetting customers, the incumbent carrier's per-line costs go up—increasing the support to *all* USF recipients in that area, and increasing the windfall;
- The Fund ends up overspending in the town centers and shortchanging the outlying areas where support is most needed.

As we look to the future of Universal Service, we need to correct these basic misassumptions to make the Fund truly compatible with today's—and tomorrow's—competitive environment. The way to do that is straightforward: We have to re-examine the geographic area that we use to determine whether support is needed, and recalculate that support at a much more granular level, so that the town centers and outlying areas are considered *separately*, and the support migrates to where it is truly needed the most. Not only would such an approach eliminate many of those dysfunctional windfalls, it would be more competitively rational because it would channel support to the truly rural outlying areas that need it the most, eliminating those unsustainable cross-subsidies without necessarily increasing the size of the Fund.

The picture in front of you shows the community of Fort Meade, Florida [Fig. 4]. Each green dot on this picture is a customer's location. There is a very clearly identified downtown area which is actually low-cost to serve; then there are outlying areas where the cost of serving is many times higher. As was the case with Meadowview, when we see competition in a place like Fort Meade we see it in this low-cost downtown area. As a result, the outlying areas are the ones that need explicit support from the Fund.



While granular targeting adds a heavy dose of rationality to the USF distribution process, it is not mutually exclusive to other approaches under consideration, such as reverse auctions, support for broadband, modifying the "identical support" rule or eliminating support for multiple providers altogether. Each of these, and many other policy decisions associated with universal service, represent important crossroads that will have impact for decades to come. Granular targeting is, however, a competitively realistic first step for all of those larger decisions that could eliminate some of the worst abuses and realign the market incentives associated with Universal Service to more closely match the program's original purpose—providing affordable, reliable service where the market would not otherwise deliver it.

Eleven years ago when the Act was passed, true competition hadn't reached any of the town centers in rural America, and we had neither the tools nor the capability to easily calculate and target support separately for these outlying areas. Today we have both the capability and the tools. And we have one more thing: The incentive to do this right, going forward. With that, I will close. Again, thank you very much for the opportunity to speak with you today, and I look forward to any questions you may have.

The CHAIRMAN. I thank you very much, Dr. Staihr.

And now, may I call on Mr. Massey?

STATEMENT OF RICHARD N. MASSEY, EXECUTIVE VICE PRESIDENT, CORPORATE SECRETARY, AND GENERAL COUNSEL, ALLTEL WIRELESS

Mr. MASSEY. Thank you, Mr. Chairman. And thank you, Mr. Vice Chairman. And we appreciate very much the interest of you two particularly, and of the Committee, in Universal Service.

I say that on behalf of Alltel Corporation, and also on behalf of myself. I'm a citizen of one of the more rural states in the country. And we totally ascribe to the values that both Senator Stevens' bill—the USA Act included, and also the Smith-Dorgan-Pryor bill. We think those move the ball down the field quite considerably, and we appreciate those efforts.

Alltel is the fifth largest wireless carrier in the country. We serve about 11 million customers. However, we cover about one and a half million square miles. The—so, we're the largest, in terms of geography. So, a vast amount of the coverage and our customer base is rural. We actually have been in the rural business—the rural telecom business for 60 years, so we know it pretty well.

What we've learned, spending a great deal of time with our customer base, is that wireless is what they need. Wireless is a very critical tool that a number of businessmen require to be competitive in this world. If you analyze the industries in a number of these rural states—I know this is true for Alaska, for an example, and for Arkansas—the industries in the rural areas are agriculture, mining, timber. These are not desktop businesses, these are businesses where the employees, the capital, is out in the world. And what those people tell us is, they want a wireless solution. So, we believe wireless is the future of a lot of the communications—maybe not all of it, but a lot of it—particularly with respect to businesses.

Universal Service has been critical in the development of the wireless infrastructure in the world. I can tell you, on behalf of Alltel, there are a number of markets that would not be served but for Universal Service. So, it's very important to us.

I'll give you an example. The Pine Ridge; it's Pine Ridge Reservation, South Dakota, is in one of the poorest counties in the United States. When we found this market, some years ago, it included an incumbent wireline provider that receives Universal Service funds. Only 30 percent of the population on this reservation actually used telephones. We received competitive ETC money, and built the wireless network there. And today, 80 percent of that population are wireless consumers.

Senators that's a success story for the Universal Service Fund. We believe that's what it was intended for. It's to get coverage to people who can't get coverage otherwise, or they don't choose to get coverage from another carrier otherwise.

So, broadband deployment, we totally ascribe to the views of all the Senators and the prior and current committee members who believe that broadband is the challenge of the future. We believe it is the interstate highway system of the future. We, however, believe that it's not necessarily going to be wireline. We believe the future—that broadband's future is in wireless. Today, we have a

wireless network, as do the Verizon Wireless folks, that provides data speeds that are comparable to DSL speeds. We believe that, in many, many markets—in many, many underserved markets, this sort of technology will be preferred by the consumer.

So, in essence, we believe Universal Service is critical to the community development of wireless in these underserved markets.

Two points. The myriad number of reforms that are here, bewildering thousands of reforms, is very complex stuff. There are two things that we'd like to emphasize here. The first that we would like for you to make sure is included in any so-called reform by the Joint Board and the FCC, the first is competitive neutrality. That was in the Stevens bill. Competitive neutrality is two parts. One of them is competition. We believe that funding a for-profit monopoly is a bad idea. We think that kind of business went out of style about 50 years ago. We believe you have to fund some competition so that subscribers—so that customers can get the services they deserve. "Neutrality" means you don't pick which technology is going to win in a particular market, you let the customer pick. That's the way the Universal Service Fund has worked to date. Customers pick their carrier. They pick the technology. And we think that's very important.

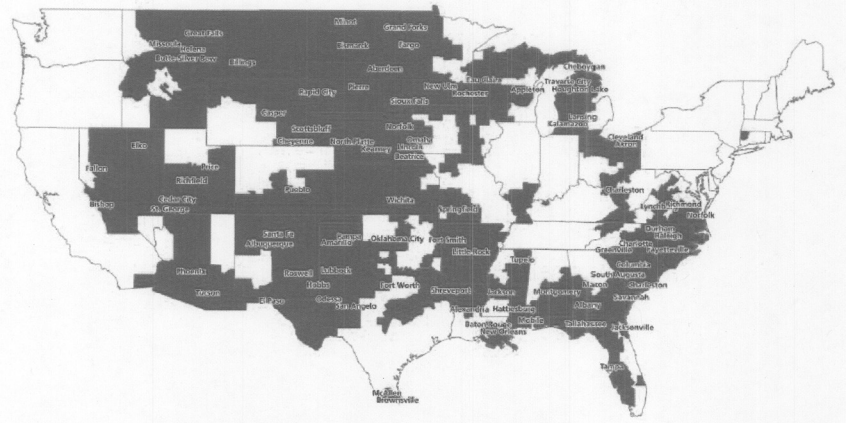
Finally—and I'm about out of time—accountability is something we ask for. We want to be accountable for the funds that you give us to build out networks in underserved markets. All we ask is that you impose the same standards on all the carriers uniformly and fairly. That's the essence of our proposal on reform.

Thank you very much.

[The prepared statement of Mr. Massey follows:]

PREPARED STATEMENT OF RICHARD N. MASSEY, EXECUTIVE VICE PRESIDENT, CORPORATE SECRETARY, AND GENERAL COUNSEL, ALLTEL WIRELESS

On behalf of Alltel Corporation, I would like to thank the Committee for inviting me to speak to you today. Alltel is based in Little Rock, Arkansas, and serves more than 11 million wireless customers in 35 states. Alltel operates the Nation's largest wireless network in terms of geographic area served, but our customer base is smaller than those of the larger carriers. This is because we are one of the few major wireless operators to focus on serving rural and more sparsely populated areas. We provide leading-edge, digital mobile voice services. We are also rapidly deploying higher-speed, mobile broadband services. Our EV–DO based Axcess℠ Broadband service is now available in over 100 communities covering 44 million people—including numerous high-cost areas where we have been designated as an ETC. This broadband service offers speeds of 400–700 kbps—comparable to the throughput of many DSL services in the market today.



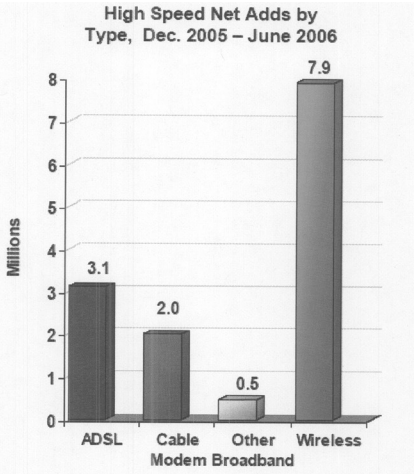
Alltel's roots go back some 60 years as a rural, independent telephone company. Although we are now exclusively in the wireless business—we spun off our wireline local telephone operations last year to the company now known as Windstream—we remain true to our deep commitment to providing the best possible service to rural Americans. I know there are many other rural-focused wireless carriers across the country and I acknowledge their great efforts as well.

Mr. Chairman, Mr. Vice Chairman, and members of the Committee, I would like to commend you for your work in this area. Members of this Committee, past and present, are largely responsible for the Universal Service provisions enacted in the Telecommunications Act of 1996 eleven years ago—and those provisions have been a great success in getting affordable telecommunications services, including wireless services, out to rural communities. The 1996 Act told the FCC and the industry: let's preserve and advance universal service, and make sure that consumers in rural, insular, and high-cost areas have access to service that is comparable to services available in urban areas. The Act also said, let's get these services out to people using a pro-competitive, de-regulatory policy framework and open all telecom markets to competition. These policies are working well. Today's Universal Service system is bringing the most advanced services and technologies, including wireless, to consumers across America—not just in metropolitan areas.

Alltel looks forward to working with the entire Committee on Universal Service reform and I would also like to praise Senator Stevens and the other Members of this Committee for the introduction of S. 101, the Universal Service for Americans Act (USA Act). This forward-looking bill sets the right course for Universal Service policy by reaffirming the fundamental principle of *competitive neutrality.* Rural consumers will benefit most from a system that promotes Universal Service without interfering with competition, and without unfairly favoring any class of providers or technologies over another. We also are enthusiastic about the bill's strengthened eligibility guidelines and auditing provisions. These will increase the program's accountability and will ensure that every dollar of high-cost support is used to maintain and improve communications facilities serving rural consumers. The bill also wisely broadens the base of Universal Service contributors.

Consumers everywhere increasingly demand mobile, broadband, and other leading-edge telecom and information services. Over the past 5 years, the number of mobile wireless subscribers has grown by 86 percent, from 118 million in June 2001 to 219 million in June 2006. There are now many more wireless phones in service than wireline. According to a survey conducted by the U.S. Department of Health and Human Services, over 10 percent of consumers are using wireless as their only phone service. And among consumers with more than one connection, a substantial proportion now use wireless as a primary means of communications. Without question, wireless communications is the "lifeline" of today's consumers. Meanwhile, wireless broadband service has grown a whopping 2,750 percent—from about 400,000 lines in 2005 to over 11 million in 2006.

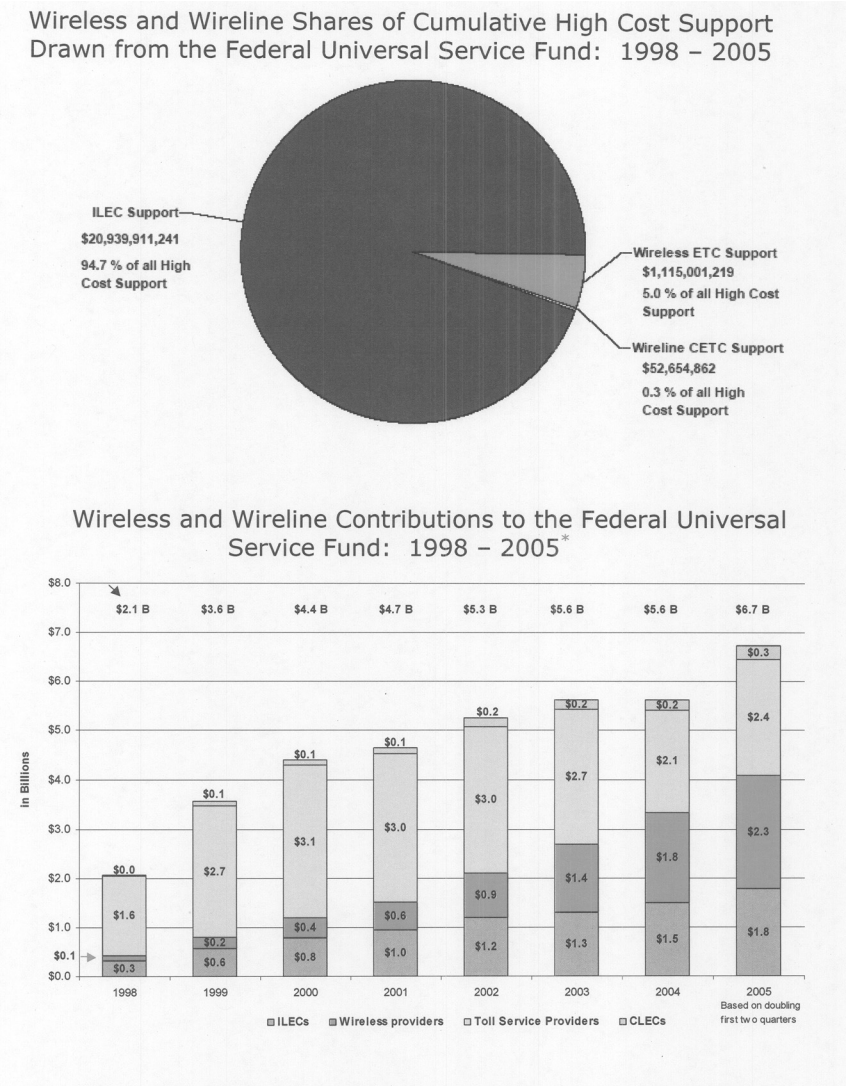
- In 1H06, total high-speed lines grew 26%, from 51.2 million to 64.6 million lines, and 59% of all adds were mobile wireless subscriptions.
- From June 2005 to June 2006:
  - ADSL's share of total broadband lines fell from 38% to 35%,
  - Cable modem's share fell from 56% to 44%.
  - Mobile wireless' share of total broadband lines rose from 1% to 17% of total broadband lines.
  - The share of "other" forms of broadband (including fixed wireless, satellite, fiber, and broadband over power line) remained at 4% of total broadband lines – although their total line count grew 39%.



Sources: FCC Report on "High-Speed Services for Internet Access," Jan. 2007.

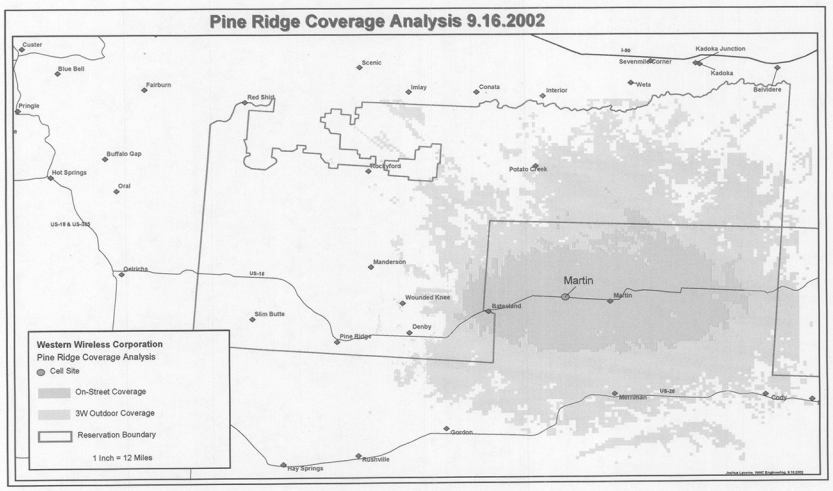
We are seeing these same trends in rural areas. Rural consumers increasingly want and need mobile wireless service. Many of you represent rural consumers and you therefore know that people in rural areas often spend more time than their urban counterparts on the road, and depend even more heavily on mobile communications, especially since desk jobs are increasingly moving out of rural areas and into city centers. For example, an entrepreneur may need to reach contacts when driving from one end of a large county to another for business; a parent may need access to telecommunications while driving children to and from relatively distant schools; and a farmer may need access to data on agricultural prices while working on a remote part of his or her property. Wireless broadband is often the only means of high-speed access in many high-cost areas and is playing a major role in bridging the "broadband divide." Alltel appreciates the emphasis this Committee places on the importance of high-speed deployment across rural America.

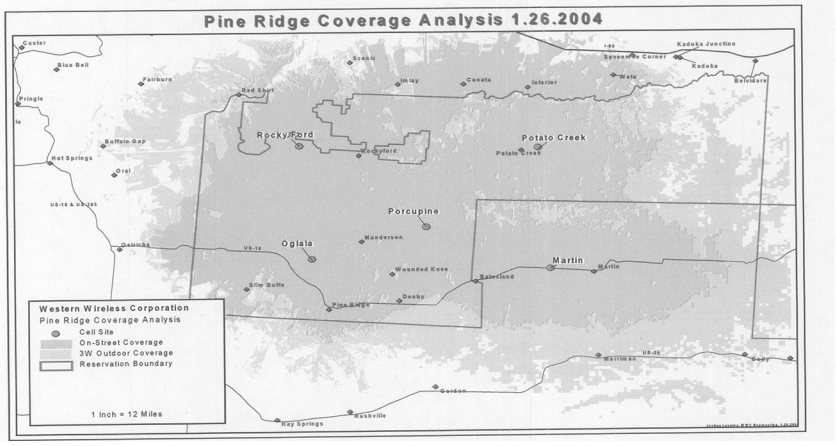
A critical part of this story is the competitively neutral Universal Service high-cost fund program, which, thanks to this Committee's efforts, has enabled wireless carriers to serve the most remote parts of the country. Until just recently, only a negligible amount of Universal Service funding was going to support the deployment of wireless service to high-cost areas—even though wireless technology and networks are what consumers in those areas need and want. Of the $25 billion spent on high-cost Universal Service since 1996, only about $2 billion has gone to wireless carriers and other competitors. Even today, less than 25 percent of Universal Service high-cost funds go to support the deployment of wireless service, even though there are now more wireless subscribers. Wireless contributes more than twice the amount into the Universal Service Fund than it receives out of the fund.



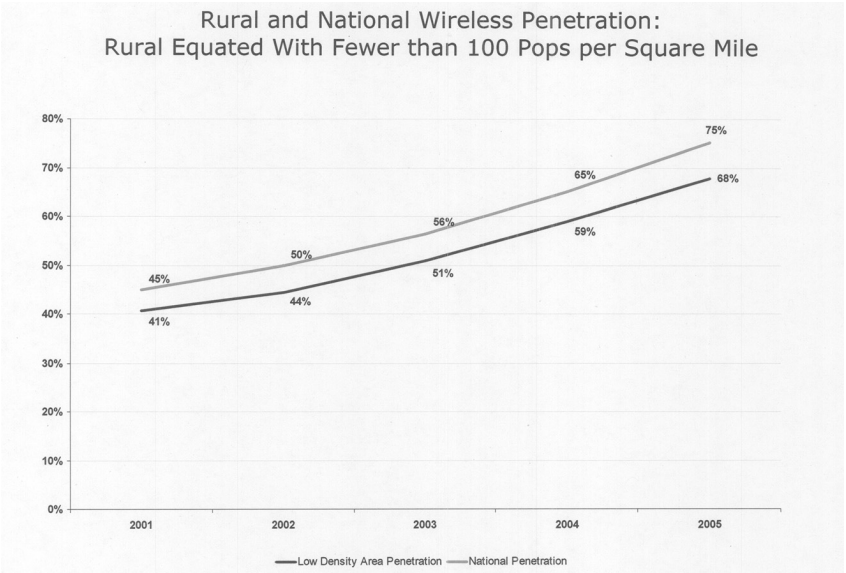
* It is anticipated that the increase in the wireless safe harbor together with declining toll revenue will result in wireless being the largest USF contributor in 2006.

America is getting a great return on its investment in wireless universal service. It's true that support for wireless has increased over the past few years. But that has come with a tremendous expansion of wireless service into rural areas. With Universal Service support, we are building facilities deep into rural areas, not just along major highways, and delivering service to consumers where they live and work. For example, on the Pine Ridge Reservation in South Dakota, the tribe estimated that less than 30 percent of the population had telephone service prior to Alltel's entry into the market as a wireless Universal Service provider. Today more than 80 percent of the population on the Pine Ridge reservation has access to wireless telephone service. As Senator Thune knows well, the vast majority of these consumers are eligible for and are receiving a discounted Lifeline service of only $1 per month. This is the true meaning of universal service.





Similar stories can be told across the country. In rural parts of Arkansas, Louisiana, Maine, North Dakota, West Virginia, and many other states, rural consumers are getting more and better wireless service at increasing broadband speeds as a direct result of high-cost Universal Service support to wireless companies. Wireless penetration rates went up from 41 percent in 2001 to 68 percent in 2005 in the most sparsely populated areas with fewer than 100 residents per square mile. This is a tremendous success story.



Make no mistake—wireless carriers are receiving funds *only* when we step up and are held accountable to our commitment to serve the entire geographic area, including outlying areas as well as towns and cities. To obtain ETC (eligible telecommunications carrier) designation and retain that status, we are required to make detailed annual demonstrations, to the FCC and to most state commissions, that we are spending the money to build and upgrade cell sites throughout our service areas, and to maintain and promote top-quality service to consumers in those areas. We are held accountable for every Universal Service dollar we spend. Alltel added numerous cell sites to its network last year, a significant percentage of which were the direct result of Universal Service support. Our capital budgeting process considers total funds available, including USF funds, when planning for new cell sites. Consequently, in each state where Alltel is an ETC, there are several cell sites built based upon anticipated Universal Service funding. Alltel expends 100 percent of the USF support on capital and operating expenditures within its ETC areas. And rural consumers increasingly are depending on wireless ETCs as their "carriers of last resort." When we use our USF support to build out new cell sites, we charge the same amount to everyone who chooses to buy our service; a consumer doesn't have to pay any more to get mobile service once the network is in place.

Simply put, with wireless high-cost universal service, you get a big "bang for your buck." USF support for wireless in rural areas gives you a great return on your investment. So why do you hear complaints about growing high-cost support for wireless consumers? And why are many parties inundating the FCC and the Joint Board with proposals that would scale back support for new wireless networks and services in a major way? Alltel urges this Committee to monitor this situation closely as the Joint Board prepares to make its next set of recommendations. It's true that the total high-cost fund is growing. But the solutions need to address the real problem. *Support for rural wireless is not the problem—and anti-competitive proposals to reduce funding toward wireless consumers are not the answer.*

As Verizon correctly noted a few weeks ago to the FCC, the real problem is that the existing Universal Service program is tailored to support traditional voice-grade services, while technological changes and increasing competition are transforming rural consumers' telecommunications needs. As a result, the amount of high-cost funding *per line*—to wireline as well as wireless—is growing rapidly without efficiently advancing the goals of universal service.

So what is the solution? How can we place reasonable limits on the growth of the fund, while ensuring that we spend the money wisely and effectively? How can we do this without harming rural consumers' access to competitive wireless and wireline services comparable to those available in urban areas?

I would like to discuss three policy recommendations that are now under serious consideration: (1) reverse auctions; (2) placing "caps" on Fund growth; and (3) tar-

geting funds more effectively. Alltel has submitted a proposal (*see* attached) for reforming how support is distributed from the Universal Service Fund, including a reverse auction aimed at bringing broadband service to unserved and underserved areas, a per-line cap on Universal Service support for basic voice services, and an approach to identifying high-cost areas that targets Universal Service support to those areas and holds carriers accountable for all support received.

1. *Reverse Auctions.* The amount of Universal Service support could be determined through a competitive bidding process, rather than through an intrusive regulatory cost-accounting system. The lowest bid would determine the amount of USF support. Alltel congratulates FCC Chairman Kevin Martin for advancing this innovative idea, which is worthy of further development. As Chairman Inouye and Senator Stevens have correctly observed in the past, complicated questions arise in connection with auctions for services that are already being provided by existing ETCs, and there could be serious unanticipated consequences. Alltel believes that it may be possible to resolve these issues, and ultimately competitively neutral auctions might be a viable way to set support levels.

Pending the resolution of these broader implementation questions, Alltel has proposed an initial "pilot" reverse auction program, which would focus on promoting broadband deployment in the most underserved rural markets. Service providers using all technologies would bid competitively in a single set of reverse auctions, and each participating ETC would have to make a commitment to provide substantial broadband service, as well as conventional services, throughout a community within a specified period of time. The lowest bid would determine the level of per-line Universal Service support needed for the auction winner to fulfill this commitment. But other carriers who make the same service commitments would have a chance to receive some support as well.

The key in this or any USF auction system is to make sure that the competitive bidding process does not displace competitive service for customers in the marketplace, post-auction. Reverse auctions should be used to set the amount of funding per line, not to pick a single "winner" as the exclusive provider of supported universal service. This would give all participating ETCs strong incentives to build facilities and get competitive services out to consumers in rural areas.

Alltel strongly opposes proposals to use reverse auctions to effectively scale down high-cost funding for one category of Universal Service providers—wireless carriers. For example, consumers would not benefit from the anti-competitive proposal to hold two separate auctions, the first for wireless only, and the second, presumably conducted many years later, only for wireline service. This imbalanced type of auction process certainly would reduce support for wireless service in high-cost areas, by pushing down the level of support per line for a single auction winner, and preventing anyone other than the auction winner from providing supported wireless services even if it is willing and able to fulfill the obligations of an ETC. The result would be to dramatically slow the rate of wireless investment in rural areas and make it harder for rural consumers to access affordable, high-quality mobile service. But this approach would do nothing to target support to areas where it is most needed, or to promote deployment of next-generation networks in rural areas. This Committee should be wary of proposals like this.

2. *Caps On Fund Growth.* Another proposal under discussion is to place some kind of caps on the growth of the fund. A cap could be an effective tool in controlling the growth of the USF, provided that it can be structured in a way that helps rural consumers. In fact, Alltel has offered a detailed proposal to do just that.

Another version of a fund growth cap has been offered by West Virginia consumer advocate Billy Jack Gregg, who appeared on the first panel this morning. Under Mr. Gregg's proposal, the total funding disbursed to all eligible telecommunications carriers in a particular geographic area—wireless and wireline—would be allowed to grow only to the extent that population in the area grows, plus inflation. But the dollars would be targeted based on the number of consumers who choose to take service from each ETC—that is, based on the number of lines each ETC serves. If you serve more customers, then you get more support. If a new carrier comes in and makes the same ubiquitous service commitment, then it would get a fair share of the funding as well.

The idea behind both Alltel's proposal and Mr. Gregg's is, if the country needs to limit funding growth, then consumers should be the ones to decide where the dollars should flow by deciding what they want to buy, rather than having regulators make those decisions for them. This way, the competitor that attracts the most consumers—by providing the highest quality, most appealing, or lowest cost services—will get the support needed to serve those rural areas.

By contrast, some have suggested that separate caps should be imposed on wireless ETC fund growth and on wireline incumbent fund growth. Like the anti-com-

petitive proposal for two separate auctions (wireless and wireline), this proposal would substantially reduce the amount of funds to support wireless investment in rural areas, but would fail to satisfy the fundamental principle of competitive neutrality. It might limit the overall growth of the fund, but how would it help rural consumers? It just continues sending the money where it has always gone, without doing anything to promote investment and new competitive services in high-cost areas. Again, we respectfully ask this Committee to be on guard for competitively biased proposals.

3. *Target Funding.* A third reform proposal is to target funds more effectively, so that they would go to carriers that serve consumers who actually live in high-cost areas, rather than simply giving the funds out based on the same formulas that have been used for decades. Alltel has offered a detailed proposal to target high-cost funding to geographically disaggregated areas, so that funding would flow to the highest-cost areas in each state, regardless of whether those areas were historically served by large or small incumbents, or by wireless or other competitive carriers. Embarq, to its credit, has offered another, similar proposal, with funding targeted to outlying portions of a study area or wire center, where costs are highest, rather than to town centers. Re-targeting funding more efficiently would enable the Fund to support Universal Service goals while also potentially reducing the overall size of the Fund and—most importantly—without limiting rural consumers' access to competitive service choices.

Unfortunately, the existing system focuses funding on *carriers* with high-cost structures, rather than on *consumers* in high-cost areas. Some propose to make this already problematic system even worse, by calculating support for wireless carriers based on so-called "actual costs." This would target the most funds to companies that spend the most money and punish carriers for providing service more efficiently. It also does nothing to encourage carriers to get services out to consumers. And it would require a complicated and unnecessary regulatory cost accounting system for competitive wireless carriers. This system doesn't work well today for wireline incumbents. Why would we want to extend it to wireless competitors?

In conclusion, I would like to thank this Committee once again for its commitment to policies that simultaneously promote Universal Service and advance competition. I also appreciate the efforts of the FCC, the Joint Board, and state commissions. Universal service support is making a real difference in increasing rural consumers' access to wireless services that are vital for health, safety, and economic development. Wireless carriers like Alltel are helping bridge the geographic "broadband divide" and are enabling rural communities to fully participate in our global economy. Going forward, Universal Service funds should be targeted and spent more effectively—but without driving down investments in wireless networks in high-cost areas. Pro-Universal Service and pro-competitive rules and policies will continue to bring the benefits of wireless *and* wireline services to consumers across America.

ALLTEL WIRELESS
February 16, 2007

Commissioner DEBORAH TAYLOR TATE,
Federal Chair, Federal-State Joint Board on Universal Service
Federal Communications Commission
Washington, DC.

Commissioner RAY BAUM,
State Chair, Federal-State Joint Board on Universal Service
Oregon Public Utility Commission
Salem, OR.

RE: HIGH COST UNIVERSAL SERVICE SUPPORT, WC DOCKET NO. 05–337
FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE, CC DOCKET NO. 96–45

Dear Commissioner Tate and Commissioner Baum:

Consumers in many rural areas rely on high-cost Universal Service support that carriers use to make available affordable telecommunications services, such as wireless services. Since the entry of competitive eligible telecommunications carriers ("CETCs") into the Universal Service market, rural areas have greatly benefited from the deployment of basic and advanced wireless universal services. The pro-competitive vision of the 1996 Act has become a reality in many rural areas, but there is more work to be done. As Universal Service reform measures are considered, such as imposing reasonable limitations on the growth of the Universal Service Fund, they must be accomplished without compromising the pro-consumer principle of competitive neutrality. At the same time, Universal Service must continue

to evolve to promote the development of new broadband networks and advanced services.

Alltel submits a set of concrete proposals to advance these goals. We propose the immediate adoption of a new "pilot" program of "reverse auctions" focused on promoting broadband service for consumers in the most underserved, high-cost areas. Pending development of a broader transformation of the system in the longer term, we also recommend certain transitional reforms to the existing high-cost support system that can be implemented immediately, designed to (1) target funding more effectively to high-cost areas; (2) impose reasonable limits on fund growth; and (3) ensure greater accountability for the use of funds.

To date the explicit Universal Service funding system has successfully brought consumers in rural America the benefits of access to robust wireless and wireline network infrastructure. Our Nation's competitively-neutral Universal Service program spurs both wireless and wireline companies to expand their networks and introduce new services for consumers and businesses in rural areas.

At the same time, in rural areas as well as in the rest of the country, technological change and increasing competition are transforming consumers' telecommunications needs. Consumers increasingly demand higher-bandwidth services: across the country, purchases of broadband lines increased by 52 percent from 2005 to 2006, according to recent FCC reports, including an increase from fewer than 400,000 wireless broadband lines in 2005 to over 11 million in 2006. Use of traditional voice-grade wireline telephone lines declined by 3.2 percent over the same time period. Consumers also increasingly require mobility: mobile wireless service has grown by 50 percent during the 3 years ending in December 2005, and consumers now use more wireless than wireline lines. Rural consumers have the same interests in obtaining access to high-speed technologies and mobile services, and are demonstrating changes in demand that parallel those of consumers across the country. But due to the relatively high costs of deploying wireline and wireless networks in many rural areas, these services are being deployed less rapidly in rural areas than elsewhere.

The existing Universal Service system is not well adapted to this changing environment, and a consensus is emerging that the high-cost support rules need reform. The existing system is designed to support traditional voice-grade wireline services—for which demand is shrinking—and does not target funds effectively to promote development of advanced networks in the highest-cost areas. As a result, high-cost fund amounts per-line are growing in many areas, without efficiently advancing the goals of universal service.

The specific and concrete measures we propose—building on proposals offered by Joint Board member Billy Jack Gregg and a range of industry parties—will not only maintain the availability of existing services in the highest-cost areas, but also will target funding to promote new broadband services. They will establish greater accountability on the use of support funds and will set reasonable limits to the growth of the fund. Critically, these proposed measures also remain true to the Commission's core goal and statutory mandate of maintaining a level playing field for facilities-based, intermodal competition to serve rural consumers.

These policy changes will affect CETCs as much as ILECs. Alltel is not offering these proposals in an intent to benefit or harm any category of providers, but because they will promote the interests of consumers and advance the public interest.

We look forward to working with you on these important matters.

Respectfully submitted,

GENE DEJORDY,
Vice President, Regulatory Affairs.

STEVE R. MOWERY,
Vice President, Public Policy.

MARK RUBIN,
Vice President, Federal Government Affairs.

cc: Joint Board members and staff

Summary of Alltel's Universal Service Reform Proposals

"Pilot" reverse auction system focused on broadband: Use reverse auctions to allocate funds (starting at about $25 million) to bidders that commit to deploy basic and advanced services, including broadband services (*e.g.,* 400 Mbps) in selected unserved and underserved markets.

- Bidders would offer the lowest amount of funding needed to deploy to specified proportions of the population in the Zip code within given benchmark dates.

- All ETCs—not just the auction winner—could receive comparable per-line funding if they make the same service commitment.

Reforms to the existing funding system:

- *To limit fund growth:* Allow per-line support in each study area to grow by no more than the inflation rate.
- *To target funds more effectively:* Disburse high-cost funding to geographically disaggregated areas, whether served by "non-rural" carriers or large "rural" ILEC holding companies, as well as CETCs:
  - For purposes of determining funding amounts, consolidate all "study areas" served by a single ILEC holding company in each state into a single study area.
  - Apply the "non-rural" funding rules to such study areas if they have more than 50,000 lines.
  - Revise the "high-cost model" forward-looking support mechanism for "non-rural" carriers (including the consolidated study areas of ILEC holding companies formerly deemed "rural") to provide support in the highest-cost wire centers nationwide, not just in 10 states.
  - Require all rural ILEC study areas to be disaggregated for purposes of targeting support to the highest-cost portions of such study areas.
- *To ensure accountability:* Broaden the FCC's 2005 accountability and reporting requirements and apply them to all ETCs, including ILECs as well as FCC-designated CETCs.
  - Require all ETCs (ILECs as well as CETCs) to document that they are using their funds to maintain and expand service availability for consumers in high-cost areas.
  - Make USAC, rather than NECA (an RLEC-dominated advocacy group), responsible for collecting and processing cost data and determining support amounts.

To protect competitive and technological neutrality: Retain the rule that all ETCs receive the same amount of support per line served.

The CHAIRMAN. I thank you very much, sir.

And now, may I call upon Mr. Tauke?

STATEMENT OF THOMAS J. TAUKE, EXECUTIVE VICE PRESIDENT, PUBLIC AFFAIRS, POLICY AND COMMUNICATIONS, VERIZON

Mr. TAUKE. Mr. Chairman, Mr. Vice Chairman, distinguished members of the Committee, this Committee has shown such great leadership on this issue in the past. We thank you and commend you for that. And we are encouraged by your interest in the ongoing challenges with Universal Service.

We often say, in the telecommunications world, that the world has changed. And, indeed, the world has changed, and it's changing very rapidly. But the Universal Service system and the Universal Service Fund is stuck in the past. You've heard a lot today already about the problems with the Universal Service Fund and the challenges in trying to modernize it for the new age, the new era in which we live. I'd like to offer just a few comments to supplement the statement that I submitted for the record.

First, I think it is helpful, as we think about these issues, to think of them in two pieces. One piece is the Universal Service Fund today and how we fix that Fund. The other piece is, how do we fund the infrastructure that is needed for the broadband that we want to deliver to all Americans?

The first piece, the Universal Service Fund, has generally been focused on maintaining affordable rates for consumers. It is, if you

will, a supplement to the expense budgets of companies. The challenge with broadband is that you need huge capital expenditures; help, if you will, with the capital side of the budget. Therefore, attempting to provide the same solution to both, in our view, does not get us in the right place. So, I encourage you to think of these in two pieces.

First, on the Universal Service Fund piece, then. You've heard, today, that there are a lot of problems with the growth of the Fund. And, indeed, there are. I'd like to share with you just a couple of thoughts as to why the Fund is growing the way it is.

The first problem that we have with the way the Fund is growing is that we have multiple carriers in many geographic areas. There are a lot of geographic areas around the country today where we are subsidizing three, four, five—and, in some cases, more—wireless carriers, in addition to the wireline carrier. Now, I ask you, if the public needs to subsidize a carrier to provide service in a given area, why do we want to just subsidize three, four, or five? So, the problem is, we've had a proliferation of carriers receiving subsidies for the same area.

Second problem is, as wireless carriers come in, the Fund explodes because of the nature of the service. If I have a home, for example, with a wireline carrier in an area that is receiving Universal Service support, and I have, let's say, two lines in that home, I get support for two lines. If my family has four people who have four wireless phones, and the wireless carrier applies for a subsidy, there are four subsidies going into that household. So, the subsidy doubles from two lines to four lines. The wireless network is paid on the basis of the cost of the wireline network, even though the technologies are totally different. And so, the wireless network is getting twice as much support for that home as the wireline network. This just doesn't make sense. The system needs to be reformed. And this is what's driving the cost that we have in this high-cost area.

Now, when you look at this problem, and you say you have multiple carriers, particularly wireless, who are receiving this cost that is defined by wireline, how do you address that issue? We looked at various ways to do it. Do you want to go through cost proceedings for wireless? How do you choose one of the wireless carriers among all of them? Our view is that the best approach is the reverse auction concept, so that in areas where you have multiple carriers, that you look at this reverse auction concept, starting with the areas where there are multiple wireless carriers, and use that system to pick which carrier receives the support and also what the level of support should be.

We think, then the FCC should take a look at how that works and whether or not that approach should be extended to other parts of the Universal Service Fund. But there has to be a mechanism to stop the subsidy for multiple carriers and to stop this dependence on the wireline costs to serve wireless.

Second, in the broadband area—and I'm almost out of time—but, in the broadband area, we urge you to take a look at programs like ConnectKentucky. Kentucky is a tough State to serve—tough terrain, dispersed population. Through the ConnectKentucky program, today that state has 94 percent of its homes connected, and expects

to be close to 100 percent by the end of the year. They've done it by targeting support to areas where there is no broadband service today, and focusing on getting the capital investment through public-private partnerships and, in some cases, with Federal funds, into the areas that need the broadband deployment. We think that approach, of focusing on grants for infrastructure investment, is the best approach to get quick action in the deployment of broadband throughout the country.

[The prepared statement of Mr. Tauke follows:]

PREPARED STATEMENT OF THOMAS J. TAUKE, EXECUTIVE VICE PRESIDENT, PUBLIC AFFAIRS, POLICY AND COMMUNICATIONS, VERIZON

Chairman Inouye and Members of the Committee:

Thank you for inviting Verizon to participate in this hearing on the Universal Service program for telephony services. Universal Service is a longstanding and appropriate goal of telecommunications policy. However, the means of achieving the goal of providing affordable telephone service to high-cost areas—the Universal Service Fund—needs to be reformed.

The world of communications—driven by new technologies and competition—has changed dramatically and will continue to change. This dynamic process has created new opportunities for consumers, while challenging all providers in the marketplace to reinvent themselves. For Verizon, this means investing in new networks, offering exciting new services to consumers, becoming more customer-focused, and increasing our efficiency in order to compete.

Today the challenges of change are reaching all markets, including those in rural America. Unlike the days of yesteryear, most consumers in rural America now have a choice of carriers. But in two-thirds of areas served by rural telcos that receive Universal Service support, competitive carriers also receive subsidies. In those same markets, many new providers operate without subsidies.

Unfortunately, the Federal high-cost funding mechanisms intended to ensure that Universal Service goals are met have not adapted to the changing marketplace. In fact, these programs are often an impediment to the kind of transformation consumers and the marketplace require. Frankly, the high-cost Universal Service funding system is not working for consumers; it's not fair, and we need to work together to change it.

As competition and technology bring consumers more choices and lower prices, one would expect that the cost of providing Universal Service would go down. But it's not. Instead, the burden on the consumer to pay the cost of the Universal Service program is going up. The percentage rate of the surcharge on phone bills has tripled, with more increases on the horizon, and in the past 8 years, high-cost funding has grown from $1.7 billion to $4.1 billion—a 142 percent increase.

This increase is driven, in part, by the proliferation of new communications options for consumers. For example, when a family with one wire line buys a wireless family plan with four handsets, the Universal Service funding provided for that family increases by a factor of five.

Moreover, in many areas we are seeing three, four, even five wireless carriers receiving Universal Service funding. From a public policy perspective, this doesn't make sense. If the consumer needs to subsidize service in a given area, how many duplicative infrastructures and carriers should they subsidize? Necessary reforms must include ways to better target support only to those areas that truly require subsidies to ensure affordable access.

Another factor that is driving increases in the Fund is that the amount of subsidy received by wire*less* carriers is determined by the cost incurred by wire*line* carriers to deliver service. To add insult to injury, as wireline telcos lose traditional lines to wireless, their per-line cost increases, thus driving up the subsidy per customer. This increased subsidy is then passed on to all providers.

The problem is not just that the Fund is getting bigger. Within the fund, the support for each recipient is also becoming unstable. A telco with cost increases that are more than the nationwide average can increase its support, while one that spends less can lose support. This doesn't provide very good incentives for carriers.

Further, in order to keep the telco high-cost funding within its current cap, the FCC raises the threshold for receiving support. Areas with costs close to the threshold can lose funding entirely as a result. Yet carriers with higher costs are given

no incentive to change their behavior. This churn threatens the predictability of support.

Verizon believes that modernization of the Fund should be guided by the following principles:

- First, funding should be targeted to geographic areas where consumers will be denied service without universal support.
- Second, the Fund should ensure affordable service in high-cost areas, while limiting consumer costs to no more than is required to accomplish that goal.
- Third, a new policy should recognize the need to maintain a rural wireline infrastructure even as the number of wireline voice customers declines.
- Fourth, a new and fairer system is needed to fund high-cost support.

Reform should start with the way money is collected for the Universal Service Fund. Verizon supports reform of the pay-in mechanism to the Fund by basing payments on phone numbers. Tying payments to telephone numbers ensures that the Fund is supported by all voice customers, and it substantially reduces the administrative burden.

We also must reform the way money is paid out of the high-cost fund. Earlier this month, Verizon filed with the Joint Board a proposal (attached to my written testimony) that would modernize the high-cost funding mechanisms. This proposal moves us toward achieving the four objectives outlined above.

It meets the needs of rural consumers for high-quality services at an affordable price. It stabilizes the fund, encourages a competitive and innovative marketplace, and promotes efficiency so consumers are treated fairly when they pick up the tab for Universal Service support.

Verizon proposes a "reverse auction" for the distribution of Universal Service support funds. To ensure an orderly movement to this new system for determining the payment of Universal Service support, we suggest four steps:

First, we should stabilize funding in each geographic area, by initially capping the Fund in each area at current levels. This will protect consumers who are paying into the Fund as we move to a new system. This will also put an end to the instability and churn of the current fund, making support more predictable.

Second, the FCC should adopt a framework for competitive bidding through a reverse auction. Competitive bidding is the way government generally procures products and services. It allows an agency through a transparent process to select the most efficient provider and to get the best possible terms. Consumers—as users of rural services and as payers of these services—benefit.

Third, this market-based process should begin in areas where there are already at least two wireless ETCs. The wireless carrier that submits the lowest bid would enter into a contract, with a specified term, that spells out its obligations. The ILEC in these areas would continue to receive its existing support, subject to a cap. Once these auctions have been completed, we suggest that auctions among wireline carriers be held in those few areas where there is a competitive wireline carrier receiving support.

Fourth, after these initial auctions, the FCC should open a new proceeding to review the auction process, and to determine next steps. The FCC might also use the results of areas where auctions have been held to adjust high-cost support for other areas.

We believe this approach puts in place a more market-oriented system that will sustain Universal Service in this competitive marketplace. While today's recipients argue over costing methods or administrative details of the fund, our proposal focuses every provider in rural areas on the kinds of transformation that produce benefits for consumers: greater efficiency, creative ways of doing business, and new services.

Let me close with three points on broadband. We all know how important the deployment of new, more capable networks and services is to our future. Verizon is a leader in that process.

First, we believe that our proposal is the best way to allow the current Universal Service system to play a constructive role in the deployment of new services. Each provider in preparing its bid will consider all of the services and revenue sources in its business plan, regardless of whether they are part of the supported service. For that reason, the support provided will help the carrier implement all parts of its business plan. This allows Universal Service to support basic services *and* encourage broadband deployment in a market-driven way.

Second, recognizing the importance of connecting America to broadband networks, we believe that we need to approach policies for broadband deployment with great care, and with an understanding that while broadband is still developing, we are

seeing remarkable growth thanks to private investment. Policies that removed regulatory roadblocks have encouraged Verizon and others to invest heavily in new technology.

Third, beyond that, we encourage Congress to review the success of programs to connect Americans in hard-to-serve areas. Specifically, we call to your attention to the very successful ConnectKentucky program.

ConnectKentucky pulled the public and private sectors into a partnership which has already made broadband accessible to 94 percent of Kentucky households. ConnectKentucky reports that it will increase that number to close to 100 percent by the end of this year.

The ConnectKentucky program began by compiling an inventory of the current and planned investment in broadband networks in the state. It then determined if sufficient demand existed in unserved areas to command private investment. Where private investment was not likely, the program focused on public-private partnerships and securing public funding from various sources to build broadband facilities.

This program is working because it's focused on infrastructure investment. That's the key reason why we should not look to the current Universal Service Fund to solve the broadband issue. The current fund is designed to provide sustained, ongoing support to maintain affordable rates. But maintaining affordable rates is not the challenge in delivering broadband services to all Americans. Instead, the challenge in broadband delivery is coming up with the one-time capital investment in infrastructure.

In most places, the private sector is making that one-time capital investment. Where the market is working, we should let the market continue to meet the needs of consumers. Where we determine that broadband is not available and the private sector is not making the needed investment in network facilities, we should target programs to support infrastructure investment, perhaps through a combination of loans, tax credits, or grants.

Verizon believes that the process we have proposed will help create a Universal Service Fund that is sustainable in this new telecommunications marketplace, while meeting the needs of consumers in high-cost areas, and providing carriers with the proper incentives to invest and innovate in the communications marketplace.

Verizon looks forward to discussing and working with the Committee on this and other ideas that further the worthy goals of universal service, particularly in this time of innovation and opportunity that is being enabled by the communications industry. Thank you.

VERIZON
February 9, 2007

Hon. DEBORAH TAYLOR TATE,
Federal Chair, Federal-State Joint Board on Universal Service
Federal Communications Commission
Washington, DC.

Hon. RAY BAUM,
State Chair, Federal-State Joint Board on Universal Service
Oregon Public Service Commission
Salem, OR.

RE: IN THE MATTER OF FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE, HIGH COST UNIVERSAL SERVICE SUPPORT, WC DOCKET NO. 05–337; IN THE MATTER OF FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE, CC DOCKET NO. 96–45

Dear Commissioner Tate and Commissioner Baum:

This proceeding is a unique opportunity to put in place meaningful reforms that will stabilize the Universal Service Fund, create better incentives for companies to serve rural America in efficient and innovative ways, and lower the cost of access to communications services for all consumers. The FCC and the Joint Board have shown constructive leadership on Universal Service reform in order to bring benefits to consumers and stabilize the fund. It is the right time for these important changes. More than ever before, consumers of communications services have options—especially from new offerings by cable, Voice over IP, and wireless providers—and they are taking advantage of them. But at the same time, consumers are faced with increasing costs as they continue to support a Universal Service system that is growing larger every year.

The need for reform is becoming more urgent as the high-cost fund now surpasses the $4 billion mark, with approximately $1 billion flowing to competitive eligible

telecommunications carriers ("CETCs") annually. A solution is needed, and the answer is a system that not only controls the growth of the fund, but provides more rational incentives to providers and ensures access to important services. Reforms must also create and sustain an environment that promotes innovation and efficiency gains and makes sure that consumers receive the benefit of these innovations.

For all these reasons, Verizon and Verizon Wireless (hereinafter "Verizon") propose that reform should involve the use of auctions or competitive bidding as the means to better target Universal Service support. This letter proposes the basic structure for and path to such auctions. Attached is an *Appendix* that outlines in greater detail one possible way to design and structure such auctions, although other approaches and designs may be appropriate and workable.

The reform plan proposed here is a careful and measured approach. It suggests immediate action to address the most pressing concerns. It proposes implementing competitive bidding quickly and on a limited basis, and where it can provide the greatest benefit. It then gives the Joint Board and the Commission the flexibility to assess the results of these auctions, and to decide whether to extend their use more widely.

Verizon's proposal is as follows:

First, stabilize the Fund by placing a reasonable cap on current support levels that is designed to control the growth the Fund has experienced in recent years, introduce better incentives for all ETCs, and prepare for further reform;

Second, establish an administrative framework for competitive bidding, which would include the auction design;

Third, implement auctions to allocate funding for wireless CETCs. These auctions would be held in areas that currently support more than one wireless CETC, and would select a single wireless CETC to receive support. Once these auctions have been completed, a separate set of auctions should be held for wireline ETCs in areas where there is currently at least one wireline CETC, to select a single wireline provider of Universal Service for the area.

Fourth, after some reasonable period, the FCC would review the experience gained with the CETC auctions, and consider developments in technology and rural markets to determine an appropriate method for extending market-based efficiencies to additional areas. These methods could include:

- A single auction in which both wireline and wireless ETCs would participate, which would select a single Universal Service provider for each area.
- The use of representative bidding, based on statistical analysis of the auction results, to adjust support for ETCs whose support had not yet been determined by an auction.

Step One: Stabilize the Fund by Placing a Reasonable Cap on High Cost Support at Current Levels

As commenters in this docket and many others have observed repeatedly, the high-cost fund has grown at an alarming pace in recent years and this rate of growth threatens both the viability and the long-term sustainability of the fund.[1] It is also increasing the amounts that consumers must spend on communications services.

A reasonable cap on the high-cost fund is critical for at least three reasons.

First, the growth in the Fund threatens core Universal Service goals if not contained. The USF contribution factor has risen dramatically in recent years. In 1998, the contribution factor averaged 3.16 percent and has increased more than threefold since, now standing at 9.7 percent.[2] As the Fifth Circuit predicted more than 5 years ago, "excess subsidization in some cases may detract from Universal Service by causing rates unnecessarily to rise, thereby pricing some consumers out of the market." *Alenco Communications* v. *FCC*, 201 F.3d 608, 620 (5th Cir. 2000).

---

[1] The Universal Service Administrative Company ("USAC") now projects that in the first quarter of 2007 the high-cost fund will top $4.3 billion. *See* USAC, *HC02—High Cost Support Projected by State—1Q2007*, *http://www.usac.org/about/governance/fcc-filings/2007/quarter1.aspx*. This is more than double the size of the Fund just seven years ago. *See* USAC, *Universal Service Fund Facts—High Cost Program Data,* 1998–2005 Disbursements by *Calendar Year* (2005) (Unaudited), *http://www.universalservice.org/about/universal-service/fund-facts/fund-facts-high-cost-program-data.aspx#calendar*.

[2] *See* FCC, Industry Analysis & Technology Division, Wireline Competition Bureau, *Trends in Telephone Service, Table Compiled as of April 2005*, at Table 19.16 (June 21, 2005); *see also* FCC, *Proposed First Quarter 2007 Universal Service Contribution Factor, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-06-2506A1.pdf*.

Second, the current high-cost mechanisms do not take into account the benefits and availability of new competition. Consumers increasingly view cable telephony, VoIP, and wireless as viable alternatives to wireline phone service. Competition from these intermodal providers has increased substantially over the last several years and has brought consumers exciting new services.[3] The spread of new intermodal competition in various ways and degrees into all parts of the country has advanced Universal Service goals tremendously. As intermodal competition thrives—and drives down prices—subsidies should be getting smaller or even disappearing altogether in areas where competitive carriers operate without subsidy. But just the opposite is happening. Subsidies are increasing even as competition explodes and rates continue to fall over time.[4]

Third, a reasonable cap on support at current levels will put in place better incentives for all carriers and allow them to adapt to the new marketplace. The high-cost fund in its current form is a product of an earlier time, before competition and technology transformed the industry. Today, these forces are compelling all providers to become more efficient and more creative, and to develop new services and new sources of revenue. Yet the current structure of the Fund discourages supported companies from transforming themselves in a way that advances both their own long-term interests and those of the customers and communities they serve. Capping support would begin the process of introducing market incentives for innovation and efficiency—a process that would subsequently be carried forward through competitive bidding.

For example, support from the rural high-cost fund is based on a comparison of each ILEC's revenue requirement per line with a nationwide benchmark. This may have made sense at one time in a less competitive market, but in today's dynamic market, where the number of traditional telephone lines is shrinking, it is creating anomalous results and bad incentives:

- Under the current rules, as a rural ILEC loses lines, its cost per line increases. Because CETCs receive the same amount of support per-line as the ILEC, over time this system also increases the per-line support for each CETC—even though the CETC's per-line cost is, if anything, falling as it gains customers.
- Each rural ILEC can increase its support if its cost per line grows faster than the national average. This creates an artificial incentive that may bias ILEC decisionmaking, since the system rewards higher expenditures and penalizes cost reduction.
- The ILEC portion of the high-cost loop fund is capped, but that cap produces unanticipated effects, creating winners and losers among the ILECs, and a misalignment of incentives. When the total amount of support would otherwise push the Fund above the cap, USAC raises the nationwide benchmark in order to ensure that disbursements to rural ILECs do not exceed the cap. This has the effect of eliminating support for some study areas where per-line costs had previously been just above the benchmark. The application of the cap thus has a dramatic impact on the support to those ILECs. Yet ILECs with higher costs—whose spending may have caused the Fund to exceed the cap—have no incentive to change their behavior.

For these reasons, as the first step in the reform process, the Commission should stabilize the Fund and create better incentives for all ETCs. This can be done by placing a reasonable cap on the fund, based on current support levels. Support would be capped for each study area, with two separate caps, one for wireline ETCs and one for wireless ETCs.

The cap on support for wireline ETCs in each study area would be the total amount received by all wireline ETCs in that area in a base year, and would include support from all Federal mechanisms that provide high-cost funding (the high-cost loop fund (both rural and non-rural), local switching, interstate access support (IAS), and interstate common line support (ICLS)). If more than one wireline ETC receives support in a study area, the support amount would be apportioned among them based on their relative lines.

The cap on support for wireless ETCs in each study area would be the total amount received by all wireless ETCs in that area in a base year from all the sup-

---

[3] *See* Comments of Verizon and Verizon Wireless at 3–10, WC Docket No. 05–337 (filed October 10, 2006) ("Comments of Verizon").

[4] The Progress & Freedom Foundation, *Digital Age Communications Act: Preliminary Proposal of the Universal Service Working Group*, at 9–10 (Rel. 1.0, Oct. 2005) (footnote omitted) ("Although the costs of providing telephone service have fallen significantly over time, [Universal Service Fund] spending has increased from $15 per household in 1993 to $52 per household in 2003.").

port mechanisms listed above. In a study area where there is more than one wireless ETC, the capped support would also be apportioned among them based on their relative lines.

In order to reflect changes in the overall need for Universal Service in each study area, each year the total wireline cap and the total wireless cap in the study area would be adjusted by the percentage change in the number of households in the area.

The particular structure proposed here, two separate funding limits, applied at the study area level, will accomplish two important goals: (1) It will end the churn in support—among study areas, and between wireline and wireless ETCs—caused by the current rules. As explained above, the current operation of the high-cost loop fund is producing winners and losers as lines and support amounts change each year. The more targeted cap described here would minimize those shifts and stabilize wireline support for each study area; (2) By applying separately to wireline and wireless ETCs, the proposal would curtail what has been the largest source of growth in the USF in recent years—new funding to CETCs.

Step Two: Adopt the Auction Design and Framework

After the cap is in place, the Commission should adopt a framework for the auction process. This framework would include administrative arrangements as well as the design of the bidding process itself. For auctions to be successful, proper design is critical. Although the exact details of an auction may be flexible, the following are the key aspects which are necessary in this context:

Areas for Auction

As part of the framework, the Commission should choose the geographic areas for which auctions would be held. These areas would then serve as the "building blocks" which bidders could, if they choose, package together in the flexible bidding process described below. Auction areas should be small enough to allow the auctions to target support where it is most needed, but not so small as to create unnecessary complexity. Although other areas of similar size may be appropriate, the most logical choice among the current alternatives (at least initially) is wire centers. These areas tend to reflect information about where rural populations are clustered, and thus distinguish between high and low density areas, since ILEC switches have generally been located in population clusters, for example in the center of a small town. Although CETCs have different network topologies, they have also tended to locate their facilities in population clusters for similar reasons, and these areas therefore tend to be correlated with ILEC wire centers. For this reason, wire centers are a reasonable choice for the areas to be auctioned.

Package Bids

The Commission should adopt an auction design that allows bidders flexibility to submit bids for individual wire centers, or bids for packages of wire centers. An auction with this package bidding feature is called a "combinatorial" auction.

Each bidder will be in the best position, based on its own business plan and market forecasts, to determine whether it is better to bid on individual areas separately, or in a group or package. By designing the auction this way, the Commission and the Joint Board would also gain the flexibility to use relatively small, targeted areas, such as wire centers, as the building blocks for this process. In effect, rather than deciding itself how these areas should be grouped together, the combinatorial auction allows the Commission to obtain this information from the market, through the decisions of the bidders.

By allowing for smaller building blocks such as wire centers, the flexible auction design would also provide more precise targeting of support, and address concerns about "cherry-picking," without ballooning the fund. At the same time, it would give CETCs more flexibility to plan their market entry in ways that fit their technologies and business plans.

Flat Payments to Auction Winners

Auctions for high-cost support should be structured around bids for a flat amount of support. This approach offers several advantages. First, it eliminates the need to apportion support among different providers, avoiding controversial issues regarding whether support should be provided to primary or second lines, wireless handsets, or on some other basis. It also eliminates one of the main sources of growth in the Fund in recent years: the addition of multiple handsets by each household.

Each bid can be a flat amount of subsidy for a given area, or package of areas. This format is simpler and puts the responsibility for estimating demand in a given area where it belongs—with the bidders themselves. ETCs are in a much better position than the auction administrator to know their own revenue expectations and

cost structures. In preparing their bids, ETCs will evaluate the competitive landscape and project their own growth should they win the bid to provide supported services in an auctioned area.

Finally, by providing support in a flat amount, this approach avoids distorting the incentive each ETC would have to gain or lose a customer. The benefit to any ETC of gaining a customer would simply be the additional revenue the ETC would obtain from that customer. Further, the auction gives the Commission, for the first time, a means to set the flat support at the amount that is just sufficient to make an ETC willing to undertake the burden of the Universal Service responsibility. Taken together, these features ensure that the proposed framework would not distort competition at the margin among ETCs in an area and would not prevent competition from occurring in an area that would otherwise have supported it.

Auction Reserves

Any auction for Universal Service support should include a reserve amount, which is the maximum bid that would be accepted. Reserves are commonly used in auctions to limit the range of possible outcomes. In the Universal Service context, the reserve ensures that the support determined by the auction is no greater than the amount of support provided prior to the auction.

The reserve reflects the limit of what the auction administrator would be willing to pay. By selecting the most efficient provider, and identifying the support amount that provider is willing to accept, the auction offers the best opportunity to obtain Universal Service on terms most advantageous to the public. However, if no bid lower than the current support amount is submitted, the administrator is better off reverting to the existing support arrangement, which would continue in an auctioned area where the reserve is not met.

The auction design included here suggests two reserves that would each have to be satisfied: one that applies at the study area level, and a second reserve that applies at the wire center level. The aggregate reserve at the study area level would be the capped amount established at the beginning of the process. The wire center reserve should be based on a *pro-rata* distribution of the study area support to each wire center, but with some additional amount added to allow for the auction results to direct more support to higher cost wire centers, and less to lower cost ones. This means that the sum of the individual wire center reserves in a study area would be greater than the aggregate reserve for the study area as a whole. However, the separate imposition of the study area reserve would ensure that the auction cannot result in an increase in support for any study area.

Step Three: Auctions for Wireless and Wireline CETCs

It makes sense for the Commission and the Joint Board to start, as an initial step, with auctions for wireless CETCs in areas in which multiple wireless CETCs currently operate and receive support. This would be followed by a parallel set of auctions for wireline ETCs, in areas where at least one wireline CETC has been designated.

Wireless CETCs operate on fundamentally different cost structures than ILECs—a fact that has long made the Commission's portability rules, which tie CETC support to the ILEC's per-line costs, a primary target for reform. Starting the competitive bidding process with wireless CETCs would immediately help to connect wireless CETC subsidies with the actual cost of providing wireless services, as wireless CETCs bid against each other for support in those areas eligible for auction. A wireless CETC auction will ensure that affordable wireless service is available in high-cost areas, and that such service is provided by the most efficient wireless provider.

Using an auction to select a single wireless CETC in each area is an important step toward rationalizing distributions from the fund. Support to CETCs (primarily wireless carriers) has caused substantial growth in the Fund over the last few years. In 1999, wireless carriers received approximately $500,000 in high-cost support.[5] By 2002, wireless CETC support had increased to approximately $45 million. *Id.* In 2005, wireless CETCs received more than $600 million in high-cost subsidies and through May of last year, that number increased to more than $800 million. *Id.* At this rate, CETCs will soon account for approximately 25 percent (if not more) of all high-cost subsidies. While in many areas a wireless CETC may ultimately prove to be the most efficient provider of universal service, funneling more and more support to fund duplicative networks in high-cost areas should not continue. With wireless

[5] *See* USAC, *Distribution of High Cost Support Between Wireless and Wireline CETCs, http://www.universalservice.org/__res/documents/about/pdf/fundfacts-High-Cost-Support-Between-CETCs-199 8-2006.pdf.*

carriers and their customers now paying a significant share of the Federal USF,[6] wireless consumers will be harmed by continual increases in USF assessments. The public interest will be served by stabilizing the Universal Service Fund and directing wireless subsidies to the most efficient providers through the use of competitive bidding.

The Commission should also allow for a reasonable transition for wireless CETCs that are receiving support today, but do not receive support after the auction. The ILEC, and any wireline CETC in that area, would continue to receive support on the basis of the capping mechanism established in Step 1.

Once the wireless CETC auctions have been completed, the Commission should also nominate for auction any area where there is at least one wireline CETC. In these auctions ILECs and wireline CETCs would participate, and each auction would select a single wireline provider of Universal Service for the area. The reserve for this auction would be the total amount of support received by wireline ETCs in the area prior to the auction. These auctions would be held in a relatively limited number of areas, since wireline ETCs are designated in about 90 study areas today.

Step Four: the Commission and the Joint Board Review Auction Experiences and Decide Next Steps

After some reasonable period, the FCC should initiate a review of its experience with the wireless and wireline CETC auctions. The Commission would consider the development of markets in rural areas and changes in technology and determine next steps. Options would include:

1. *Conducting general auctions*. The Commission could decide to move forward with general auctions in which both wireline and wireless ETCs would participate. Such an auction would be held in each high-cost area where there is at least one CETC, and would select a single Universal Service provider for the area to receive the support determined by its bid.

2. *Using representative bidding*. The Commission could use the results of auctions, where they have been held, to adjust the support of ETCs whose support has not yet been established by an auction. This use of "representative auctions" is an established practice in other applications.[7] Once it has assembled a representative sample of results from the areas where bidding has been completed, the FCC could commission an econometric study that would relate the auction results to the characteristics of a high-cost area, such as size and density. This econometric model would estimate the likely results of an auction in an area with given characteristics.

Results from wireless auctions could be extended to wireless CETCs operating in areas where auctions had not yet been completed. Results from wireline auctions could be applied to wireline ETCs whose support had not yet been set by auction.

The support amount for these ETCs would then be set at the lower of the capped support amount or the amount estimated from the auction results. If an ILEC believes that the estimated support should not be implemented in a given area, it would have the option of nominating the area for an auction.

* * * * * * *

In its present form, Universal Service funding provides companies with the wrong incentives, discourages innovation, and has increased the amounts consumers pay for communications services. The approach outlined here will help remedy these problems and transform the Fund into an efficient, market-oriented system that advances the core Universal Service objectives.

Sincerely,

KATHLEEN GRILLO,
Vice President—Federal Regulatory.

ATTACHMENT

cc: Chairman Kevin J. Martin
Commissioner Jonathan Adelstein
Commissioner Michael J. Copps
Commissioner Robert M. McDowell
Hon. Lisa Polak Edgar
Hon. Larry S. Landis
Hon. John D. Burke
Hon. Billy Jack Gregg
Daniel Gonzalez
Michelle Carey
Ian Dillner
Scott Bergmann
Scott Deutchman
John Hunter
Thomas Navin
Donald Stockdale
Amy Bender
Jeremy Marcus

[6] *See* Alltel *Ex Parte* Presentation, CC Docket No. 96–45 (Oct. 20, 2006) at Attach. at 12.
[7] *See* Comments of Verizon and Verizon Wireless at 27–28.

Vickie Robinson
Ted Burmeister
Katie King
Gary Seigel
Phil Nyegaard
Jacob Williams
Jennifer A. Richardson
Peter Bluhm
Peter A. Pescosolido
Joel Shifman
Jeff Pursley
Lori Kenyon
Aram Shumavon
Eric Seguin
Brad Ramsay
David Dowds
Michael H. Lee
Philip McClelland
Denise Parrish

APPENDIX

Modernizing Universal Service—A Design for Competitive Bidding

This appendix illustrates one way the Joint Board and the FCC could implement a competitive bidding process for Universal Service obligations.

1. Summary

The auction design outlined in this appendix would introduce a more efficient framework for the distribution of support to Universal Service providers in high-cost areas. This could be done in a series of steps:

First, immediate measures would be taken to stabilize the fund, and to introduce better incentives for all ETCs, by capping support based on current levels.

Second, the FCC would adopt a framework for competitive bidding, including administrative arrangements and the design of the bidding process itself.

Third, to initiate the use of competitive bidding, the Commission would prompt auctions in high-cost areas where there are multiple wireless CETCs. These auctions would select a single wireless provider of Universal Service for each area. The incumbent local exchange companies in those areas would continue to receive support based on the capping mechanism. Once the wireless CETC auctions had been completed, the FCC would also nominate any area where there is at least one wireline CETC. These auctions would select a single wireline provider of Universal Service for each of those areas.

Fourth, after some reasonable period, the FCC would review the experience it had gained with the CETC auctions, and consider developments in technology and rural markets to determine an appropriate method for extending market-based efficiencies to additional areas. These methods could include:

- A single auction in which both wireline and wireless ETCs would participate, which would select a single Universal Service provider for each area.
- The use of representative bidding, based on statistical analysis of the auction results, to adjust support for ETCs whose support had not yet been determined by an auction.

2. Stabilize the Fund

The FCC should start by taking immediate steps to stabilize the fund, bring fund growth under control, and put in place incentives for all ETCs to adapt to changes in the market and become more efficient. This would establish a starting point for the implementation of competitive bidding.

Support would be capped for each study area. There would be two separate caps in each study area, one for wireline ETCs and one for wireless ETCs.

- *Cap for wireline ETCs*. The cap on support for wireline ETCs would be the total amount received by all wireline ETCs in the study area in a base year (which could be the most recent twelve-month period for which data are available when an order becomes effective). The cap would include receipts from all programs for high-cost areas (the high-cost loop fund (rural and non-rural), local switching, interstate access support (IAS), and interstate common line support (ICLS)).[1]

[1] For ILECs, once the cap described here has been applied, it would replace the calculation that is done today to determine support amounts from each of the existing funds. The exception would be the calculation for rate-of-return ILECs of the support amounts for local switching and ICLS, which would be calculated as they are today. High cost subsidies in each rate-of-return study area would then be adjusted to bring the total amount of support within the study area cap. The current cap on the ILEC portion of the high-cost fund would no longer be applied. For price cap ILEC study areas, the total amount of wireline support in each area should simply

Continued

- If there is more than one wireline ETC in the study area, the capped support amount would be apportioned among them on the basis of their relative lines.
- The current cap on the ILEC portion of the high-cost fund is producing winners and losers as lines and support amounts change each year. The mechanism described here would minimize those shifts and stabilize wireline support for each study area.

- *Cap for wireless ETCs*. The cap on support for wireless ETCs would be the total amount received by all wireless ETCs in the study area in a base year (which could be the most recent twelve-month period for which data are available when an order becomes effective). The cap would include support from all programs for high-cost areas (the high-cost loop fund (rural and non-rural), local switching, interstate access support (IAS), and Interstate Common line support (ICLS)).[2]
  - If there is more than one wireless ETC in the study area, the capped support amount would be apportioned among them on the basis of their relative lines.
  - Increased support for wireless ETCs represents a large proportion of the growth in the Federal mechanisms in recent years. The cap would stabilize the Fund and provide a starting point for the wireless ETC auctions.
- *Adjustment of the caps*. Each year, the total wireline cap and the total wireless cap in each study area would be adjusted by the percentage change in the number of households in the study area. This would allow the cap to reflect changes in the overall need for Universal Service in the area. However, there would be no adjustment for the total number of lines or handsets in the area. The current rural growth factor (which has been negative in some recent years) would be eliminated.

3. Adopt the Framework

Before any auction takes place, the FCC should adopt a framework for the auction process.

a. Areas for Bidding

The FCC would first designate the geographic areas that would be used for bidding. Areas should be small enough to allow support to be targeted where it is most needed, but not so small as to create unnecessary complexity. They should incorporate information about where rural populations are clustered, so as to distinguish between high and low density areas.

Geographic units such as census block groups or counties are possibilities, but these areas often cut across geographic barriers, such as mountains and rivers, and ignore clustering of customers that would be relevant to any prospective provider of universal service. The arrangement of ILEC wire centers, however, contains useful information about the geography of each area and the location of customers, since ILEC switches have generally been located in population clusters (in the centers of small towns). CETCs, while they have different network topologies, have also tended to locate their facilities in population clusters for similar reasons; they have put their facilities where the customers are.

The use of ILEC wire center areas represents a reasonable balance among these considerations. If some other geographic unit of similar size is readily available, and meets the requirements discussed here, then the Commission may consider that unit in place of wire centers. Once a geographic unit has been selected, steps should be taken to ensure that all potential participants in an auction would have ready access to data delineating the boundaries of those areas. An auction design that allows for package bids (as discussed below) makes it possible to use areas that are smaller than a study area.

b. The "Reserve" or Maximum Bid

The Commission would also establish a maximum bid, or reserve, for each wire center. Reserve amounts are widely used in competitive bidding processes to limit the range of possible outcomes. In this case, the reserve amount would be set at the level of the support provided immediately prior to the auction. In this design, two reserves would be enforced: the first at the study area level, and the second at the wire center level.

---

be capped, and if there are wireline CETCs in the area the support would be apportioned among the wireline ETCs on the basis of their relative lines.

[2] For wireless ETCs, none of the existing funds is capped today. The total amount of funding to wireless CETCs in each area should simply be capped, and the apportionment among wireless CETCs on the basis of their relative lines would replace the existing fund calculations.

The aggregate reserve. For the wireless auction, the aggregate reserve for each study area would be the total amount of support provided to all wireless ETCs in the study area prior to the auction. For the wireline auction, the aggregate reserve for each study area would be the total amount of support provided to all wireline ETCs in the study area prior to the auction.

The wire center reserve. In order to allow competitive bidding to proceed at the wire center level, it would be necessary to develop a reserve amount for each wire center. This would be done by disaggregating the existing support at the study area level in the following way:

- First, the aggregate reserve in the study area would be divided by the total lines of all wireless (wireline) ETCs to derive an average per-line support amount.
- Second, the aggregate study area reserve would be disaggregated to each wire center on a *pro-rata* basis by multiplying the number of wireless (wireline) ETC lines in each wire center by the average per-line support amount.
- Finally, each wire center amount would be multiplied by a constant greater than one to arrive at the wire center reserve amount.

This approach allows a reserve to be developed for each wire center, but avoids the need for the Commission to develop detailed cost estimates by wire center.[3] Because each wire center reserve is greater than its *pro-rata* share of the current level of support in a study area, it also provides room for the bidding process to provide more support to higher cost wire centers, and less support to lower cost ones. However, this also means that the sum of the individual wire center reserves will be greater than the aggregate reserve at the study area level. The application of the aggregate reserve ensures that the bidding process cannot result in an increase in support for the study area as a whole.

c. Qualification Process

Qualified bidders that would be eligible to participate in the bidding process would be providers who have been designated as ETCs in the area. This is consistent with Section 214(e), which requires a carrier to be an ETC in order to be eligible for support.

d. Obligation of the Auction Winner

In any competitive bidding process, the ETCs would be bidding for the obligation to serve as the provider of Universal Service in a high-cost area, in return for which it would receive financial support equal to the amount of its bid.[4] The Commission, in cooperation with the states, would develop a statement that would define the winning bidder's obligations. This would, in effect, serve as a request for quote (or RFQ).

In return for the Universal Service support, the winning bidder would be required to offer service in the entire area, and to meet any other terms of the RFQ. If a wireless CETC bids for an area and loses, then that CETC would no longer have an obligation to serve that area.

e. Schedule and Organization of the Bidding

In this design, competitive bidding would not take place simultaneously in all areas. Instead, bidding would be introduced gradually through a series of transitional steps.

The Commission would establish a regular schedule of events leading up to an auction. This would include nomination of areas for bidding, registration of bidders, posting of deposits, and the bidding process itself (this series of events is referred to here as a "bidding cycle"). This flexible framework would allow the Commission to manage the transition to competitive bidding in reasonable steps, and, at the same time, provide ETCs themselves with the opportunity to decide when an area is ready for competitive bidding.

- A bidding cycle would be held twice each year. The first bidding cycle would begin 6 months after the adoption of an order establishing the plan.

---

[3] The Commission does not need to engage in detailed cost analysis in order to establish reserves. In fact, part of the reason to use competitive bidding is to reduce reliance on traditional measures of cost. However, auction results might be improved if some simple indicator could be developed, perhaps based on the size or density of the wire center, to differentiate between higher and lower cost wire centers. Support from the non-rural high-cost fund is already disaggregated to the wire center level. There is also a process in place for ILECs to develop and submit proposals to disaggregate study areas for USF purposes, and where such plans have been approved, they could be used to calculate a reserve at the wire center level.

[4] Some of the Universal Service mechanisms, such as Lifeline, Link-Up, schools and libraries, and rural health care, are not related to high-cost subsidies, and would not be determined through the competitive bidding process outlined here.

- In any cycle, a wireless CETC would be able to nominate for bidding any area for which it is qualified, and where there is at least one other wireless CETC, except in areas where an auction had already been held and the term of the contract resulting from that auction had not yet expired. A wireline ETC would be able to nominate an area where there is at least one wireline CETC for a wireline auction, except in areas where an auction had already been held and the term of the contract resulting from that auction had not yet expired.
- At certain points in the transition process, the Commission would, on its own motion, nominate areas that meet certain criteria. For example, as discussed in Section 4, it would nominate areas with more than one wireless CETC to begin the wireless CETC auctions.
- Dates would be established for the events in each cycle. For example, if a wireless CETC wished to nominate an area for bidding in the first half of a given year, it might be required to file its nomination by February 1 of that year.
- Once an area has been nominated, a second window would be established for ETCs to register to bid in areas that had been nominated, and to nominate additional areas. This would prevent an ETC from gaining a first-mover advantage by nominating an area, would ensure that all ETCs interested in a given area are able to participate, and ensure that all areas related to those initially nominated can be included in the bidding process.
- The Commission would set a firm date for bidding to begin. As described in Section 6 below, bidding would be dynamic, which is to say it would involve multiple rounds.
- By grouping all of the bidding processes for each six-month period together, this framework would simplify administration. And, by announcing a clear schedule of events in advance, the framework would also make it easier for ETCs to plan their participation in the bidding process.

4. Auctions for Wireless and Wireline CETCs

To initiate the use of auctions for universal service, the Commission could first prompt competitive bidding among wireless CETCs.

In each area where there is more than one wireless CETC, an auction would select one "winner" to be the wireless provider of Universal Service in that area. Any area that had not previously been nominated by a wireless CETC, and where more than one wireless CETC is already certified, could be nominated by the FCC on its own motion.[5] Wireless CETCs would bid for a flat amount of support in each area. The design of the bidding process is discussed in Section 6.

Once a wireless winner is selected, that provider would receive the support amount contained in its bid. The ILEC, and any other wireline ETC in the same area, would continue to receive support under the cap mechanism described in Section 1.

The FCC could publish results of all auctions on a website, where that information would be available for use by any bidder in formulating its bid in subsequent auctions.

Once the wireless CETC auctions have been completed, the Commission should nominate for auction any area where at least one wireline CETC has been designated. In these auctions, both the ILEC and any wireline CETC would participate, and the auction would select a single wireline provider of Universal Service for the area.

5. FCC Reviews Auction Experience, Decides Next Steps

After a reasonable period, the FCC could then review its experience with the wireless and wireline Universal Service auctions.

The Commission would consider this experience, the development of markets in rural areas, changes in technology, and the acceptance of substitutes by customers of different services.

Based on this experience, the FCC would then determine whether it should nominate additional areas for auction.

- *A general auction*. The Commission could prompt a general auction in any area where there is a CETC. Both wireline and wireless ETCs would participate. The general auction would select a single ETC to be the Universal Service provider for the high-cost area and to receive the support determined by its bid. The auction design described here is intended to be suitable for a general auction; the

[5] The Commission could decide either to prompt bidding on all such areas in one bidding cycle, or could decide that it would be more convenient to spread the auctions out over time.

FCC could determine whether any adjustments would be appropriate, based on the experience gained with previous auctions. The reserve for this auction could be the sum of the wireline and wireless support amounts provided on the date of the general auction.

- *Representative bidding*. As part of its review, the Commission should also consider whether to use the results of auctions, where they have been held, to adjust the support of ETCs receiving support not yet established by an auction. Once it has assembled a representative sample of results from the areas where bidding has been completed, the FCC should either perform or commission an econometric study that would relate these results to the characteristics of the areas, such as size and density. This econometric model could then be used to estimate the likely results of an auction in an area with given characteristics.

  Estimates based on the wireless auctions, or on general auctions, could be used to adjust the support of a wireless ETC in an area where a wireless ETC auction had not yet been completed, (either because the area had not been nominated, or because an auction in the area had failed).

  Estimates based on the wireline auctions, or on general auctions, could be used to adjust the support of wireline ETCs whose support had not yet been set by an auction.

The support would be the lower of the capped support amount or the amount indicated by the econometric study.[6] If an ETC does not believe that the estimate produced by the econometric study should be applied to a given area, then it would have the option of nominating that area for bidding.

6. Design of the Competitive Bidding Process

The design outlined here is called a "clock-proxy" auction. The bidding process would be a hybrid of two designs that combines the advantages of each. The first phase is a clock auction. The second phase is a proxy auction. This design draws on the latest work of auction experts in this area (including the Commission's own). A similar design has recently been adopted by Ofcom for a major spectrum auction in the United Kingdom.

a. The Clock-Proxy Hybrid

The last few years have seen significant advances in auction design theory.[7] One of these advances has been the development of a hybrid of two types of auction designs, a "clock" auction and a "proxy" auction. This hybrid is called a "clock-proxy" auction.

The first phase of this design would be a "clock auction." A clock auction is a dynamic, multiple round process in which the auctioneer announces prices and bidders respond with quantities desired at the announced prices. It is called a clock auction because the rounds of bidding are conducted at regular intervals. This design allows the auction itself to generate information useful to the bidders. By observing the results of the early rounds, each bidder gains knowledge of the value of each area and how the areas are related to one another. In this respect, the clock phase of this design is similar to the spectrum auctions. Importantly, a clock auction also limits the opportunities for bidders to engage in strategic behavior compared with a more conventional multiple-round auction in which the bidders themselves formulate the bids. In each round, a bidder can only answer a yes-or-no question for each area or package of areas: will the bidder be willing to become the Universal Service provider at the support amount called out by the auctioneer? This kind of design thus makes it difficult, for example, for a bidder to use the amount of its bid to signal other bidders.

The second phase of this design would be a "proxy" auction, which is based on the results of the clock phase. The proxy phase is necessary to make the results from the clock phase more efficient. It provides the opportunity for bidders to create combinations of prices that would not have occurred in the clock phase. This is

[6] As Verizon and Verizon Wireless noted in their comments, this approach has been used to extend auction results in other settings, such as the pricing of timber cutting rights in Canada. Comments of Verizon and Verizon Wireless at 27–28, WC Docket No. 05–337 (filed October 10, 2006).

[7] For an overview of modern auction theory, see Paul Milgrom (2004), *Putting Auction Theory to Work*, Cambridge: Cambridge University Press. For essays on various aspects of combinatorial auctions, *see* Peter Cramton, Yoav Shoham, and Richard Steinberg (2006), *Combinatorial Auctions*, Cambridge, MA: MIT Press. A discussion of the clock-proxy design is provided in Lawrence M. Ausubel, Peter Cramton, and Paul Milgrom, "The Clock-Proxy Auction: A Practical Combinatorial Auction Design," which appears as Chapter 5 in Cramton, Shoham, and Steinberg.

called the proxy stage because the bidding activity is conducted by a proxy agent (a computer program) following strict rules in order to limit the possibility of strategic behavior by the bidder itself.

b. Advantages of the "Clock-Proxy" Hybrid Design

Flexible bidding for individual areas, or packages of areas. This design allows the bidders to place bids on different areas in a very flexible way. A bidder could submit bids on a specific area or areas. The same bidder could also submit a "package bid" on a group of areas, if the bidder found them to be related to one another (for example, if the bidder could serve the "package" more efficiently than the individual areas separately). This type of bidding process is called a "combinatorial" auction.

A design which permits the flexibility of package bidding makes the choice of the area to be auctioned less critical. It would allow the Commission to design the auction around smaller geographic units (such as the wire center areas discussed here) without unduly complicating the bidding process. Rather than having the Commission make decisions about how areas should be grouped together, this approach allows the Commission to elicit information from the bidders about how the areas should be grouped. This design would achieve more accurate targeting of Universal Service support, and address cherry-picking concerns. These advantages would be gained without inflating the fund, and without giving up the economies of serving larger areas in cases where those are important.

Allowing for different relationships among areas. The auction design outlined here is designed to perform well—in terms of efficiency, and minimizing the need for support—regardless of whether different bidders view a given set of areas as independent, substitutes, or complements. This is important because in bidding for Universal Service support, all three of these are possible:

- Areas are *independent* if a bidder's willingness to bid for hypothetical "area A" is not affected by the outcome of the bidding for any other area. For example, a small ILEC that serves a single wire center may care only about that area.
- Two areas are *substitutes* if a bidder wishes to win either area A or area B, but not both. This could be the case for a wireless carrier that wants to enter one new market, and is considering A and B as possible alternatives. If in the early rounds of bidding this carrier encounters strong competition for A, it may shift its attention to B in later rounds. This kind of behavior has occurred in the spectrum auctions.
- Two areas are *complements* if a bidder sees some synergies in serving the two areas together, so that it would be willing to accept less support in area A if it also wins area B. For example, a mid-size ILEC that serves several wire centers in a state may view them as complements. In this case, strong competition for A may make this carrier less willing to bid for B.

Some earlier proposals for competitive bidding of Universal Service have essentially treated high-cost areas as independent.[8] For that reason, they do not make any provision for either substitutes or complements. The multiple-round design used in the spectrum auctions performs well when areas are substitutes, but not as well when they are complements. As explained in more detail below, the clock-proxy auction design will perform well regardless of whether different bidders view a given set of areas as independent, substitutes, or complements.

Minimizing strategic behavior. The design outlined here also minimizes the possibility of strategic behavior, such as collusion among the bidders, or an attempt by one bidder to conceal its interest in particular areas by holding back until the late rounds of an auction. This is particularly important in the context of bidding for universal service, where the number of bidders for any given area is likely to be small. Because this design encourages each party to bid straightforwardly based on relevant business factors, such as its expected costs and revenues, it would improve the transparency of the process, and the efficiency of the outcome.

Single Winner-Flat Amount of Subsidy. This design allows for a single winner. Thus, there would be no need to attempt the difficult task of apportioning support

[8] For example, neither Milgrom (Paul Milgrom, "Procuring Universal Service: Putting Auction Theory to Work," Lecture at the Royal Swedish Academy of Sciences, December 9, 1996) nor Weller (Dennis Weller, "Auctions for Universal Service Obligations," *Telecommunications Policy,* Vol. 23, 1999, pp. 645–674) allowed for package bidding; instead they proposed a separate auction for each area. Since these designs were also single-round, sealed-bid auctions, they did not allow bidders to shift their attention from one area to another based on results in earlier rounds. The only provision for complementarity was a limited opportunity for a bidder to withdraw if it wins area A but loses some other area it sees as related. Because the design proposed here deals directly with package bidding, and also allows for multiple rounds, there is no need for such a withdrawal provision.

amounts among different providers. This would avoid many contentious issues that have arisen in the past, such as whether to support primary lines, additional lines, multiple handsets, and so on. It would also make for a simpler bidding process. Each bidder would bid a flat dollar amount of subsidy—the total amount the ETC would accept in order to take on the Universal Service obligation for a given high-cost area. Each bidder would base its bid on its own business plan, which would include the bidder's own assessment of many factors—including the demand quantities (of lines, handsets, etc.) it would expect to serve within each area.

c. Clock Phase

As discussed above, in the first phase of the auction (the "clock" phase), the bidding would proceed in a series of discrete rounds. Instead of having the bidders submit support amounts, the auctioneer "calls out" a support amount for each area in each round. Each bidder then indicates which areas it would be willing to serve as the Universal Service provider at the specified support amount. The clock phase would proceed as follows:

- The support amount called out by the auctioneer in each round is a flat amount per year. It is constant each year for the duration of the contract. In the first round of the clock phase, the auctioneer calls out the reserve price in each wire center.
- In each round of the clock phase, each bidder may submit a bid on a package that includes any area or combination of areas it chooses. Since the support amounts are being announced by the auctioneer, the package bid is simply a list of the areas the bidder would be willing to serve for the amounts called out in that round. Each bid is also exclusive in the sense that at the end of the clock phase the auctioneer can accept only one bid for each area, and one bid from each bidder. All bids remain in effect for the entire duration of the auction and cannot be withdrawn (even after bidding has closed). At the end of the bidding process, the auctioneer may go back and accept any bid from a previous round. This means that a bidder must carefully consider what it bids in every round, because every bid is a binding offer that the bidder might be called upon to honor.
- At the end of each round, the auctioneer determines how many bids have been submitted for each area. The objective of the auctioneer is to select a single bidder for each area. Therefore, in an area where more than one bid has been received, there is excess supply. In areas where no bids have been received there is excess demand. In areas where there is excess supply (more than one bidder) the auctioneer reduces the support amount called out in the next round by a set amount.[9]
- The auction is held over the Internet, using a software program to administer the bidding.[10] The program includes admission control to ensure that only qualified entities submit bids. The program also checks to see that bids meet the rules, and prompts the bidder to resubmit a bid if it does not. The rounds occur at some set interval, perhaps every 2 hours.
- The program will accept only bids that meet the wire center reserve. It also checks after each round to see that the aggregate reserve is met at the study area level, and provides that information to the bidders prior to the next round.
- This aggregate reserve check can only be done after a round is completed, so within a round each bidder does not know if the bids being submitted, taken together, will satisfy the rules. In some cases, not all wire centers in a study area will have been nominated for bidding. In this event, in order to apply the aggregate study area reserve, the auctioneer would include the areas that were not part of the auction in the calculation as if they had received bids at their wire center reserve amounts.
- Each bidder would be subject to an "activity rule," which would require it to bid actively in every round in order to maintain eligibility to bid in subsequent rounds. This rule, which has been used in the spectrum auctions, prevents a

[9] The decrement by which the bid is reduced each round is an element of the auction design. A large, or coarse, bid decrement will make the auction go faster, but may jump over the correct support amount. To address this issue, a device called "intra-round bidding" may be used to obtain finer information from the bidders. Rather than simply drop out of the bidding for an area when the support amount falls below the level it would accept, a bidder could indicate willingness to accept a level of support between the amounts called out in the last two rounds.

[10] Having bids submitted electronically over the Internet, and using specialized software to administer the bidding process, has been used successfully in the FCC's spectrum auctions, as well as many other successful auctions around the world.

bidder from "lying low" in early rounds to conceal its intentions, or to allow rivals to eliminate one another.[11] In areas where there are few bidders, the auctioneer may limit the information provided to each bidder. For example, each bidder may know the number of other bidders, but not the identity of each.

- The clock auction rounds continue until there is no more than one bidder for each area.
- At the end of the clock phase, there may be some areas for which there is no bid. There may also be areas where bids have been submitted, but these do not satisfy the aggregate reserve constraint because, as discussed above, the sum of the wire center reserves will be greater than the aggregate reserve constraint for the study area.
- At the end of the clock phase, the auctioneer runs an optimization program that selects the winning bidder in each area, based on all the bids submitted (this may include bids from earlier rounds, since all bids remain in effect until the auction closes). The optimization seeks to select winners for as many areas as possible, while minimizing the cost to the fund.

d. Proxy Phase

Once the clock phase of the auction has been completed, a final round or "proxy phase" is held to "fine-tune" the results.

The proxy phase is used to make the results of the clock phase more efficient. The proxy format opens up additional bidding opportunities by allowing each bidder to specify package prices that might not have been announced by the auctioneer in the clock phase. At the same time, the proxy phase limits each bidder's ability to behave strategically by having a proxy agent bid on behalf of the actual bidder according to strict rules.

In the proxy phase, each bidder reports a valuation for each package of areas in which it is interested. This valuation is the "best and final" support amount that bidder would accept. Unlike the clock phase, where each bidder specifies a single package in each round, here a bidder may submit valuations for any number of packages, and the packages may overlap in the sense that a given wire center may be included in more than one package.

The actual bidding is then done on the bidder's behalf by a proxy, which is simply a computer program that bids according to preset rules, given the valuations submitted. Starting with the support amounts produced by the clock phase, each proxy looks for opportunities to make its bidder better off by submitting a bid on the bidder's best package; that is, the package that maximizes the difference between the current bid and the bidder's valuation. Bidding continues until no proxy can find any such opportunity.

- The same reserve rules discussed in Section 3.b are maintained in the proxy round. The activity rule is also maintained in the proxy phase, but may be relaxed by a measured amount to allow bidders to increase the number of areas on which they bid.
- In practice, the proxy round is implemented using an optimization program. A winner is chosen for each area by a criterion that minimizes the total amount bid over all areas. The amount of support determined by the optimization is also competitive in the sense that no coalition of bidders can offer the auctioneer a lower-cost plan.
- In the final optimization, there may still be some wire centers for which there is no bid. There may also be study areas for which bids were submitted, but where the auction fails because the bids did not meet the aggregate reserve constraint for the study area. In these areas, the situation would revert to the *status quo* prior to the auction, and the ETC(s) that participated in the auction would continue to receive support capped by the mechanism described in Section 1.
- The proxy phase builds upon the advantages of the clock phase. The information generated in the clock phase helps bidders formulate the valuations they are asked to submit in the proxy phase.
- If the areas are substitutes, the clock auction may also do most of the work of identifying the best bids, leaving relatively little need for "fine tuning" in the proxy phase.

[11] Specifically, the rule employed here is called a "revealed preference activity rule," which ensures that, as the support amount declines during the rounds of bidding, a bidder cannot shift its bid toward a package whose support amount has fallen more than the support amount from a previously preferred package. *See* Ausubel, Cramton, and Milgrom, op. cit., at page 120.

- However, where areas are complements, it is likely that bidders may hold back from making some bids, and the clock phase may end before all of the possible bids have been revealed. Suppose a bidder is interested in a package of areas A, B, and C which it views as complements. Given the particular support amounts called out by the auctioneer, and especially if another party bids aggressively for B, this bidder may choose not to bid for any of the three areas, even though its combined bid might have been superior. By giving the bidder an opportunity to specify a different combination of support amounts, the proxy phase may elicit a bid for the package that would be better, from the auctioneer's perspective, than any combination of bids offered in the clock phase.

7. Transition: Implementation of Auction Results

After the auction results have been announced, a transition period is necessary if a "winner" will be taking on new Universal Service obligations. For example, if the winner is a wireless CETC not already serving the area, then a transition period may be needed. At some pre-announced point in the transition, the administrator could require the winner to post bonds to ensure performance of the contract. Later in the transition, the winner may be required to file an implementation plan to show how it would plan to fulfill its responsibility. This would create an incentive for the winner to formulate plans in a timely way, and would provide the administrator with an early warning of any potential problems. A transition period would also allow ETCs that had participated in an auction, and had not won, to adjust their business plans.

Transition in the Event of a General Auction. Under this proposal, no general auction would be held unless the Commission took action pursuant to its review in Step 4. If a general auction is held, and the ILEC is the winner, then no transition would be needed, since the obligation it would take on would simply be an extension of what it is already doing. If an ILEC bids for an area and loses, the state commission would decide whether and how to reduce regulation of that carrier and what (if any) obligation to serve would be appropriate. The Commission and/or state commissions, on the other hand, could decide to exercise their authority to remove obligations that the losing ILEC bidder may have to provide unbundled elements or resale.

Although the winner would have the responsibility to provide service, it could fulfill that responsibility by contracting with other parties, including the incumbent. The losing ILEC could choose to continue to operate, selling retail services to end-users. The state commission may reduce retail regulation of such ILEC services. The ILEC could also sell wholesale inputs to the new Universal Service provider. If the FCC and/or the state commission removed UNE and resale obligations from the ILEC, then these wholesale transactions could be at commercial terms.

8. Terms of the Contract

The contract between the winner and the regulators (FCC and state) would incorporate the terms of the RFQ and the level of annual support to the winner. Like any procurement contract, it would include provisions to ensure that the terms of the contract are met. These could include fines, forfeiture of bond amounts, and being barred from participation in any subsequent auctions.

The contract would be awarded for a set term. The area could not be nominated during that contract period. At the end of the term, the contract would continue until a party—either an ETC or the Commission—nominated it again, at which time another auction would be held.

9. Areas Not Yet Auctioned

In some areas, support may not have been set through competitive bidding (either because the area was not nominated for bid or because the auction failed to produce a result). These areas would continue under the capped support arrangement described in Section 1. In an area that receives no support today, the reserve would be zero, and thus that area would not be eligible for auction.

The CHAIRMAN. I thank you very much.

May I now call upon Senator Thune?

STATEMENT OF HON. JOHN THUNE, U.S. SENATOR FROM SOUTH DAKOTA

Senator THUNE. Thank you, Mr. Chairman.

And I thank you for holding this hearing. And I apologize—I've been bouncing back and forth between an Armed Services Com-

mittee hearing this morning—for not being here for all the testimony. I thank our witnesses.

And I particularly want to welcome here a South Dakotan. Tom Simmons is the Senior Vice President of Public Policy for Midcontinent Communications, which is located in Sioux Falls, South Dakota. And I happen to be a subscriber. They provide phone, they provide Internet, they provide video. And so, I have all those at my home in Sioux Falls. And I appreciate the efforts that they're making to improve those services all across South Dakota.

As you know, I'm a cosponsor of Senator Stevens' bill that deals with USF, both on the distribution mechanism and the contribution mechanism, and think that that—can improve the way that we go about reaching some of these areas that aren't reached and delivering broadband to more areas across the country. But I certainly welcome other thoughts about how to do that, whether or not those are the best solutions or whether—there are perhaps other ideas that might be even better ones.

So, thank you Tom, for being here today, for making the trip out from South Dakota, and to all our witnesses for their excellent testimony. And we'll look forward to moving forward with some legislation that will address this very important issue.

Thanks.

The CHAIRMAN. Mr. Simmons?

STATEMENT OF W. TOM SIMMONS, SENIOR VICE PRESIDENT, PUBLIC POLICY, MIDCONTINENT COMMUNICATIONS

Mr. SIMMONS. Chairman Inouye, Vice Chairman Stevens, members of the Committee, thank you for inviting me to testify today.

My name is Tom Simmons. I'm the Senior Vice President of Public Policy for Midcontinent Communications, a leading provider of cable telecommunications services, including analog and digital cable television, broadband Internet, long-distance and local telephone services. We serve approximately 200 communities in North and South Dakota, western Minnesota, and northern Nebraska, generally classified as small or rural. The size of our communities range from densities of 5 to 116 homes per mile of cable plant, and populations range from less than 30, in Barlow, North Dakota, to our largest community, in Sioux Falls, home of Senator John Thune, which has a population of more than 140,000.

Midcontinent launched its broadband Internet service over 10 years ago, on April 15, 1996, in Aberdeen, South Dakota. At that time, we made a pledge to bring advanced broadband services to as many customers as possible, regardless of the size of the community.

At the end of last year, we completed a project to rebuild our cable plant to 750 megahertz or better in 50 more Midcontinent communities, bringing our total number of upgraded systems to over 156; and that serves 95 percent of Midcontinent's customers. Customers in these communities now enjoy over 150 channels of analog and digital video programming, broadband, high-speed Internet service, high-definition television, digital video recording, and video on demand.

I'd like to start by simply pointing out that the entry of cable operators into telephony is great news for consumers across America.

According to recent reports, cable phone customers are saving over $10 a month on their phone bills, and the anticipated consumer benefit from competition over the next 5 years will total more than $100 billion. And cable operators like Midcontinent are increasingly bringing benefits of their competitive phone services to rural areas.

As I testified last Congress before this Committee, Midcontinent strongly supports the goals and purposes of Universal Service. We believe that quality telecommunications services should be available to all regions of the country at just, affordable, and reasonable rates. A strong Universal Service program is an essential component of national telecommunications policy, and we share the concern of policymakers, industry stakeholders, and the public, that, in its current form, the Universal Service program is not sustainable.

But, while there is general consensus that all aspects of the system, including contributions, eligibility, and level of support, are in need of reform, there are a wide range of views as to how the program should be restructured.

With respect to distribution-related Universal Service issues, we believe it would be a mistake to make broadband services eligible for USF distributions in areas that already have a broadband provider. It's unnecessary and profoundly unfair for the government to subsidize a broadband competitor to Midcontinent or any other broadband provider that has already stepped up to the plate and answered the call to help close the digital divide. Subsidizing competition is also a waste of scarce resources that should be targeted to areas where a market-based solution has not developed.

Also, the continued growth in the size of the Fund is a matter of significant concern to the cable industry, for a very simple reason: these costs ultimately are borne by consumers.

Our industry supports efforts to reduce the burden of Federal support programs by more efficiently distributing support. In particular, we believe that reverse auctions, if structured properly, offer an opportunity not only to reduce the size of the Fund, but also promote competition in high-cost areas by making support available on a more equitable basis.

Turning to the current USF contribution mechanism, cable recognizes that reliance on the assessment of interstate telecommunications revenues virtually guarantees that the funding base will continue to shrink. To address this, the cable industry has long advocated the adoption of a telephone-numbers-based contribution mechanism, a simple, yet effective, reform that will sustain the long-term health of this Fund while adapting to the evolving technology and economics of voice telephony.

As stated above, Midcontinent and the cable industry strongly support the goals and purposes of the Universal Service program. We recognize that changes are necessary to ensure its continued viability. We appreciate that the legislation introduced by Vice Chairman Stevens would give the FCC the option of establishing a numbers-based assessment scheme. And we'd like to work with this Committee to give priority to a numbers-based option and ensure that future assessments are not extended to broadband and Internet services.

The imposition of new fees on broadband service at the same time policymakers seek to encourage more widespread deployment and service penetration would be counterproductive and would raise the price of high-speed Internet services for current and potential broadband customers. It would also penalize those who have worked diligently to deploy broadband to nearly every part of the country.

Thank you, Mr. Chairman, for inviting me to testify today. I'd be happy to answer your questions, or those of the members of the Committee.

[The prepared statement of Mr. Simmons follows:]

PREPARED STATEMENT OF W. TOM SIMMONS, SENIOR VICE PRESIDENT, PUBLIC POLICY, MIDCONTINENT COMMUNICATIONS

Chairman Inouye, Vice Chairman Stevens and members of the Committee thank you for inviting me to testify today. My name is Tom Simmons and I am the Senior Vice President of Public Policy for Midcontinent Communications, a leading provider of cable telecommunications services including analog and digital cable television, broadband Internet and local and long distance telephone services. We serve over 200,000 customers in approximately 200 communities in North and South Dakota, western Minnesota, and northern Nebraska generally classified as small or rural. The size of our communities range from densities of 5 to 116 homes per mile of cable plant and populations ranging from less than 30 in Barlow, North Dakota to our largest community, Sioux Falls, South Dakota, which has a population of more than 140,000.

Midcontinent launched its broadband Internet service over 10 years ago, on April 15, 1996 in Aberdeen, South Dakota, and made a pledge then to bring advanced broadband services to as many customers as possible regardless of the size of community. At the end of 2005, we completed a project to rebuild our cable plant to 750 MHz or better in 50 more Midcontinent communities bringing our total number of upgraded systems to 156, serving over 95 percent of Midcontinent's customers. Customers in these communities now enjoy over 150 channels of analog and digital video programming, broadband Internet service, high definition television, and digital video recording capability. Midcontinent Communications is also a certificated local exchange telephone service provider in North Dakota, South Dakota, and Minnesota. Midcontinent first launched facility based circuit-switched telephony in 2000, and in the last year launched its first digital VoIP phone service in Mitchell, South Dakota. Since then, we've rolled out digital phone services in a number of additional communities throughout our service area and plan to continue the conversion of analog to digital telephony in many more. Midcontinent is a privately held company that has invested, and continues to invest, substantial amounts of private risk capital to bring advanced services to our customers without the assistance of public funds. We're proud of our ability to deliver the services our customers demand, which are no less than those demanded and expected in major metropolitan areas.

As a provider of telephone service in rural America, Midcontinent strongly supports the goals and purposes of the Universal Service Fund (USF). We believe that quality telecommunications services should be available to all regions of the country at just, affordable and reasonable rates. In that regard, even prior to the Federal Communications Commission's recent order requiring that all VoIP providers pay into the USF, Midcontinent and all other cable operators offering voice telephone service—either by way of traditional circuit-switched telephony or VoIP—have always contributed to the Universal Service Fund.

The entry of cable operators into the telephony marketplace is great news for consumers across America. According to a recent J.D. Power report, cable phone customers are saving over $10 a month on their phone bills. Based on the projected growth of cable phone services, Microeconomic Consulting and Research Associates recently projected that the total anticipated consumer benefit from competition over the next 5 years will total more than $100 billion. And cable operators, such as Midcontinent, are increasingly bringing the benefits of their competitive telephone services to rural areas.

A strong Universal Service program is an essential component of national telecommunications policy and we share the concerns of policymakers, industry stakeholders and the public that, in its current form, the Universal Service program is

not sustainable. While there is general consensus that all aspects of the system, including contributions, eligibility and level of support are in need of reform, there are a wide range of views as to how the program should be restructured.

With respect to distribution related Universal Service issues, we recognize the value in preserving and promoting this program which provides funding to companies that serve areas where market forces historically might not have resulted in all customers being served. These market forces, however, are not static. Improvements in technology, particularly the transition to IP-based equipment and services, have made it possible for cable operators and other facilities-based competitors to serve areas that previously might not have supported competitive entry. Similarly, incumbent local exchange carriers increasingly are able to provide multiple services (including DSL and video) over infrastructure previously used solely to provide telephone service. This transition to markets in which there is facilities-based competition for voice and non-voice services calls into question the need for continued government funding at historical levels, and may eventually permit the total elimination of high-cost support in at least some markets.

The continued growth in the size of the fund, however, is a matter of significant concern to the cable industry for a simple reason—these costs ultimately are borne by consumers. Based on the anticipated growth of cable telephony services, and the corresponding growth in the share of the program that will be funded by cable consumers, our industry supports efforts to reduce the burden of Federal support programs by more efficiently distributing support. In particular, we believe that reverse auctions, if structured properly, offer an opportunity not only to reduce the size of the fund, but also to promote competition in high-cost areas by making support available on a more equitable basis. The challenge is to reduce the burden on consumers and promote competition, without sacrificing the level of service provided in these areas today. We believe that an auction program can achieve these goals if it incorporates the following requirements.

First, reverse auctions will only be effective and technology neutral if they cover relatively small service areas (such as census block groups) rather than service areas that conform to the boundaries of a particular type of service provider.

Second, minimum levels of service to be offered and obligations to be met by all bidders must be established. This should include some sort of carrier-of-last-resort obligation, which will ensure that the fundamental goal of providing service to all consumers is met. Any facilities-based provider that commits to meeting these requirements should be eligible to participate in the auction.

Third, bidders should be required to offer services using their own wired or wireless connection to the end-user. Such a requirement will provide an important incentive for the construction of competitive networks.

Fourth, eligibility to participate in an auction and receive the resulting support should be contingent on accommodating requests for interconnection. Incumbent carriers should not be permitted to collect government funding for their networks, while at the same time blocking competitive entry and foreclosing the introduction of more efficient, innovative technologies that will provide the ultimate cure for high-cost networks.

Fifth, there should be no guarantee of support such that an incumbent local exchange carrier or any other provider is "made whole" through a government subsidy if they receive less support than they did before the introduction of auctions. Any type of guaranteed support or other guaranteed revenue stream would completely undercut the rationale for moving to an auctions-based system, which is to reduce the overall amount of support provided by the program.

Lastly, for each area subject to auction there should be a fresh look on a periodic basis. As technology develops and companies continue to expand their networks, the amount of support needed to serve any particular geographic area should continue to decline to reflect increased efficiencies.

We also believe it would be a mistake to make broadband services eligible for USF distributions in areas that already have a broadband provider. Midcontinent shares this Committee's desire to ensure that all Americans, including those who live in rural communities, have access to high-speed Internet service. As I stated at the outset, Midcontinent has spent hundreds of millions of dollars to upgrade its facilities and deploy broadband services in rural communities. We did this without a government mandate and without a government subsidy. We did it because we want to make certain that our customers have the same access to advanced digital technology as all Americans. We took the risk and invested private capital in order to provide broadband services in the communities we serve. It is unnecessary and profoundly unfair for the government to subsidize a broadband competitor to Midcontinent or any other broadband provider that has already stepped up to the plate and answered the call to help close the digital divide.

We recognize that some form of subsidy may be necessary to promote broadband deployment in remote rural areas where no provider is currently offering a broadband service and it is otherwise uneconomic to do so. The cable industry has offered support for legislation that would offer loans or tax incentives to companies that deploy broadband services in clearly defined and carefully targeted *unserved* areas. But the government should take great care not to subsidize broadband in communities where companies are already offering consumers broadband service. Subsidizing competition is unfair and a waste of scarce resources that should be targeted to areas where a market based solution has not developed.

However, despite our support for government programs that target funding to unserved areas, we would like to point out that *any* program that subsidizes private entities to deploy broadband service is fraught with the potential for abuse. An example of such a program, though well intentioned, is the current Rural Utilities Service broadband loan program. Loan money from this program is being used to subsidize cable and phone competitors in markets where there are already two or more broadband providers. This type of subsidized competition penalizes private entities serving those markets and discourages private investment in rural America. In its September 30, 2005 report, the Office of Inspector General of the U.S. Department of Agriculture found that the RUS had not maintained its focus on rural communities without preexisting service, questioned whether the government should be providing loans to competing rural providers when many small communities might be hard pressed to support even a single company, and observed that the RUS, by granting such loans, may be "creating an uneven playing field for preexisting providers operating without government subsidies."

While government subsidies may be necessary to promote broadband deployment in unserved areas, the cable industry does not believe that Universal Service Funds are necessary to spur further broadband deployment. Broadband deployment in this country continues to grow at a robust rate, with the number of consumers that have signed up for high-speed Internet service in the U.S. far exceeding any other country in the world. The cable industry, for example, has invested over $110 billion since 1996 in order to provide high-speed Internet access and other advanced services throughout the country.

As of June 30, 2006, the Federal Communications Commission reported that based on company data, cable modem service was available to 93 percent of households that could access cable TV service and the phone companies' Digital Subscriber Line (DSL) service was available to 79 percent of households who could access ILEC telephone service. Kagan Research reported even higher numbers, stating that cable broadband service is available to more than 94 percent of *all* U.S. homes.

With private industry investing in broadband deployment like never before, and the successful roll out of broadband and other advanced services across the country, it does not make sense to undermine the Universal Service program's principle purpose of promoting the availability of affordable telecommunications services to all regions of the country.

Turning to the current USF contribution mechanism, cable recognizes that reliance on the assessment of interstate telecommunications revenues virtually guarantees that the funding base will continue to shrink. An increasing number of companies offer consumers voice telephone service for a fixed monthly rate that does not differentiate between local or long distance calls. Companies also offer bundled packages of digital services that include voice telephony. Most consumer VoIP services are offered without regard to intrastate or interstate distinctions. The fact is that interstate telecommunications revenues have been declining and are predicted to continue declining for the foreseeable future. As the line between what is a local and long distance call continues to blur, the existing USF contribution mechanism will become increasingly obsolete which threatens the viability of the program itself.

The cable industry has long advocated the adoption of a telephone numbers-based contribution mechanism, a simple yet effective reform that will sustain the long-term health of this Fund while adapting to the evolving technology and economics of voice telephony. Using telephone numbers would be a relatively simple means of determining who should contribute as well as when contributions were owed and in what amount. There would be no need to apportion provider revenues into interstate *versus* intrastate or to determine which portion of a bundled offering represents interstate telecommunications. It would also make no difference whether a service was defined as a telecommunications service or as an information service. Under a telephone number-based system, all that matters is whether or not the service uses a phone number. As such, a numbers-based system promotes competitive neutrality among providers and technologies and ensures that no provider of a voice telephone service is placed at a competitive disadvantage due to disparate treatment with respect to Universal Service Fund contributions.

While a numbers-based approach would capture any service designed as a replacement for plain old telephone service (POTS), it would avoid assessments on a service that might include a voice component. Few would argue, for example, that applications, or devices, where voice functionality is ancillary to the actual purpose of the service or device—such as voice enabled gaming—should be assessed for USF purposes.

Some have expressed concern that a numbers-based system would collapse as proposals to map telephone numbers to Internet addresses, such as ENUM, become a reality. However, ENUM requires that a subscriber have an active telephone line. If someday in the distant future a non-number based system were developed and widely implemented, the telephone number-based contribution mechanism could easily be adapted, as some form of unique identifier or address will always be necessary to route various types of voice communications.

Mr. Chairman, the reality is that interstate telecommunications revenues are declining and will continue to decline. Conversely, an FCC staff analysis shows that the number of active telephone numbers is expected to grow for the foreseeable future, from 554 million numbers in use in 2004 to nearly 600 million numbers in use in 2007. Moving to a numbers-based USF contribution mechanism embraces this reality and will ensure the Universal Service Fund remains solvent well into the future. Furthermore, it would create a more predictable and equitable split between assessments collected by providers of local and long distance telephone services, and between residential and business subscribers. Residential telephone subscribers would generally pay less under a numbers-based plan. Assuming an appropriate assessment amount, even most one-line households with low long distance usage would pay less under a numbers-based system than they do under the existing interstate revenue model.

As stated above, Midcontinent and the cable industry strongly support the goals and purposes of the Universal Service program and recognize that changes are necessary to ensure its continued viability. We appreciate that the legislation introduced by Vice Chairman Stevens (S. 101) would give the FCC the option of establishing a numbers-based assessment scheme and we would like to work with this Committee to give priority to the numbers-based option and ensure that future assessments are not extended to broadband and Internet services. The imposition of new fees on broadband service at the same time policymakers seek to encourage more widespread deployment and service penetration would be counter-productive and would raise the price of high-speed Internet services for current and potential broadband customers. It would also penalize those who have worked diligently to deploy broadband to nearly the entire Nation.

Contrary to assertions that broadband is negatively impacting universal service, the impact has been minimal at best. Most VoIP services, for example, already pay into the Universal Service Fund and a number-based plan would, in any case, capture these services into the future. The assessment of broadband service is unnecessary to the goal of a stable, sufficient and predictable Fund. Instead, a number-based contribution mechanism addresses the current problems with declining interstate revenues and bundling of services, and captures new technologies and protocols such as VoIP.

Mr. Chairman, Midcontinent supports the goal of the Federal Government to assure that all Americans have access to telephony and broadband services. We have invested hundreds of millions to help that goal become a reality. We recognize that government subsidies may be the only answer in some high-cost rural areas. However, any government program designed to promote broadband deployment must be technology and provider neutral and carefully defined and targeted to only those areas that lack broadband service. Furthermore, any such program must be subject to the most stringent government oversight to ensure that government funds are allocated only to areas that are defined as unserved and are not used to subsidize competition.

Thank you for inviting me to testify today. I would be happy to answer any questions you or the members of the Committee may have.

The CHAIRMAN. Thank you very much.

I'd like to thank the panel for its patience waiting for us.

I'd like to recognize Senator Thune for questions.

Senator THUNE. Thank you, Mr. Chairman.

I guess I would like to direct a question to Mr. Massey at Alltel. In the NTCA testimony, it was pointed out that wireless needs wires. And I guess I'm interested in knowing whether you agree

with that statement. And how should that statement impact our thoughts about a reverse-auction proposal that combines wireless and wireline into the same auction? Would combining them into a single auction impact the incumbent wireline infrastructure that's already being deployed?

Mr. MASSEY. Senator, that's a great question. And the construction of a network of all of our communications network is very complicated, and I will do my best not to use arcane terms.

All networks use what is called "backhaul." Backhaul is the conduit through which traffic that originates in the last mile is channeled to then go through switches and so forth to reach the other side, the other last mile. It's the garden hose in the middle of all networks. Yes, wireless networks—all wireless networks, to some extent, use backhaul.

However, I'll say, we believe we pay, as we say in Arkansas, *full retail* for access to those networks. It is one of our highest expenses, which is access to those wireline networks through which traffic is routed. And I'm not aware that the subsidy affects that pricing by one penny.

Senator THUNE. Do wireless carriers need the same level of USF support as wireline carriers?

Mr. MASSEY. Do we need the same level?

Senator THUNE. Yes. I mean, what's the——

Mr. MASSEY. We believe——

Senator THUNE. What is the——

Mr. MASSEY.—we do, yes.

Senator THUNE. What are the differences in how a wireless carrier spends those dollars, compared to a wireline carrier?

Mr. MASSEY. I can give you pretty good answers on the wireless side. Part of the problem on—and I'm glad you raised the actual-cost issue, because it's one of those things that has been in a number of the filings. Just a couple of things on that. And the answer is, we don't know. The fact is, is that we don't—we have a pretty good handle on our costs. We're a public company. When we submit, for accountability for our USF funds, we give to the FCC, really for the world to know exactly where every dime we spend goes. The problem is that on the wireline side, there is an intermediary and a black box, Senator, and it's very difficult for us to tell what their actual costs are. So, it's very possible, in my opinion, notwithstanding some of the thinking that may be out there, that our actual costs to extend service to a customer could be more than the actual cost of a LEC, of a wireline company, to extend those costs. We just don't know. And we've not, frankly, seen any factual basis for any differentiation there.

The so-called "identical support" rule is one that compensates competitive carriers for essentially the underlying wireline provider. And one point that I'd like to make on that is—and if you see our written testimony, you'll see it there—that we've provided some factual basis for that. Support's not really identical. It's not necessarily the same in a particular market. So, we're not necessarily receiving the same dollars to build the network in a market that the wireline companies are receiving for that market.

The third thing is, is that we just ask that you'd beware, as you consider this so-called "actual cost" concept, the unintended con-

sequences of paying one competitor a lower rate than paying another competitor. We think that it's part and parcel of the so-called "competitive neutrality" concept that really has caused the flourishing of both wireline and wireless networks in underserved areas. So, that's what we ask for.

Senator THUNE. Mr. Crothers, let's say that a reverse-auction regime is put in place, for USF funding—and that Alltel wireless wins with the lowest bid in your service areas. What do you think happens, then, to your service offerings? I mean, do your folks pull up stakes? Would they defer new infrastructure investments? What happens in that type of a scenario?

Mr. CROTHERS. Senator, it's almost impossible to tell. First of all, as we go toward this reverse-auction concept I think that it's going to become rapidly apparent the fatal flaws that are involved with it. We're talking about different technologies, we're talking about different service territories, we're talking about different technologies having different capacities. It's almost impossible to ever compare apples to apples and oranges to oranges. However, the one thing that we can state today, state yesterday and tomorrow, is that every one of a local exchange company's costs are approved. They are, throughout South Dakota. They are, throughout the world of independent telephone industry. If one receives Universal Service funding, they're done by form and approved by the Federal Communications Commission. In the last 18 months, there have been a tremendous amount of audits, and expanded auditing, of local exchange companies.

And so, I think what you'll see is, those are absolutely proven correct for the wireline industry. So, if, in fact, they are correct, and they are no longer available, a number of things are going to happen. The number one is, prices would dramatically have to increase. That, of course, would force people off of the network. Number two is that companies—in many cases, the independent telephone companies—in South Dakota, virtually all locally owned—are no longer going to be able to invest in their networks.

So, to me, sir—and I mentioned this at one point, and I believe it was in the written testimony—a reverse auction truly is a race to the bottom. The less you invest in your network, the less you invest in your subscribers, the less that you will have, the more impacted that the people of America will be. And it's going to be disproportionally harsh on rural Americans.

Senator THUNE. Just one last question, if I might, for Mr. Simmons.

Tom, you had suggested that this only provides support for broadband deployment in areas that currently don't have it. Do you think there will be viable business models that will take advantage of a program that you've described? And would Midcontinent participate in that sort of a program?

Mr. SIMMONS. In describing these programs are you talking about price supports on the broadband side?

Senator THUNE. Right.

Mr. SIMMONS. Well, we've advocated that any level of support, whether it be from the Universal Service Fund or even from the Agriculture Department's Rural Utilities Service Funds, that they be allocated to serving unserved areas.

We believe that might have been the original intent of the RUS program, but we have seen something quite different happen across our service areas, where, in fact, those funds were used to subsidize competition where service providers have been providing service for some time—not only one, but, in some cases, two providers—while still leaving a lot of areas unserved.

But, frankly, the areas unserved in our part of the country are becoming either very remote or very limited. In the state of South Dakota, for example, there are only two communities with a population of more than 200 people that do not have broadband service, which I think is quite remarkable. We have a lot of competition in the markets where we provide broadband service. In the 200 communities where we provide service, we have broadband competitors in one-third of those, which is a pretty good number, since we serve very small communities. And, again, much to the credit of the rural telephone companies, they are, more often than not, our competitors in providing those broadband services.

So, again, I understand the need for Universal Service support for those particular unserved communities, but maybe not in the communities where they're challenging us for subscribers. There may be an area outside of that part of the community that requires the help. That's why I was intrigued by Mr. Landis' statement, in the earlier panel, about granular information, to understand what this is really about, to clearly understand what is really going on in those communities. And I have had the privilege of hearing Mr. Landis testify at several NARUC meetings and certain seminars, where he has greatly endorsed the marketing approach to providing services in communities. And, again, citing the local cable companies and local telephone companies that provide those levels of service.

Senator THUNE. My time's up, I thank the panel for their testimony.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much.

Senator Klobuchar?

STATEMENT OF HON. AMY KLOBUCHAR, U.S. SENATOR FROM MINNESOTA

Senator KLOBUCHAR. Thank you, Mr. Chairman.

And thank you, to the panel. I used to practice in this area, way back, before I was a prosecutor. So, I was actually thinking about all the times I had seen the USF language cited in briefs and things like that. We look back, and looked at it, and it said, in the Communications Act of 1934, that the fundamental purpose of the Fund is to ensure that all the people of the United States have access to, "a rapid, efficient, nationwide and worldwide wire and radio communications service with adequate facilities at reasonable charges." And so, that's why I'm so concerned, representing a State that has a large metro area, but also rural, about this digital divide. And, you know, Mr. Simmons, you were talking about the communities in South Dakota that have access, but the issue has been acknowledged, is that we don't really have a tracking to know how many people have it. The FCC tracks it by Zip Code, so one person could have it within the zip code. But there was a study—

the GAO reported, in May of 2006, that broadband take-up rates were 70 percent higher in suburban and urban homes than in rural homes. And a 2006 Pew study found a similar divide. And one more troubling statistic, more than one in ten rural counties don't even have a single high-speed Internet connection in the entire county.

So, with that, I just wanted to explore a little more about how we can get to where we want to go. Mr. Massey, you have stated in your testimony that wireless—I heard you say this—is often the only means of high-speed broadband access in rural areas. Could you talk about the implications for our national policy if we were to go that way?

Mr. MASSEY. Well, in fact, Senator, we bought a company, Midwest Wireless, that's now a part of Alltel that was headquartered in Mankato, Minnesota, the southern, more rural part, as you know, and they have a vibrant wireless broadband practice. It delivers speeds that are close to DSL speeds. They were—they are, and were, selling it very well. But, frankly, there are a number of markets in the—really, in the more rural parts of southern Minnesota—as you know, a lot of farms, a lot of distance—and not a lot of—and maybe, I guess you'd almost say—there's a lot of low-income population. It's not profitable for us. We don't get a return for our shareholders to build a fully deployed broadband network in some of those rural southern Minnesota markets. We'd love to do it. We'd love to serve those customers. With a little help, we could do that. And we think that we could do that as efficiently as anybody at the table.

So, we think wireless is not the—is not the sole answer to the broadband problem. I think it was—Vice Chairman Stevens was talking about the call-center—opportunity to return a lot of call-center jobs to rural America, let's say. Frankly, my guess is that the technology to really move that sort of traffic will always—well, at least for the foreseeable future, be—will be some sort of a ground-based technology. It'll be fiber of some kind. It would be very difficult and very expensive for us to build a—and probably the technology doesn't exist to build that fat a pipe for that sort of service. But for the people in your markets and the people in South Dakota and Arkansas and Tennessee that are agriculture-based, mining-based, farming-based, that want access to rapid data—and where they are in their jobs, not to have to get in the pickup and drive all the way back to the house to access the Internet, to order a combine part, but to get it where they are—we think wireless is the solution, and we think it should be a part of any broadband solution.

Senator KLOBUCHAR. Thank you.

Mr. Tauke, I understand that many rural wireless carriers that Mr. Massey was referring to would like to provide broadband, but they can't do it effectively unless they get data-roaming agreements with larger carriers. I understand that you have a pretty standard voice roaming agreement with the smaller carriers. Does your company make it common practice to enter into data-roaming agreements? And what would you say about a policy of automatic roaming agreements?

Mr. TAUKE. Roaming agreements, for both voice and data, have generally been commercial agreements. We try to enter into agreements, where we can, that make sense in order to have as expanded a coverage as feasible for our own customers, because, obviously, when we enter into a roaming agreement with someone else, that gives us the ability to provide additional service to other customers.

There are not many wireless carriers in—many of the smaller wireless carriers today—who deploy the kind of data capability that we do in our network.

Senator KLOBUCHAR. I mean, you also talked about how broadband should not be a part of Universal Service, in your view, because the issue is not affordable rates, I think you said, but, instead, the one-time capital investment. And I just wondered if some of the other panelists could comment on that, and where you stand on that.

Mr. Crothers?

Mr. CROTHERS. Senator, we believe that broadband should be part of Universal Service. It's been demonstrated over and over—the first panel emphasized it—that it really goes to the security and the competitiveness and the education of the American people. It isn't a luxury, it isn't an add-on. And I know the time is getting late, but I'll leave it at that. It's critical to our very being.

Dr. STAIHR. First, if we're going to support broadband, it's a given that the Fund would actually have to increase. OK? If we make that decision, we make that decision, and that's a good thing. It comes down to, do the benefits of supporting it outweigh the costs? And we know there are areas that, just as they're uneconomic to serve for voice, they are going to be uneconomic to serve for broadband without some help, regardless of the technology. Maybe wireline, maybe wireless. As an economist, I think the data is pretty clear that the benefits do outweigh the costs. So, a policy that supports broadband's inclusion as a supported service makes sense.

Mr. MASSEY. I think you got my answer earlier, but——

Senator KLOBUCHAR. Yes.

Mr. MASSEY.—just to make sure, we believe it ought to be part of that Universal Service Fund.

Senator KLOBUCHAR. OK.

Mr. Simmons?

Mr. SIMMONS. Senator, my comment would be, again, that granular component, and take a look at what it really is. Mr. Crothers said it's not entertainment. Yes, it is. IP video is a major portion of that. Lots of companies will make lots of money by providing almost a cable service over the broadband side of all that. The gaming components, and the time that are spent with those type of things that fall clearly under the entertainment side, might be something quite different than pure information flow or pure communications or Voice over Internet telephony.

Senator KLOBUCHAR. So, you would support it for certain components of it.

Mr. SIMMONS. Well, I think it would be important to take a look at what is being subsidized and clearly understand what that service is used for, and if it really does merit support. Or if we have

a case of unintended consequences where, down the road we're subsidizing a service that we shouldn't, which puts at risk someone else's private investment.

Senator KLOBUCHAR. And, you know, my concern is just that we're shipping jobs to other countries that have broadband available, and then we have small towns in Minnesota, where they don't have it available, where we could add to their employment if we did.

Mr. SIMMONS. I'm not——

Senator KLOBUCHAR. And I don't think of that as videos and entertainment.

Mr. SIMMONS. I'm not questioning the need in those areas that are unserved. I clearly think we need to do what we need to do to make sure that broadband is deployed into those particular areas.

Senator KLOBUCHAR. Mr. Tauke? That's my last question, then. Go ahead.

Mr. TAUKE. Senator, I just wanted to clarify our position. We believe that we need to ensure that broadband is available to all consumers. Second, we recognize that there are areas where there is no broadband today, and where there is need for assistance in order to provide that broadband. But the question is, Do you want a program which provides ongoing sustained funding, which is what you have with Universal Service, or do you need a program which provides significant capital—one-time capital investment? We think the latter is what's needed now. And so, you can't look to the Universal Service Fund as a solution to that particular problem.

Senator KLOBUCHAR. All right. Thank you for clarifying that.

[The prepared statement of Senator Klobuchar follows:]

PREPARED STATEMENT OF HON. AMY KLOBUCHAR, U.S. SENATOR FROM MINNESOTA

Thank you Mr. Chairman and Mr. Vice Chairman. I am pleased to be here to address the challenges facing the Universal Service Fund and to work on ways to reform it.

The USF is not new to me—in my years as a telecoms lawyer I dealt frequently with USF issues. And in the past two years, I've been all over my home state, Minnesota, talking about the need to serve all of our communities with affordable and up-to-date telecommunications services.

But I am a newcomer to the more recent debates about the best methods to sustain, reform, and fairly allocate the costs of the Fund.

So I look forward to engaging with all of the stakeholders, with the FCC and the Joint Board, and with my colleagues, and to asking a number of important questions. They include:

Should the contribution be assessed on a "per connection" basis or a "per working telephone number" basis?

How do ETCs fit into the purposes and operation of the Fund?

How do we best allocate high cost support for non-rural carriers?

How do we improve our method of distribution from the Fund?

Throughout this debate, I think it is vital that we remember the fundamental purpose of Universal Service, as stated in the Communications Act of 1934: It is to ensure that "all the people of the United States," have access to "a rapid, efficient, Nation-wide, and worldwide wire and radio communication service with adequate facilities at reasonable charges . . ."

And that brings me to my top priority in this area: bridging the digital divide and bringing high-speed broadband to every community in Minnesota and every corner of this country.

I have talked in previous hearings about the persistent urban-rural digital divide. In May 2006, the GAO reported that broadband takeup rates were 70 percent high-

er in suburban and urban homes than in rural homes. A 2006 Pew study found a similar divide.

Here is another troubling statistic: more than 1 in 10 of the most rural counties do not even have a single high-speed Internet connection—in the entire county.

A community that is left without affordable broadband access is a community that will be left behind. A 2006 MIT study found that towns which had mass-market broadband experienced markedly faster growth in employment and number of businesses.

I am convinced that the market alone will not solve this problem. Broadband deployment will lag behind in rural areas because the private sector gets a much higher return in areas of high population density and high income. I am convinced that the Federal Government must assist underserved areas—especially rural areas—in partnership with states, towns, and the private sector.

That much is clear to me. What is a little less clear is the precise form Federal Government that involvement should take.

The FCC and the Joint Board have resisted adding broadband to the list of covered services under the USF. They have consistently decided not to. I want to explore that decision, especially in light of the fact that broadband meets one of the key criteria of the Fund: like plain-old telephone service decades ago, it has become "*essential* to education, public health, and public safety."

I believe that an updated, reformed Universal Service Fund is very likely the best vehicle for bringing broadband to rural America. But I am willing to listen to those who say that some other vehicle will get us faster and more effectively to our destination.

Some have talked about the possibilities of auctions, others about targeted grants and loans, others about tax credits. And, of course, any Federal approach must complement existing and emerging digital divide initiatives being undertaken at the state and local level.

I intend to look at every possible vehicle, with a strong inclination toward adding broadband to the USF, and I do not intend to rest until we have met this challenge.

Thank you.

The CHAIRMAN. I thank you very much, Senator.

I'd like to stay here a little longer to continue this discussion, but I'm already an hour late. I'm supposed to be on the floor right now. But I've just instructed the staff to add, to the in-depth briefing, wireless.

I'm certain you have noted that the membership of this Committee is heavily rural. And, as a result, I can assure you that we will have some action here, if not the consideration of some measure on the floor. But in order to do that, we will have to take into consideration the concerns and interests of all the parties involved. It will be a challenge, but I can assure you we will take on that challenge.

And, in the meantime, we'll be calling upon you for advice and counsel, because this is not the way to do policy and make decisions. A whole bunch of nonexperts here, we know very little about what is involved, but we will have to make the decisions. And so, we are counting on you.

And, for the moment, I'll be submitting questions for your consideration. I'd like to get a better understanding of reverse auction, for example. I'd like to get your thoughts on that.

So, with that, thank you very, very much.

The hearing is adjourned.

[Whereupon, at 12:20 p.m., the hearing was adjourned.]

A P P E N D I X

PREPARED STATEMENT OF HON. BILL NELSON, U.S. SENATOR FROM FLORIDA

Mr. Chairman, thank you for holding this important hearing on the present and future of the Universal Service Fund.

Today, the Universal Service Fund fills a critical role by ensuring that all Americans have access to telecommunications services at affordable prices. The E-Rate program, for example, has ensured that almost all American students have access to the Internet. Similarly, the Low-Income program provides affordable telephone service that is truly a "Lifeline" for many families.

As we move toward the future, I look forward to exploring possible new uses of Universal Service funds, such as targeted support to bridge the urban-rural divide in broadband service penetration. Consumers in rural areas of Florida should have the same access to broadband services that consumers in urban areas, such as Miami or Tampa, have available.

At the same time, however, we must also take steps to preserve the financial stability of the Universal Service Fund. This reform should start with controlling the growth of the Universal Service Fund and, in particular, growth of the High-Cost portion of the Fund.

Unrestrained growth of the High-Cost portion of the Fund is causing an increased and substantial burden on consumers that pay into the Fund. Florida, for instance, is currently the largest net payer into the Fund—last year the State paid in more than *$311 million more in contributions than it received in distributions.*

We need to move toward a system that shares both the costs and benefits of Universal Service more equally among all Americans.

On the contribution side of the Universal Service equation, I look forward to reform that is sustainable, while still protecting low-volume and low-income consumers from any spike in the amount they currently pay into the Fund.

And on the distribution side, I look forward to hearing the details of various reform options—such as reverse auctions—that may limit unsustainable growth of the Fund.

Working together, we can create a Universal Service Fund that is technologically flexible, fair to consumers, and sustainable for the future.

Thank you.

PREPARED STATEMENT OF GARY WALLACE, VICE PRESIDENT, CORPORATE RELATIONS, ATX GROUP, INC.

Mr. Chairman, Vice Chairman and members of the Committee, on behalf of the ATX Group, Inc., thank you for giving ATX Group the opportunity to submit comments for the record to addresses the devastating effects that a "one size fits all" numbers-based Universal Service Fund (USF) contribution structure would have on consumers with automobiles equipped with integrated in-vehicle emergency communications systems.

I applaud the Senate Commerce Committee for specifically recognizing in its 2006 proposed telecommunications law reforms that the unique circumstances of in-vehicle emergency communications should be taken into account in designing a Universal Service Fund contribution mechanism.

In-vehicle emergency communications systems which provide automated crash notification, stolen vehicle recovery and mayday signals to trained emergency response professionals are often referred to as "telematics" services. These intelligent vehicle technologies enhance response to highway emergencies. Every day these services save lives, speed emergency response and assist drivers. Systems deployed today on several million passenger vehicles provided by ATX, OnStar and others use the cellular network with communications devices which have individual telephone numbers. These systems, however, are extremely low volume network users.

ATX currently pays Universal Service support payments through its carrier suppliers and for telecommunications services provided by its call center. As a matter of principal, ATX has no objections to making "equitable" contributions to the Universal Service support system. The proposal to assess a flat Universal Service fee on all telephone numbers, regardless of level of use would have a profound, inequitable and burdensome affect on lifesaving telematics services.

Even at $1.00 per month per phone number, the USF contributions for telematics services would approach the cost of the telecommunications services charged by the carrier. The fee would violate the Telecommunications Act of 1996 requirement that Universal Service contributions be "equitable and nondiscriminatory." It would also be against the public interest to slow the broader rollout of telematics based safety and security services to the mass auto market. This would be contrary to the long held transportation and public safety policies of encouraging drivers to adopt intelligent transportation technologies.

ATX provides core automotive telematics services to several auto Original Equipment Manufacturers (OEMs). Core telematics services include GPS satellite location-enhanced, automatic collision notification; a dedicated in-vehicle "May Day" button to summon emergency assistance; and vehicle theft recovery. Neither ATX nor its automotive OEM customers currently offer a personal calling service as part of their telematics packages. The core service allows a vehicle occupant to communicate with a call center to request assistance.

Additionally, upon deployment of a vehicle's airbag and/or activation of emergency pretensioners in seat belts, a signal is transmitted to the call center, which will respond to the automatic crash notification (ACN). Whether by call or ACN signal, a vehicle's transmission is only to the ATX call center and only the call center may place a call to the vehicle. The technology uses the cellular network, with GPS location capability, and each activated vehicle is assigned one telephone number.

An overwhelming number of vehicles have no communication with the call center during a year. Of those who do communicate with the call center the average call is of very short duration. The presence of a phone number reflects neither network use nor the ability to communicate outside the call center and vehicle. A consumer purchases core telematics services to summon assistance in an emergency. A "one size fits all" numbers-based USF assessment will have substantial impact on consumer behavior, will encourage arbitrage opportunities between mobile communications technologies and be damaging to the effort to bring emergency communications capabilities to all vehicles.

In a hypothetical 350,000 telematics equipped vehicle fleet, a $1.00 per month fee against each telephone number results in a USF contribution of $350,000 per month. The current USF fee for the same fleet would be approximately $10,000. The proposed USF assessment approaches the cost paid for the airtime and the underlying services provided by the carrier. Notably, the carrier's services encompass not only airtime, but its expertise and administrative assistance in assigning numbers, arranging for toll free platforms, initializing a vehicle's capability to transmit and receive, maintaining databases and overall assisting in the delivery of emergency telematics services.

The Communications Act of 1934, as amended, section 254(b)(4), establishes the standard by which the FCC then may assess a fee to support the Universal Service program. That standard requires that the contribution be "equitable and nondiscriminatory." A contribution mechanism that approaches the cost charged and revenue collected by the carrier for its services clearly violates this standard.

The courts have addressed the importance of how the fee must be fair. In *Texas Office of Public Utility Counsel* v. *FCC*, 183 F.3d 393, 431 (CA 5 1999), the Court of Appeals for the Fifth Circuit ruled that a Universal Service fee that exceeded a carrier's revenue violates the law's equitable and nondiscriminatory standard. The Court held that where a carrier was assessed a fee in excess of its interstate revenues, the underlying premise required of any contribution mechanism was violated. There must be fairness in the allocation of contribution duties. It characterized the assessment as a "heavy inequity" and that the cost imposed was "prohibitive."

The Fifth Circuit addressed the circumstances where a carrier had minimal interstate traffic and significant international traffic. The core telematics circumstance is even more egregious. Here, with the ability only to communicate between call center and vehicle, and where most consumers make no calls, network use is nominal and confined. The fundamental value of telematics is the ability to transmit a call or signal to the call center in those infrequent circumstances when emergency assistance is needed. The current USF contribution model, based on revenues, recognizes and accommodates the vast disparity between general consumer use of the cellular network and the minimal use of core telematics equipped vehicles.

A "one size fits all" phone number assessment structure does not comprehend that while automotive telematics services are assigned a large number of phone numbers, the extent and frequency of use of the network is extremely low and confined. The FCC's own decisions recognize that a contribution model must recognize and accommodate such disparity. See *In the Matters of the Federal-State Joint Board on Universal Service and Access Charge Reform*, 15 FCC Rcd 1679, FCC 99–290 at paragraphs 23–25 (1999).

A $1.00 monthly fee on each telematics vehicle is inequitable and discriminatory. Under this assessment, ATX's customers would see their monthly USF contributions increase nearly 3,000 percent, approaching the cost of the wireless service. Even under the 50 percent discount proposed by the cellular carriers for their "buckets of minutes" customers, where several numbers are assigned yet only one bill is rendered, the proposed USF fee to core telematics vehicles is still enormous. Such an assessment will disrupt a market that today is delivering an important public safety feature—the ability to locate expeditiously and dispatch aid to individuals involved in an in-vehicle emergency or collision—ubiquitously and without limitation to the technical capabilities of local Public Safety Answering Points.

If the expansion of location-based automatic crash notification and emergency response services are slowed, it will profoundly affect rural areas where these services have the greatest impact on highway deaths and injuries. Because distances are so great, the speed of emergency response in a rural setting is the difference between life and death as well as recovery and permanent injury.

In summary, ATX urges the Congress and the Federal Communications Commission to recognize what the Senate Commerce Committee recognized last year. A "one size fits all" numbers based systems is profoundly unfair and inequitable to drivers of vehicles equipped with integrated in-vehicle emergency communications systems.

PREPARED STATEMENT OF F.J. POLLAK, PRESIDENT AND CEO, TRACFONE WIRELESS, INC.

My name is F.J. Pollak. I am President and Chief Executive Officer of TracFone Wireless, Inc. TracFone is headquartered in Miami, Florida. With more than 8 million customers, TracFone is the Nation's leading provider of prepaid wireless telecommunications services and TracFone is also the 6th largest wireless carrier in the United States. (The only larger wireless carriers are AT&T/Cingular, Verizon Wireless, Sprint Nextel, T-Mobile, and Alltel). Since its inception in 1996, TracFone has been able to grow its business to over 8 million customers by focusing on a segment of the wireless marketplace largely ignored by other wireless companies. Specifically, TracFone's service is directed mainly to low volume, often low income, consumers who normally make an average of 1 call a day. TracFone offers a "pay-as-you-go" service. There are no duration or volume commitments, no early termination penalties, no advance deposits; no credit checks. TracFone's customers pay only for the wireless service they need, when they need it. For many TracFone customers, wireless telephone service would otherwise be unavailable or, if available, would be unaffordable. As such, TracFone thinks of itself as a true Universal Service Provider—and it provides affordable, easy-to-use prepaid wireless service without receipt of any subsidies from the Universal Service Fund.

As a provider of interstate telecommunications services, TracFone is required to contribute to the Federal Universal Service Fund (USF). Although TracFone contributes to the USF based on its actual interstate revenues, it has no way to recover its USF contribution costs from consumers in the form of billed surcharges. Unlike traditional providers of post-paid wireline and wireless services, prepaid providers do not send monthly invoices to their customers and therefore, have no opportunity to add Federal Universal Service Fund surcharges as line items on customer bills. With no means to recover its USF contributions from its customers, today, TracFone contributes over $10 million a year into USF out of its shareholders' pockets. As such, TracFone is a substantial contributor to the Fund and is a very meaningful voice in the USF debate.

TracFone believes that the current USF contribution methodology based on interstate revenues is fair to all and is consistent with the legal requirements of the Communications Act. To the extent that there are concerns about the ability of the current, interstate revenues-based system to provide sufficient support for the USF, TracFone believes that certain adjustments could significantly increase the level of USF funding. Specifically, there no longer is any need for a wireless safe harbor as wireless providers are able to identify which of their usage is interstate. In that regard, TracFone believes that the FCC took an important step in the right direction last June when it increased the wireless safe harbor from 28.5 percent to 37.1 per-

cent. In addition, TracFone supports the decision of the FCC to subject Internet-based telephone calling services (often called Voice over the Internet Protocol or "VoIP") to USF contribution requirements. Also, the law empowers the FCC to impose USF contribution obligations on others who provide services which use interstate telecommunications including, for example, broadband Internet access services. TracFone believes that the contribution base could be expanded to include those services with no reduction in demand for those services. Inclusion of providers of broadband Internet access services in the USF funding mechanism seems especially appropriate in light of proposals which would expand the USF to subsidize such services in high-cost areas.

A contribution methodology based on working telephone numbers would significantly and unnecessarily increase the costs of service for low volume low income consumers. Today, based on its *actual interstate revenues,* TracFone remits to the USF about $0.10 per customer per month. While this may seem like a small amount, TracFone's average revenue per user is only $14.00 per month as compared with the wireless industry average of about $56.00. Moreover, TracFone customers, like most prepaid wireless customers, make few interstate calls. Indeed, many TracFone customers make no interstate calls. Therefore, almost all of its customers' $14.00 average revenue is derived from intrastate and local service—services which, by law, may not be subject to assessment for the Federal USF.

If the FCC were to implement a numbers-based contribution methodology and the initial per number charge were to be set at $1.20 per month (an amount projected by a group called the USF By The Numbers Coalition in a January report), TracFone's monthly per customer USF contribution would increase from $0.10 to $1.20—more than a 1,200 percent increase, effectively creating almost a $100 million a year tax increase. Since TracFone's customer base has grown rapidly—by approximately 1.8 million customers in 2006, future increases under a numbers-based plan would be much greater. As discussed above, TracFone has no means to recover USF contributions from its customers through billed surcharges, TracFone would have to absorb the entirety of these increases from its operating revenues since raising its rates is not a viable, competitive option.

The reason why TracFone and other prepaid providers cannot raise their rates to incorporate their USF contribution costs is the nature of the competitive market in which telecom services in general, and wireless services in particular, are provided. Traditional post-paid providers (those who render bills for services) widely advertise the price of their services without reference to USF surcharges or other additions to those advertised prices. Such carriers widely advertise services such as 400 minutes for $39.95, or $0.10 per minute, etc. However, their bills sent in arrears are for much higher amounts—amounts which include USF and other taxes, surcharges and fees imposed by the carriers but not included in their advertised price. Companies like TracFone compete with those providers. Unlike post-paid providers who can add taxes, fees and surcharges, including USF charges, to their advertised prices, TracFone and other prepaid providers must include in their advertised prices all taxes, fees, and surcharges, since they have no billing mechanism to add those charges later. This creates a significant competitive disadvantage since consumers compare providers' advertised prices with each other, without realizing that some providers' advertised prices do not include taxes, fees and surcharges which will be added to their bills, while prepaid providers' advertised prices are all-inclusive.

Some providers of prepaid service—those who provide service using their own switches—are able to take from their customers' prepaid account balances usage amounts equivalent to the amount of the USF surcharge. This method is often called the "Sufficient Positive Balance" method since the providers will debit the customers' accounts only if there are in the accounts a sufficient positive balance to cover the amount of the debit. Unlike those providers, TracFone does not have any switches of its own. It provides service by purchasing capacity from other providers. As a result, TracFone customers' account balances are stored directly in the customers' wireless phones, not in a central switch. TracFone does not have real time access to its customers' phones or to the prepaid account balances stored in those phones, and it could not debit those accounts to recover its USF costs even if it wanted to. Accordingly, neither raising rates nor debiting customer accounts to recover USF costs are viable options for providers like TracFone. In short, a numbers-based contribution plan would not work for certain types of telecom providers, including prepaid wireless providers. Not only are those companies' services not billed, those companies do not provide service on a monthly basis. Some consumers make multiple purchases of prepaid airtime in a month; other consumers may go several months or more without making any airtime purchases.

Consumer groups have recognized that a numbers-based plan would dramatically increase the costs of the USF borne by low income low volume consumers. That is

why a coalition of such groups called the Keep USF Fair Coalition as well as the National Association of State Utility Consumer Advocates has opposed the implementation of a numbers-based contribution proposal at the FCC. In a report released February 27, 2006 entitled "Exposing the Hoax: The Phony 'Crisis' of the Universal Service Fund," the Keep USF Fair Coalition articulated the view that a flat per-working telephone number tax would significantly increase the monthly telecommunications costs for low volume consumers and would force many low income consumers to drop their telephone service. The Coalition report also demonstrated that abandonment of a revenues-based system in favor of a numbers tax is not necessary, pointing out that the contribution base has been stable and that available data demonstrate that there will not be a sharp decline in interstate telecommunications revenues.

Moreover, the potentially devastating impact of a regressive numbers tax to finance Universal Service is not limited to residential consumers. Many so-called "enterprise" customers—users of large quantities of telephone numbers—would also be hit hard by a numbers tax. One prominent example of such users is the higher education community. The FCC has heard from numerous colleges and universities, large and small, about how their telecom costs will increase dramatically if a per number tax is implemented. For example, Harvard University estimates that its annual USF contributions would increase from $70,000 to $400,000; Rice University anticipates monthly increases from $400 to $10,000; Southern Illinois estimates that its annual USF fees would increase from $12,000 to more than $200,000 per year; Calvin College, a small liberal arts college in Michigan, would have its monthly USF costs skyrocket from $700 to over $11,000. The list goes on.

These institutions differ from each other in many respects. However, the ability of each institution to provide telecommunications services to its students and faculty would be undermined by the FCC numbers tax proposal. Several (including Harvard) even report that their ability to provide E–911 access for their students would be jeopardized. Given the high priority which the FCC properly has placed on mandatory E–911 access availability, it would be a sad and cruel irony if the FCC's numbers tax had the perverse impact of limiting E–911 access for students residing on college campuses throughout the country.

There is another problem with a numbers tax. Typically, telephone numbers are provided as part of local telecommunications service. Many customers of wireline and wireless telephone service make few, if any, interstate calls. Yet the FCC's proposed monthly numbers tax to finance the Federal Universal Service Fund would be imposed on such customers without regard to whether consumers derived any interstate usage whatsoever in any given month. Imposition of USF funding obligations on such consumers was not what Congress had in mind in enacting Section 254 of the Communications Act; nor would it be sound public policy to require that consumers who use little, if any, interstate service, bear a large—and increasing—share of underwriting the Federal USF.

If the FCC adopts a numbers tax to fund universal service, it will be necessary for it to provide alternative contribution mechanisms for certain types of carriers. Many providers of interstate telecommunications service do not provide customers with working telephone numbers as part of their service offerings. Since the law requires that "every" provider of interstate telecommunications service must contribute to the USF, there must be a mechanism appropriate for all carriers.

TracFone recommends that those interstate telecommunications service providers who are unable to recover their USF contributions through billed charges to their customers be allowed to continue to have their contributions based on their interstate revenues. Alternatively, in order to prevent pricing their services beyond the reach of the low volume, low income users they serve, TracFone suggests that those carriers' USF contributions under any methodology be capped at the levels of their contributions under the current revenues-based methodology.

Finally, TracFone reminds the Committee that another component of the efforts to ensure that USF contributions not unduly burden the provision of telecommunications services is to demand that the Fund's growth be limited and distribution of USF resources carefully managed. TracFone urges the Committee to continue to encourage the FCC to protect against waste, fraud and abuse, and other sources unintended and avoidable growth of the USF. In this regard, TracFone believes that the most critical Universal Service issue is the rising size of the Fund and the increasing burden being borne by the Nation's telecommunications consumers to support that unrestrained growth. The use of reverse auctions as a means for distributing USF high-cost support has the potential to significantly limit growth of the fund. The reverse auctions proposal is currently before the Federal-State Joint Board on Universal Service and a recommendation to the FCC is expected some time this spring. TracFone encourages the Joint Board and the FCC to give careful consider-

ation to reverse auctions and other proposals to limit fund growth and to ensure that USF resources are distributed in an efficient manner. Congress and the FCC must enact and implement requirements and procedures which limit availability of USF support to those who truly need the support and which ensure that the funds are disbursed in an efficient and targeted manner, with safeguards to prevent waste, fraud and abuse. Implementation of such requirements and procedures will ensure that there will be a sufficient USF in the future without the need for disruptive and inequitable numbers taxes imposed on consumers and on those enterprise customers, including colleges and universities and healthcare institutions, which utilize large quantities of phone numbers.

GOLDEN WEST TELECOMMUNICATIONS
March 8, 2007

Hon. DANIEL K. INOUYE,
Chairman,
Senate Commerce, Science, and Transportation Committee
Washington, DC.

Dear Senator Inouye:

On behalf of Golden West Telecommunications, I commend your leadership in the Senate Commerce, Science, and Transportation Committee. I have watched with admiration as you and other members of the Committee work to ensure the long-term stability of the Universal Service Fund. While policy positions of small and large companies may differ on this issue, we are in agreement that accurate, complete and factual testimony is the foundation for sound public policy. Unfortunately, we do not believe this goal has been met.

During his testimony on March 1, 2007, Richard Massey, who currently serves as Executive Vice President, Corporate Secretary and General Counsel of Alltel Wireless, testified about the successes that Alltel has had across rural America. In his pre-filed testimony Massey stated:

> "For example, on the Pine Ridge Reservation in South Dakota, the tribe estimated that less than 30 percent of the population had telephone service prior to Alltel's entry into the market as a wireless Universal Service provider. Today more than 80 percent of the population on the Pine Ridge Reservation has access to wireless telephone service."

In addition, during his oral statement before the Committee, Massey stated:

> "It's Pine Ridge Reservation, it's included in one of the poorest counties in the United States. When we found this market some years ago, it included an incumbent wireline provider that receives Universal Service funds, and yet only 20 percent of the population on this reservation actually used telephones. We received competitive ETC money and built the wireless network there and today 80 percent of that population are wireless consumers."

The statistics Mr. Massey uses in his statements are simply not correct. Attached is information from two government reports, *Telephone Subscribership on American Indian Reservations and Off-Reservation Trust Lands* released by the Federal Communications Commission in May 2003 and the *Telecommunications Challenges to Assessing and Improving Telecommunications for Native Americans on Tribal Lands* released by the U.S. Government Accountability Office in January 2006. The reports, both based on the 2000 Census, provide the best neutral analysis of wireline penetration rates on American Indian Reservations and Off-Reservation Trust Lands. As stated, wireline penetration rates on the Pine Ridge Reservation were greater than 75 percent for American Indian housing units by 2000. This level of penetration is remarkable when one takes into account that the two poorest counties in the United States are part of the Pine Ridge Reservation.

Achieving this remarkable number was South Dakota-based Golden West Telecommunications, which serves over 48,000 customers in South Dakota (including three reservations) with telephone, cable, high-speed Internet and other advanced telecommunication services.

With regard to Mr. Massey's prc-filed testimony and oral testimony, Western Wireless, now Alltel, did not deploy wireless service until November 2000 and did not receive eligible telecommunications carrier status until October 2001. Given this, it is evident that Mr. Massey's claim that telephone penetration rates on the Pine Ridge Reservation improved from less than 30 percent to more than 80 percent penetration is clearly inaccurate. It is not possible for them to claim any portion of success given the timing of their service provision and the FCC's and GAO's docu-

mentation of wireline penetration rates. Alltel has stated these inaccurate numbers in countless news articles and more than once in testimony before Congressional panels.

I respectfully request that this letter along with its attachments be submitted to the Committee's hearing record for March 1, 2007 to ensure that inaccurate information does not continue to be presented regarding this matter. We recognize the need for accurate information to reflect the reality of rural telecommunications so that sound policy can secure the long-term success of the rural telecommunications industry and for the Universal Service Fund. Thank you for your time and consideration on this matter.

Sincerely,

GEORGE STRANDELL,
General Manager and CEO,
Golden West Telecommunications.

cc: Hon. TED STEVENS,
Ranking Member,
Senate Commerce, Science, and Transportation Committee,
Washington, DC.

Hon. JOHN THUNE,
Member,
Senate Commerce, Science, and Transportation Committee,
U.S. Senate
Washington, DC.

ATTACHMENTS

TELEPHONE SUBSCRIBERSHIP ON AMERICAN INDIAN RESERVATIONS AND OFF/RESERVATION TRUST LANDS—(DATA FROM 2000 DECENNIAL CENSUS)

* * * * * * *

Table 3

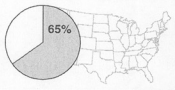
Telephone Subcribership on American Indian Reservations and Off-Reservation Trust Lands: Federal and State, and State and Tribal Designated Statistical Areas (2000 Census)

		All Housing Units		American Indian	
		Penetration	Housing Units	Penetration	Housing Units
North Dakota	* Fort Berthold Reservation, ND	93.3%	1,894	89.3%	1,103
North Dakota	* Spirit Lake Reservation, ND	80.0%	1,253	69.6%	783
Oklahoma	Caddo-Wichita-Delaware OTSA, OK	94.4%	5,251	83.3%	378
Oklahoma	Cherokee OTSA, OK	94.0%	175,814	88.2%	24,151
Oklahoma	Cheyenne-Arapaho OTSA, OK	96.1%	58,780	86.1%	1,971
Oklahoma	Chickasaw OTSA, OK	93.7%	109,197	88.1%	7,289
Oklahoma	Choctaw OTSA, OK	91.4%	86,395	87.4%	9,496
Oklahoma	Citizen Potawatomi Nation-Absentee Shawnee OTSA, OK	96.9%	37,753	96.0%	1,961
Oklahoma	Creek OTSA, OK	96.6%	280,760	93.2%	16,587
Oklahoma	Creek-Seminole joint use area OTSA, OK	89.0%	773	76.9%	143
Oklahoma	Eastern Shawnee OTSA, OK	94.0%	234	100.0%	40
Oklahoma	Iowa OTSA, OK	91.9%	2,283	74.2%	120
Oklahoma	Kaw OTSA, OK	96.0%	2,404	91.1%	202
Oklahoma	Kaw-Ponca joint use area OTSA, OK	95.3%	11,352	85.7%	547
Oklahoma	Kickapoo OTSA, OK	95.7%	6,481	93.9%	459
Oklahoma	Kiowa-Comanche-Apache-Fort Sill Apache OTSA, OK	94.7%	69,729	86.9%	2,795
Oklahoma	Kiowa-Comanche-Apache-Ft Sill Apache-Caddo-Wichita-Delaware OTSA, OK	90.0%	4,317	87.9%	1,133
Oklahoma	Miami OTSA, OK	93.3%	89	0.0%	6
Oklahoma	Miami-Peoria joint use area OTSA, OK	93.7%	1,849	95.9%	242
Oklahoma	Modoc OTSA, OK	100.0%	60	100.0%	8
Oklahoma	* Osage Reservation, OK	95.2%	16,617	90.8%	1,976
Oklahoma	Otoe-Missouria OTSA, OK	86.7%	271	77.5%	111
Oklahoma	Ottawa OTSA, OK	92.5%	2,386	94.5%	403
Oklahoma	Pawnee OTSA, OK	94.7%	6,332	86.2%	603
Oklahoma	Peoria OTSA, OK	97.4%	1,957	95.1%	204
Oklahoma	Ponca OTSA, OK	89.2%	788	81.8%	220
Oklahoma	Quapaw OTSA, OK	89.9%	2,757	88.0%	366
Oklahoma	Sac and Fox OTSA, OK	94.8%	21,788	87.8%	1,571
Oklahoma	Seminole OTSA, OK	90.0%	8,802	73.2%	1,134
Oklahoma	Seneca-Cayuga OTSA, OK	95.5%	1,719	92.6%	149
Oklahoma	Tonkawa OTSA, OK	94.8%	1,504	77.9%	104
Oklahoma	Wyandotte OTSA, OK	92.8%	707	81.7%	104
Oregon	* Burns Paiute Colony and Off-Reservation Trust Land, OR	84.0%	50	83.0%	47
Oregon	* Celilo Village, OR	88.9%	18	87.5%	16
Oregon	* Coos, Lower Umpqua, & Siuslaw Reservation & Off-Reservation Trust Land, OR	100.0%	1	100.0%	1
Oregon	* Coquille Reservation and Off-Reservation Trust Land, OR	79.5%	73	65.1%	43
Oregon	* Grand Ronde Community and Off-Reservation Trust Land, OR	100.0%	9	100.0%	9
Oregon	* Klamath Reservation, OR	100.0%	2	100.0%	2
Oregon	* Siletz Reservation and Off-Reservation Trust Land, OR	100.0%	96	100.0%	58
Oregon	* Umatilla Reservation, OR	96.7%	1,013	94.5%	454
Oregon	* Warm Springs Reservation and Off-Reservation Trust Land, OR	90.1%	807	89.5%	732
Rhode Island	* Narragansett Reservation, RI	100.0%	19	100.0%	3
South Carolina	* Catawba Reservation, SC	97.7%	172	97.3%	148
South Dakota	* Cheyenne River Reservation and Off-Reservation Trust Land, SD	92.1%	2,598	88.1%	1,648
South Dakota	* Crow Creek Reservation, SD	75.5%	547	70.9%	429
South Dakota	* Flandreau Reservation, SD	88.8%	125	88.8%	107
South Dakota	* Lake Traverse Reservation, SD--ND	92.3%	3,759	76.9%	921
South Dakota	* Lower Brule Reservation and Off-Reservation Trust Land, SD	78.4%	356	74.6%	303
South Dakota	* Pine Ridge Reservation and Off-Reservation Trust Land, SD--NE	77.8%	3,504	75.2%	3,093
South Dakota	* Rosebud Reservation and Off-Reservation Trust Land, SD	75.4%	2,784	69.6%	2,169
South Dakota	* Standing Rock Reservation, SD--ND	79.9%	2,372	68.9%	1,406
South Dakota	* Yankton Reservation, SD	90.8%	2,214	75.2%	693
Texas	* Alabama-Coushatta Reservation, TX	87.9%	165	88.5%	156
Texas	* Kickapoo (TX) Reservation, TX	35.2%	108	33.0%	103
Texas	* Ysleta Del Sur Pueblo and Off-Reservation Trust Land, TX	95.5%	111	93.5%	77
Utah	* Paiute (UT) Reservation, UT	85.3%	75	84.3%	70
Utah	* Skull Valley Reservation, UT	100.0%	7	100.0%	7
Utah	* Uintah and Ouray Reservation and Off-Reservation Trust Land, UT	94.3%	6,012	78.1%	787
Virginia	Chickahominy SDAISA, VA	98.8%	1,241	100.0%	179
Virginia	Eastern Chickahominy SDAISA, VA	100.0%	38	100.0%	15
Virginia	Mattaponi (state) Reservation, VA	88.5%	26	88.5%	26
Virginia	Pamunkey (state) Reservation, VA	100.0%	29	100.0%	21
Washington	* Chehalis Reservation, WA	92.1%	190	87.5%	104

GAO–06–189 TELECOMMUNICATIONS: CHALLENGES TO ASSESSING AND IMPROVING TELECOMMUNICATIONS FOR NATIVE AMERICANS ON TRIBAL LANDS

* * * * * * *

Figure 3: Telephone Subscribership Rates for the 25 Tribal Lands with the Most Native American Households,[a] Based on Census 2000



The 25 tribal lands listed below are the 25 with the highest number of Native American households[a] in the lower 48 states. These tribal lands represent **93,644 of 144,132 (65%)** of Native American households in the lower 48 states as shown in Census 2000 data.

	Tribal land	Native American households	Telephone subscribership rate[b]		Tribal land	Native American households	Telephone subscribership rate
(1)	Navajo Nation Reservation and Off-Reservation Trust Land (AZ,NM,UT)	45,817	38%	(14)	Hopi Reservation and Off-Reservation Trust Land (AZ)	1,781	66%
(2)	Pine Ridge Reservation and Off-Reservation Trust Land (SD,NE)	3,106	75%	(15)	Wind River Reservation and Off-Reservation Trust Land (WY)	1,764	76%
(3)	Osage Reservation (OK)	2,900	92%	(16)	Fort Peck Reservation and Off-Reservation Trust Land (MT)	1,763	86%
(4)	Fort Apache Reservation (AZ)	2,801	55%	(17)	Zuni Reservation and Off-Reservation Trust Land (NM,AZ)	1,708	78%
(5)	Flathead Reservation (MT)	2,585	92%	(18)	Cheyenne River Reservation and Off-Reservation Trust Land (SD)	1,688	88%
(6)	Tohono O'odham Reservation and Off-Reservation Trust Land (AZ)	2,559	73%	(19)	Colville Reservation and Off-Reservation Trust Land (WA)	1,594	90%
(7)	Gila River Reservation (AZ)	2,540	71%	(20)	Leech Lake Reservation and Off-Reservation Trust Land (MN)	1,431	85%
(8)	Blackfeet Reservation and Off-Reservation Trust Land (MT)	2,434	91%	(21)	Standing Rock Reservation (SD,ND)	1,426	69%
(9)	Turtle Mountain Reservation and Off-Reservation Trust Land (MT,ND,SD)	2,359	94%	(22)	Red Lake Reservation (MN)	1,310	87%
(10)	Eastern Cherokee Reservation (NC)	2,238	91%	(23)	Crow Reservation and Off-Reservation Trust Land (MT)	1,246	84%
(11)	Rosebud Reservation and Off-Reservation Trust Land (SD)	2,225	70%	(24)	White Earth Reservation and Off-Reservation Trust Land (MN)	1,161	85%
(12)	San Carlos Reservation (AZ)	2,107	79%	(25)	Fort Berthold Reservation (ND)	1,124	90%
(13)	Yakama Reservation and Off-Reservation Trust Land (WA)	1,977	88%				

Source: GAO analysis of 2000 Census data.

[a]The Census 2000 data in this report are for the American Indian and/or Alaska Native alone or in combination with one or more other races. Households are classified by the race of the householder. When the term Native American households is used, it refers to the total number of occupied housing

---

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO HON. DEBORAH TAYLOR TATE

Question 1. In 1997, the FCC adopted the principle that its Universal Service policies should be "competitively neutral." In explaining this principle, the FCC concluded that "competitive neutrality means that Universal Service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another." But it seems that people have different views as to how that principle should be applied, particularly when it comes to providing support for different kinds of communications platforms. As members of the Joint Board, do you believe that this remains a valuable principle, and how should it be applied to competition both among and between communications platforms?

Answer. Competitive neutrality absolutely remains a valid and valuable principle. Indeed, I believe that our goal should be a sustainable Universal Service system that is, to the greatest extent possible, agnostic to the technology and platform supported. Our current rules, however, set support levels based on the costs incurred by incumbent local exchange carriers (LEC) while allowing all other competitive eligible telecommunications carriers (CETCs)—regardless of their costs—to receive an equal amount of support on a per line basis. While this means that all CETCs in an area receive an equal amount of support per line, only the incumbent LECs' sup-

port is actually cost based. Given the incredibly rapid growth of the CETC portion of the high-cost fund, it is incumbent upon the Joint Board and the Commission to consider whether these rules still make sense. Thus, the Joint Board is actively reviewing this "equal support rule." See 47 C.F.R. § 54.307. One potential alternative to the equal support rule would be the use of "reverse auctions" to establish the number of competitors and the level of support in an area, given a specific set of service criteria. Reverse auctions present one way to identify the appropriate level of ETC support in a market-based and competitively neutral manner.

Question 2. Section 254(c) of the Telecommunications Act of 1996 defines Universal Service as "an evolving level of telecommunications services" and also sets forth criteria that the FCC considers when it decides which services qualify as "supported services" eligible for Universal Service support. At present, it is my understanding that the Universal Service Fund does not support broadband service. But then, the question always arises—should it? And if so, when? Do you think that Universal Service should evolve to support broadband services, and if so, what would trigger such a determination?

Answer. It is important to note that, in many instances, the Universal Service Fund (USF) presently supports broadband services in an indirect manner. For example, carrier infrastructure investments funded through the USF frequently can be upgraded to provide broadband at considerably reduced levels of expense and effort. In rural areas, schools and libraries connected to the Internet under the E-Rate program often serve as "anchor clients" for advanced service providers that could not otherwise economically provide broadband service to a community.

That being said, I believe that the USF should, and will, evolve to directly support broadband services. Section 254(c) of the Act requires the Joint Board to consider the evolving level of telecommunications services that should be supported, "taking into account advances in telecommunications and information technologies and services." In considering the evolution of supported services, the Act requires that we 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." 47 U.S.C. § 254(c). I believe that broadband may now, or soon will, meet each of these standards.

Question 2a. Given that the law defines Universal Service as an evolving level of "*telecommunications services*" and given that the FCC has classified cable modem and DSL services as "*information services*," would the Congress need to change the statute to make broadband eligible for support?

Answer. Section 254(b) of the Act establishes access to "advanced telecommunications and information services" as a fundamental principle of universal service. Section 254(c) of the Act requires the Commission to take into account "advances in telecommunications and information technologies and services" in defining the services that are supported by USF. The Commission may well, as a result, already have the authority it needs to support advanced services that are not classified as "telecommunications services" under the Act. Express clarification from Congress would, however, eliminate any doubt.

Question 3. Currently the wireless eligible telecommunications carriers (ETCs) receive Universal Service support on a "per customer" basis based on the "per line" costs of the *wireline* carrier in the same geographic area. This is sometimes called the "identical support rule" and ensures that different communications platform providers receive the same amount of "per line" support. One criticism of the so-called "identical support rule" for Universal Service is that it results in overly generous support to wireless carriers because levels of support are not based on the per line cost of providing *wireless* services. As a result, I have two questions——

First, do you believe that Universal Service should support both wireline and wireless services in rural America?

Answer. The Commission's current rules broadly support voice grade access to the public-switched telephone network. Competitors, including both wireline and wireless carriers, bring a dazzling array of services to the rural areas of our country. Indeed, wireless services have added a new dimension to connectivity—mobility—that is very important to many consumers. Of course, as the steward of these consumer-derived funds, we must ensure that our policies are sustainable and will allow new generations of Americans to have access to the latest generation of services so that our country is able to compete in the increasingly global economy. The key is for consumers throughout the country have access to such services at just, reasonable and affordable rates.

Question 3a. Second, would it be possible to construct a model for wireless carriers that would calculate support based on costs of *wireless* carriers, and what effect might that have on the size of the fund?

Answer. It is my understanding from experts such as David Bodenhamer and Jim Stegeman, each of whom testified at the *en banc*, that it would be possible to develop a wireless cost model. Such a model could provide some temporary reduction in outlays from the fund. It is important to note, however, that the per line amount of support provided to wireless CETCs is only one factor contributing to the incredible rate of growth of the CETC portion of the high-cost fund. Indeed, the fact that we currently fund multiple networks in high-cost areas—areas that require high-cost support for even a single provider to serve—also is a major ingredient in the rapid growth of the high-cost fund.

Question 4. Commissioner Tate, it is my understanding that there are currently two matters for decision pending before the Joint Board. One, referred by the FCC in June 2004, examines what the rules should be governing the rural high-cost support mechanism. The other, referred by the FCC in November 2002, considers how high-cost, Universal Service support should be calculated in competitive service areas. Could you give the Committee a sense of when the Joint Board might make a recommendation to the Commission on these issues? What steps must be taken before any recommendation can be made?

Answer. The Joint Board is poised to act in the next several weeks to make a short-term recommendation to stabilize the high-cost fund to the full Commission. The Joint Board's recommendation on longer range solutions likely will take several months longer. Joint Board recommendations are the product of an ongoing process of negotiation and dialogue—a process which currently is leading to significant forward progress.

Question 4a. Am I correct that the FCC must act on any recommendation made by the Joint Board within 1 year?

Answer. Yes. Section 254(a)(2) of the Act states, "the Commission shall complete any proceeding to implement subsequent recommendations from any Joint Board on Universal Service within 1 year after receiving such recommendations." I hope we will be able to act more quickly.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO HON. DEBORAH TAYLOR TATE

Question 1. There has been a lot of talk about reforming the USF contribution assessment system. Much of this discussion has focused on moving toward a "numbers-based" system that would assess a per-line fee on all working telephone lines. Do you believe that this could be implemented in a way that would not harm low-volume and low-income telecommunications consumers?

Answer. Yes. Proponents of this change advocate that it will, among other things, stabilize revenues, improve consumer understanding of the fees, and help to optimize use of our limited numbering resources. Others have voiced concerns that moving toward a numbers-based contribution assessment may negatively impact some consumers, particularly low-volume and low-income consumers. While no proposal is directly before me at this time, I believe that when the Commission does consider reforming the USF contribution assessment system, we must carefully evaluate the impact of each proposal on consumers. I remain open to ideas that will improve our Universal Service contribution policies, but will insist that the solution we ultimately adopt be tailored to benefit, rather than burden, consumers.

Question 2. The concept of reverse auctions has been widely discussed as one solution to the problem of unchecked High-Cost Fund growth. How fast do you believe a reverse auction program could be implemented? Why is it better than other approaches—such as study area caps or disaggregation? And, if implemented, what sort of savings do you think reverse auctions would provide?

Answer. The amount of time it will take to implement a reverse auction program will depend on the nature of the proposal. One proposal already in the record suggests a phased in approach that could take several years. Other proposals likely could be implemented on a shorter timeline.

Reverse auctions present one way to identify the appropriate level of ETC support in high-cost areas in a market-based and competitively neutral manner. This potentially is a technology neutral solution to one of the policy dilemmas we currently face with our "equal support rule," a policy that sets support levels based on the costs incurred by incumbent local exchange carriers while allowing all other competitive eligible telecommunications carriers—regardless of their costs—to receive

an equal amount of support on a per line basis. Reverse auction rules also could result in a reduction in the number of CETCs drawing high-cost support. The Joint Board also is considering other policy proposals, such as disaggregation. The Joint Board has not yet made a decision regarding which proposals it will recommend to the Commission.

Question 3. Can reverse auctions be implemented in a manner that is truly competitively and technologically neutral? Wouldn't such a plan inevitably mandate technology-based "winners" and "losers?"

Answer. I believe it is possible to create a reverse auctions system that is competitively and technologically neutral. Many commenters believe that this is one of the significant benefits of utilizing reverse auctions. The Joint Board is cognizant of the difficult changes that technological convergence is causing in the application of our Universal Service policies and is working to make policy recommendations that recognize these marketplace changes in a manner that will promote access to advanced telecommunications and information services at just, reasonable and affordable rates throughout the Nation. Any recommendation made by the Joint Board will be made on the basis of input from industry, state regulators, consumers, and other stakeholders.

Question 4. Do you believe that the FCC currently has all the authority it needs to implement a reverse auction process? What about authority to implement other reforms (such as study area caps or disaggregation)?

Answer. Yes—the Commission's authority to implement Universal Service programs is broad. Any distribution mechanism would, however, necessarily have to adhere to the principles set forth in the Act. *See* 47 U.S.C. § 254(b). While this is one of the issues on which the Joint Board sought public comment last fall, I believe that the Commission does have the authority necessary to implement a reverse auctions process. The Commission previously has instituted rules permissively allowing disaggregation of support areas for certain purposes. See 47 C.F.R. § 54.315.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO HON. DEBORAH TAYLOR TATE

Question 1. Commissioner Tate, under the current rules in place for the Universal Service high-cost fund, can local exchange carriers obtain broadband equipment? If so, under what circumstances can they obtain broadband equipment? Is there any data regarding the extent to which local exchange carriers are obtaining broadband equipment with Universal Service high-cost support funds?

Answer. Section 254(e) of the Act requires that, "[a] carrier that receives [universal service] support shall use that support only for the provision, maintenance, and upgrading of facilities and services for which the support is intended." Under the high-cost fund, the Commission has permitted carriers to obtain support to be used to upgrade loop facilities in a manner that permits the carrier to offer broadband services in addition to voice service. *See Federal-State Joint Board on Universal Service*, CC Docket No. 96–45, *Fourteenth Report and Order and Twenty-Second Order on Reconsideration, Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers*, CC Docket No. 00–256, Report and Order, 16 FCC Rcd 11244, 11320–23, paras. 194–201 (2001) (*Rural Task Force Order*). The high-cost fund does, therefore, indirectly support investment in broadband capable networks. Other than this high-cost loop support, I am not aware of other high-cost support mechanisms that directly support the acquisition of broadband equipment.

Question 2. Commissioner Tate, do you believe that legislative changes to the Universal Service Fund program should be completed prior to, concurrent with, or subsequent to any Commission action on intercarrier compensation? Do you see Universal Service reform and intercarrier compensation reform as linked or as separate issues?

Answer. While guidance from Congress is always welcome, especially as we work through the difficult legal and policy issues inherent to intercarrier compensation reform, I believe that the Commission can take action in this area under the current Act.

Intercarrier compensation reform is linked to Universal Service in some ways. For example, the "Missoula Plan" would add significant payment obligations to the Universal Service Fund. Thus, while I believe that the two issues do not necessarily have to be addressed simultaneously, reform of both systems must be complementary.

Question 3. Commissioner Tate, in some rural parts of Washington State, there are Wireless Internet Service Providers (WISP) that provide wireless phone service and Internet access over the same device. Under the current rules could WISP's be eligible to be an ETC as long as it provides wireless service?

Answer. Section 214(e) requires common carriers seeking ETC status to be designated an ETC by a state commission or the Federal Communications Commission. *See* 47 U.S.C. § 214(e). Wireline and wireless carriers designated as ETCs must offer the telecommunications services or functions that are designated for USF support by the Commission in Section 54.101 of its rules. *See* 47 U.S.C. § 214(e)(1); 47 U.S.C. § 254(c); 47 C.F.R. § 54.101. ETCs also must file certifications that all support received will be used only for the provision, maintenance, and upgrading of facilities and services for which the support is intended. *See* 47 U.S.C. § 254(e); 47 C.F.R. § 54.7.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO HON. MICHAEL J. COPPS

Question 1. In 1997, the FCC adopted the principle that its Universal Service policies should be "competitively neutral." In explaining this principle, the FCC concluded that "competitive neutrality means that Universal Service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another." But it seems that people have different views as to how that principle should be applied, particularly when it comes to providing support for different kinds of communications platforms. As members of the Joint Board, do you believe that this remains a valuable principle, and how should it be applied to competition both among and between communications platforms?

Answer. I believe that competitive neutrality remains a valuable principle. Different types of technologies can benefit consumers and universal service. However, I believe we need to take a closer look at how the system works today. We should take into account the realities of the marketplace, the difficulties in achieving strict competitive neutrality, and the differences in technology, including their costs, to ensure that we don't unnecessarily favor one technology or company over another. If we do that, I believe that consumers can benefit from multiple technologies while the Universal Service system still supports them in a rational manner.

Question 2. Section 254(c) of the Telecommunications Act of 1996 defines Universal Service as "an evolving level of telecommunications services" and also sets forth criteria that the FCC considers when it decides which services qualify as "supported services" eligible for Universal Service support. At present, it is my understanding that the Universal Service Fund does not support broadband service. But then, the question always arises—should it? Do you think that Universal Service should evolve to support broadband services, and if so, what would trigger such a determination?

Answer. I believe that the time has come to very explicitly include broadband as part of our Universal Service system. I believe a good case can be made that the Commission has statutory authority already to do this, but in light of FCC inaction over the years, further guidance from Congress appears needed.

The Commission is charged with preserving and advancing universal service. That means ensuring everyone, from the inner city to the most rural reaches of the country, has access to the wonders of communications. The challenge we face in meeting this great objective is ensuring that our Universal Service mechanisms are sustainable. As more of our networks and communications migrate to broadband technology, I believe the key to sustainability lies in modernizing the Universal Service system. That means having broadband both contribute to and receive support from the Universal Service Fund.

Question 2a. Given that the law defines Universal Service as an evolving level of "*telecommunications services*" and given that the FCC has classified cable modem and DSL services as "*information services*," would the Congress need to change the statute to make broadband eligible for support?

Answer. When the Commission started down the road of reclassifying telecommunications services I was concerned that the Commission did not take the time to think ahead to the possible intended and unintended consequences of our actions. One serious source of concern was the real possibility that we would create impediments to bringing broadband to all of America. Nevertheless, I believe that Congress provided the Commission with the statutory authority to make broadband eligible for support when it told the Commission to base its Universal Service policies on "access to advanced telecommunications and information services." It may be the

case, however, that all of my colleagues do not support such a view. For this reason, the Commission would benefit from additional Congressional guidance in this area.

Question 3. Currently the wireless eligible telecommunications carriers (ETCs) receive Universal Service support on a "per customer" basis based on the "per line" costs of the *wireline* carrier in the same geographic area. This is sometimes called the "identical support rule" and ensures that different communications platform providers receive the same amount of "per line" support. One criticism of the so-called "identical support rule" for Universal Service is that it results in overly generous support to wireless carriers because levels of support are not based on the per line cost of providing *wireless* services. As a result, I have two questions——

First, do you believe that Universal Service should support both wireline and wireless services in rural America?

Answer. Yes. I believe that there is a place for wireless and wireline services in our Universal Service system and we should treat them fairly.

Question 3a. Second, would it be possible to construct a model for wireless carriers that would calculate support based on costs of *wireless* carriers, and what effect might that have on the size of the fund?

Answer. It is clear to me that the costs of investing and maintaining wireless and wireline infrastructure are inherently different. The Commission's current rules for determining wireless eligible telecommunications carriers' costs are both irrational and costly as they are based on the wireline incumbent carrier's costs. As I said at the hearing, I believe that one of the things we can do to stabilize the Universal Service Fund is eliminate the Commission's identical support rule. But to do so, we need to have an alternative mechanism for calculating support based on wireless carriers' costs. Calculating these costs based on a model is certainly possible and worth considering. At this time, it is difficult to know what the impact of a model approach will have on the size of the Fund because the size of these costs will be based on the model's mechanics.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO HON. MICHAEL J. COPPS

Question 1. There has been a lot of talk about reforming the USF contribution assessment system. Much of this discussion has focused on moving toward a "numbers-based" system that would assess a per-line fee on all working telephone lines. Do you believe that this could be implemented in a way that would not harm low-volume and low-income telecommunications consumers?

Answer. My preference has leaned toward a revenue-based system, because it makes intuitive sense that those who use the network more, pay more. But the current interstate revenue-based system may not be sustainable. The boundaries between local and long distance are eroding, while new Internet-based services are growing. So the Commission may have to consider other approaches like a numbers based approach to secure the future of universal service. But the way I see it, the devil is in the details. Before supporting any such plan, I would need to understand its impact on low-volume and low-income consumers. At the end of the day, whatever methodology we choose, I must be convinced that it benefits consumers.

Question 2. The concept of reverse auctions has been widely discussed as one solution to the problem of unchecked High-Cost Fund growth. How fast do you believe a reverse auction program could be implemented? Why is it better than other approaches—such as study area caps or disaggregation? And, if implemented, what sort of savings do you think reverse auctions would provide?

Answer. I am concerned about the impact of an auction-based Universal Service system on rural areas in this country. So are many commenters on record at the FCC. Congress charged the Commission with ensuring that consumers in all regions of the Nation have access to comparable services at comparable rates. It is not yet clear to me that an auction-based system would ensure adequate levels of support and meet this Congressional objective. In addition, it appears that it would take years before a reverse auction program could be implemented on a national basis though it would be shorter to implement a pilot program as some have suggested. There are many ideas other than reverse auctions that the Joint Board has before it, including study area caps and disaggregation that would likely take a shorter time to implement. Finally, without more detail on the types of reverse auctions to be implemented it is difficult to determine what, if any savings, will be accomplished.

Question 3. Can reverse auctions be implemented in a manner that is truly competitively and technologically neutral? Wouldn't such a plan inevitably mandate technology-based "winners" and "losers?"

Answer. There are many different ways to implement a reverse auction. In fact, both wireless carriers and wireline carriers have submitted proposals on how a reverse auction would work. Whether a reverse auction actually met the Commission's policy of competitive neutrality would depend on the details of each proposal. However, it is not yet clear to me that an auction-based system that rewards the least-cost provider will guarantee comparable services at comparable rates, which is another core principle of universal service. When the Commission previously considered the use of auctions in 1997, it noted "it is unlikely that there will be competition in a significant number of rural, insular, or high-cost areas in the near future. Consequently, it is unlikely that competitive bidding mechanisms would be useful in many areas in the near future." Before moving ahead here, it is imperative that we understand what has changed since the Commission reached this conclusion. As part of this analysis, we must consider whether any such proposal would be competitively and technology neutral.

Question 4. Do you believe that the FCC currently has all the authority it needs to implement a reverse auction process? What about authority to implement other reforms (such as study area caps or disaggregation)?

Answer. The Commission is charged with the preservation and advancement of Universal Service based on the principles set forth in section 254(b), including ensuring that all Americans have quality services at reasonable rates, have access to advanced telecommunications and information services, and have access to comparable service at comparable rates. To the extent that Universal Service proposals concerning the distribution of funds, such as reverse auctions, study area caps and disaggregation, are designed to comport with these principles, I believe that the Commission has the authority to implement them. However, to the extent that Congress believes that a particular mechanism is inconsistent with these core principles, we would surely benefit from additional guidance.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO HON. MICHAEL J. COPPS

Question 1. Commissioner Copps, under the current rules in place for the Universal Service high-cost fund, can local exchange carriers obtain broadband equipment? If so, under what circumstances can they obtain broadband equipment? Is there any data regarding the extent to which local exchange carriers are obtaining broadband equipment with Universal Service high-cost support fund?

Answer. The High Cost program is already indirectly subsidizing broadband. Investments in telephone networks subsidized by the program end up subsidizing broadband because most telephone equipment is capable of providing voice and data services. Also, the Department of Agriculture's Rural Utilities Service makes low-interest loans to companies that invest in telephone networks capable of providing broadband as well as voice telephone service. Many of those loans were made for equipment that subsequently formed part of the cost basis for USF support. I am not aware of data regarding how much high-cost support is used to support broadband.

Question 2. Commissioner Copps, do you believe that legislative changes to the Universal Service Fund program should be completed prior to, concurrent with, or subsequent to any Commission action on intercarrier compensation? Do you see Universal Service reform and intercarrier compensation reform as linked or as separate issues?

Answer. I believe that that one thing that could be done to stabilize the Fund is to adjust the contribution rules to ensure that it is funded by intrastate and interstate revenues. With the boundaries between local and long distance eroding, and the growth of any-distance calling plans, assessing only on interstate services is growing more difficult over time. However, such a change would require action by Congress. There does not appear to be a magic formula as to the timing of changes to Universal Service and intercarrier compensation. However, any changes we make to one program could require offsetting changes in the other. Thus any action must be done in a comprehensive way.

Question 3. Commissioner Copps, in some rural parts of Washington State, there are Wireless Internet Service Providers (WISP) that provide wireless phone service and Internet access over the same device. Under the current rules could WISP's be eligible to be an ETC as long as it provides wireless service?

Answer. The states have primary responsibility for designating telecommunications carriers as eligible telecommunications carriers (ETCs). It is my understanding that the FCC has not considered any carrier applications from Washington State for designation as an ETC. In the case of Washington State, the Utilities and Transportation Commission has the authority and has approved such applications. Therefore, whether a wireless Internet service provider is eligible for ETC status under Washington State's rules is a decision for the state commission to determine.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO LARRY S. LANDIS

Question 1. In 1997, the FCC adopted the principle that its Universal Service policies should be "competitively neutral." In explaining this principle, the FCC concluded that "competitive neutrality means that Universal Service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another." But it seems that people have different views as to how that principle should be applied, particularly when it comes to providing support for different kinds of communications platforms. As members of the Joint Board, do you believe that this remains a valuable principle, and how should it be applied to competition both among and between communications platforms?

Answer. I believe that "competitive neutrality" is a key concept, but so is seeing that Universal Service funds are appropriately deployed, that legitimate needs are met, and that accountability, efficiency, and performance are demanded. The focus should be on the service provided to consumers *not necessarily* the companies or technologies providing the service.

Seeking to establish a "competitively neutral" regime is an important principle, but its application must be tempered by the specific legal requirements contained in 47 U.S.C. § 254(b)(3) and (b)(5) respectively. When it emerged, competitive neutrality seemed like it should be a driving focus and the only logical choice for policymakers. Logically enough, the issue has become achieving a competitively neutral definition of "competitive neutrality." Shifts in the market, including the pace of changes occurring in technology, corporate consolidation, and corporate realignment have been so great that this goal has become troublesome to operationalize with specific policy reforms.

In designing a next-generation policy, we need to take some time not only to listen to the lawyers but also to the marketers, since the former are paid to be "close" to policymakers whereas marketers are paid to be "close" to the market.

The wireless industry has spoken justifiably, aggressively and articulately about the achievements which have been made possible in an environment where there is a light regulatory touch. And they have also pointed to those customers who have "cut the cord" as evidence of wireless' success story.

The reality however, is that the market still has significantly different expectations of the existing wireline and wireless technologies. The overwhelming majority of customers have and use both technologies, but use them differently. Moreover, customer expectations of wireless, while rising steadily, are still not "competitively neutral", if, for example, by competitive neutrality you mean "number of dropped calls," or other measures of quality of service.

A leading national wireless company has made "fewest dropped calls" the keystone of its marketing element, *because that claim is meaningful to a large segment of the wireless market*. No wireline company would make such a claim because such a claim would not be relevant to either the experience or the expectations of its customers. For equally obvious reasons, wireline companies choose not to compete in the "mobile convenience" segment of the market.

Market-based issues aside, the requirements of reasonably comparable rates and services as well as the pursuit of affordable rates and services are among the primary *foci* and drivers of our policies. Many predict we are moving toward the day when there will be one converged, efficient network capable of provisioning multiple layers of applications and services. Many companies have moved their business models to this notion and means of operation, and to its companion marketing proposal . . . the "triple" or the "quadruple play," with emphasis on expanding the share of total communications wallet and driving both consolidation and partnering.

Question 2. Section 254(c) of the Telecommunications Act of 1996 defines Universal Service as "an evolving level of telecommunications services" and also sets forth criteria that the FCC considers when it decides which services qualify as "supported services" eligible for Universal Service support. At present, it is my understanding that the Universal Service Fund does not support broadband service. But

then, the question always arises—should it? And if so, when? Do you think that Universal Service should evolve to support broadband services, and if so, what would trigger such a determination?

Question 2a. Given that the law defines Universal Service as an evolving level of "telecommunications services" and given that the FCC has classified cable modem and DSL services as "information services," would the Congress need to change the statute to make broadband eligible for support?

Answer. As indicated by my colleagues in the March 1 hearing, there are specific criteria set forth under 47 U.S.C. § 254(c) which direct the Joint Board to recommend to the FCC, and for the FCC to establish, a definition of the telecommunications services which should be supported by Universal Service mechanisms.

Section 254(c) states that when adopting this list of telecommunications services, the Joint Board and Commission "shall consider" whether the service is: (1) essential to education, public health, or public safety; (2) subscribed to by a substantial majority of residential consumers; (3) being deployed by telecommunications carriers in public telecommunications networks; and (4) consistent with the public interest, convenience and necessity.

The Commission has concluded that each of these criteria must be considered, "but each not necessarily met", before a service may be included within the general definition of universal service, should it be in the public interest.

In July of 2003, the FCC released its *Definitions Order* under CC Docket No. 96–45, upon which the Joint Board had made its recommendations. A part of that Order was the consideration of advanced or high-speed services. The Commission stated that it declined to expand the definition of supported services to include advanced or high-speed services at that time.

Although the Commission agreed with certain of those who filed comments in that proceeding that broadband services were becoming increasingly important for consumers in all regions of the Nation, they also agreed with the Joint Board and the majority of commenters that high-speed and advanced services currently [*i.e.,* as of 2003] did not meet the Act's criteria for inclusion on the list of supported services.

Furthermore, the Commission went on to say that although telecommunications carriers increasingly were deploying infrastructure capable of providing advanced and high-speed services, the Commission agreed with the Joint Board and commenters that *advanced services were not subscribed to by a substantial majority of residential consumers*. In fact, the Commission's own data showed that as of December 31, 2002, there were approximately 17.4 million high-speed lines serving residential and small business subscribers, which represented just 16 percent of all U.S. households.

It is evident that broadband services are becoming increasingly pervasive and moving in the direction of the "substantial majority" test, and it is also evident that independent of the criteria set up in 47 U.S.C. § 254(c), there is strong anecdotal evidence to support the need for pervasive buildout.

It would be prudent for the FCC to refer this matter to the Joint Board for further consideration, given that we may soon fulfill the "substantial majority" criterion.

The threshold legal question of whether or not advanced services, as they relate to cable modems, DSL and other similarly situated services, would have to be reclassified from information services to telecommunications services for purposes of USF support presents a potential legal quagmire for the FCC and the Joint Board. Such reclassification could potentially reopen the door to litigation over jurisdictional and related issues which had been largely resolved.

It would seem to be less troublesome for Congress to pass a narrowly focused amendment to the Telecommunications Act of 1996 allowing broadband services to be supported, thereby investing the policy decision with statutory authority.

If a decision is made to move toward support of broadband services either through the FCC or through Congress, it also becomes important to consider whether broadband support should take the same general form as has High Cost support, or whether that support should concentrate primarily or exclusively on the cost of buildout. I believe the latter approach is preferable, and clearly more affordable.

The first question is whether and to what extent High Cost support is currently advantaging the use of a second line for Internet access via dial-up, as opposed to a single-line solution which rolls up POTS (or its VoIP surrogate) together with high-speed access. An artificially depressed "take rate" created perversely through a legacy technology subsidy could significantly impact the business plans of those providers which are weighing broadband buildout and deciding where it is economical to implement it.

For other areas, implementation of a second tier incentive in the form of specific tax breaks could prove sufficient to assure build out where the business model suggests that a positive return without incentives is unlikely or improbable.

Finally, the Wyoming and Kentucky studies suggest there are remote areas (perhaps as few as 2–5 percent of total customers) where the cost of building out a single loop or equivalent may run as high as $10,000 or more, depending on circumstances and the technology involved. In such instances, a straight subsidy of some sort is clearly required to produce the desired ubiquitous buildout.

However, the Wyoming study has also shown that significant intermodal distinctions exist among technologies. In that case, any provider (regardless of technology) should be allowed to bid for the opportunity to build out to those "highest cost" customers, with the subsidy being awarded to the lowest bidder, but in no case should a subsidy greater than the cost of the lowest price technology be granted.

Hypothetically, if the cost of buildout to a specific customer is projected at $2,500 for cable, $3,700 for wireless and $10,000 for a wireline provider, any provider should be able to bid to serve that customer . . . but in no case should the winning bidder receive more than the $2,500 representing the lowest cost provider.

Question 3. Currently the wireless eligible telecommunications carriers (ETCs) receive Universal Service support on a "per customer" basis based on the "per line" costs of the *wireline* carrier in the same geographic area. This is sometimes called the "identical support rule" and ensures that different communications platform providers receive the same amount of "per line" support. One criticism of the so-called "identical support rule" for Universal Service is that it results in overly generous support to wireless carriers because levels of support are not based on the per line cost of providing *wireless* services. As a result, I have two questions——

First, do you believe that Universal Service should support both wireline and wireless services in rural America?

Second, would it be possible to construct a model for wireless carriers that would calculate support based on costs of *wireless* carriers, and what effect might that have on the size of the fund?

Answer. Yes, I believe that in truly high-cost rural areas, there is room both in terms of public policy and funding to support both wireline and wireless services in rural America. However, I have great difficulty accepting the notion that it is necessary for multiple wireless companies to receive what amount to multiple government subsidies in the process of bringing both wireless and wireline services to "truly rural" areas.

In many if not most cases, the cities, towns and villages where the *wireline* providers locate their central offices and wire centers, are contestable. It is not unusual in relatively small communities to find a wireline, wireless and cable provider competing for customers in those core areas.

I believe that the current system of equal support, while well-intentioned, does little to achieve competitive neutrality. The identical support rule demonstrates the unintended consequences which are produced when a strong desire to achieve competitive neutrality doesn't take into account differing cost structures.

Many in the industry readily admit in moments of candor that the identical support rule has become, in many instances, a means to game the system. Given the current circumstances, State Commissions need to be more vigilant in their review and approval process for CETC applicants, *e.g.,* undertaking the sort of assessment which the FCC contemplated in its 2005 ETC Order.[1]

Under the current structure, as CETCs, wireless carriers receive the same per-line support as their wireline counterparts while in most cases their cost structure is significantly less than that of the incumbent wireline carrier.

Also, as noted in Q. 1, carriers operate under a separate set of both policy and service expectations. How can anyone realistically argue that wireline and wireless companies are being treated in a competitively neutral manner when many wireless companies and advocates admit privately that their costs are, in many cases, significantly lower that those of the ILECs?

At the same time, RLEC recipients of High Cost Line Support continue to receive funding based on legacy investment and business decisions which may have been made decades ago. It is arguable that this produces business decisions which resemble those of the Big 3 auto makers, with their legacy cost structure and legacy investments.

It is largely because of this identical support that we have seen first-hand the size of the Fund grow exponentially over the last several years.

On an interim basis, as a preliminary threshold matter, I believe that CETCs should receive support based on their own costs, not those of the incumbent wireline carrier.

---

[1] FCC Docket 96–45, 05–46 rel. March 17, 2005.

I believe that a model could be constructed to capture a wireless carrier's costs as long as the relevant agency accounts for the type of territory that will be served—determining, *e.g.,* is it rural or urban, what type of terrain is it encompassing, farm land or mountainous? These types of considerations can be built into a model in a much more efficient manner today than they were in previous iterations of the current high-cost model.

As long as the companies seeking funding understand that they must justify that funding with a cost analysis or model, I believe there is a strong incentive—currently at $1 billion and doubling each year in recent years—to provide such cost justification.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO LARRY S. LANDIS

Question 1. There has been a lot of talk about reforming the USF contribution assessment system. Much of this discussion has focused on moving toward a "numbers-based" system that would assess a per-line fee on all working telephone lines. Do you believe that this could be implemented in a way that would not harm low-volume and low-income telecommunications consumers?

Answer. Yes. I believe using a numbers-based methodology could be useful and not harmful to low-volume or low-income consumers as long as the contributions base is expanded to include wireless carriers, VoIP providers, and voice-grade equivalents to capture special access and private lines, particularly for businesses.

The key to avoiding an undue burden for any segment of the population is to spread the responsibility across all segments so that no one segment (*i.e.,* low income users) is unduly burdened.

Currently, everyone who is connected to the system is receiving full value from the system regardless of the price paid; if that were not the case, they would disconnect from the system. So we should not necessarily assume that just because someone does not make a high volume of calls, that person is being harmed by the price per call paid. That person may place a higher value on each call, or simply on the ability to access the network at will, than does the higher volume user.

In the event Congress should determine that additional steps should be taken to avoid burdening low-income consumers, there are multiple options available, including increasing Lifeline support or indexing to income level, but such a move should be based on appropriate and totally objective 3rd party data to make certain the focus is squarely on the target population.

Question 2. The concept of reverse auctions has been widely discussed as one solution to the problem of unchecked High-Cost Fund growth. How fast do you believe a reverse auction program could be implemented? Why is it better than other approaches—such as study area caps or disaggregation? And, if implemented, what sort of savings do you think reverse auctions would provide?

Answer. I believe that if implemented nationwide, a reverse auction system could be functional within two to 3 years. I would personally prefer an approach in which reverse auctions were first tested, perhaps as a means of identifying providers in unserved areas or of selecting a "winner" or "winners" (depending on the model adopted) in a representative group of states, before being implemented nationally. Many key questions must be addressed, as I'm sure the members of the Committee are well aware.

Every aspect of the design of a reverse auction needs to be carefully considered, especially including who "wins," which is directly related to the question of whether the design is to be "winner" takes all, "winner" takes more [as proposed in at least one wireless CETC auction model in response to the Request for Comment], or whether there is one "winner" for each sector—*i.e.,* wireline and wireless.

If the design which is ultimately selected were to be "one winner takes all," there are numerous issues to be resolved in the event the incumbent local exchange (wireline) carrier is not successful in the auction process, including what happens to that incumbent's network and overall presence in the market if the wireline incumbent is unsuccessful and does not "win" the auction.

Since most wireless providers are still dependent on wireline incumbents' networks for transport, the question of what constitutes fair compensation for continued use of portions of the network of a "losing" incumbent by a "winning" CETC is a critical issue.

Further, we also need to be prepared to offer a transition mechanism for incumbents that might "lose" in an auction setting, since their business plans are premised on the current USF disbursement system rather than on a significantly different mechanism.

In our current proceeding we are examining how, on a broad basis, we deal with the possibility of partial or full re-monopolization of the marketplace in certain regions. This threshold policy question is important because some rural and insular areas of the United States may not be able to support more than one carrier, yet under the current USF structure, multiple carriers are funded. This is a political and economic reality, yet we are very mindful that this system cannot be unwound overnight, assuming a consensus emerges that implementation of a reverse auction approach is a worthy goal.

That is why the answers are dependent upon the implementation rules—*i.e.,* the design and structure of the auction[s] if such an approach were to be adopted—and without such details being addressed, it is almost impossible to quantify and assess what possible savings or costs would be produced.

Interim measures, including a cap on funding, are essential in order to stem the accelerating growth spiral of the Fund in the short term. As my colleague Billy Jack Gregg said in response to a question at the March 1 hearing, that interim cap must be applied where the problem exists . . . where the growth is occurring. Like Willie Sutton in Director Gregg's response, we need to go "where the money is," and apply the temporary cap there.

Put another way, an EMT responding to a serious accident does not apply a tourniquet to a victim's leg if that accident victim is hemorrhaging from the arm. And this analogy is appropriate in more ways than one, because a proposed interim cap, like a tourniquet, is only intended to be a temporary measure to address an acute need until the patient can be fully triaged and comprehensively treated.

This step would allow the Joint Board sufficient time to address longer-term issues without leaving the Fund in jeopardy of implosion because it cannot sustain itself. It also has the advantage of being an admittedly imperfect remedy, dramatically increasing the likelihood that neither the Joint Board nor the FCC will find it a necessary and sufficient solution and thereby make it possible to "declare victory".

Disaggregation is not a new concept for the FCC's consideration. In the *Rural Task Force Order* of 2001, the FCC recommended disaggregation for rural carriers; however, only a small minority of all rural carriers took advantage of this opportunity. I believe that disaggregation is essential and not incompatible with a properly-designed reverse auction solution or other alternative for USF reform, including a models-based solution, provided anti-"gaming" protections are built in.

Question 3. Can reverse auctions be implemented in a manner that is truly competitively and technologically neutral? Wouldn't such a plan inevitably mandate technology-based "winners" and "losers?"

Answer. Yes, a reverse auction approach can be adopted which is both competitively and technologically neutral. As I have advocated previously, a reverse auction may well need to be linked to other reforms such as disaggregation to assure both neutrality and compliance with legislative intent.

Taken as a whole, the current framework, well-intentioned as it was, is all about choosing winners and losers. In too many cases, providers are not being held to account or expected to appropriately steward the funds which they receive. A relative handful of states are according a virtual free pass to USF funding through their failure to implement the voluntary guidelines for screening CETC applicants promulgated by the FCC in its March 17, 2005 ETC Order.[1]

As long as these circumstances exist, those of us who shape public policy—whether serving in Congress, on the FCC, or as a member of a State Commission—are choosing winners, even if that is usually as an act of omission rather than of commission. When we do so, we are also choosing losers: the American people, in the form of higher-than-necessary USF levies placed upon ratepayers.

Virtually any form of reverse auction which has been discussed in conjunction with the Joint Board's current proceeding will produce "losers," by design. The whole purpose of a reverse auction model is to derive the greatest value for the least possible investment of "high-cost dollars" for the customer. In some circumstances one technology may advantage its user over the differing technologies of other providers competing to serve in the same geographic area. But in a reverse auction, each provider is free to determine how little s/he is willing to accept in return for the "franchise" to serve an area. If s/he is willing to pay more dearly by accepting a lower level of compensation than the competition—regardless of cost differentials which may exist intermodally—then s/he will be the "winner." Thus the "winner" is the bidder who brings the greatest value for the least cost to the customer. The question is whether it would be deemed *politically* acceptable.

[1] FCC Docket 96–45, 05–46 rel. March 17, 2005.

The winners/losers issue depends on vendors' definitions of the value of subsidy. A higher cost vendor may elect to receive a lower margin than his/her competitors, in order to retain or gain the incremental revenue produced through high-cost support. So the vendors themselves determine what is "fair," by the full value they place on "winning."

When you let the bidders determine the value of the subsidy they are eligible to receive as the successful bidder or bidders, then by definition the winner receives full value, and all "losers" are losers because they set a higher value than the market (through the reverse auction mechanism) was willing to attach to provision of service.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO HON. JOHN DOWNES BURKE

Question 1. In 1997, the FCC adopted the principle that its Universal Service policies should be "competitively neutral." In explaining this principle, the FCC concluded that "competitive neutrality means that Universal Service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another." But it seems that people have different views as to how that principle should be applied, particularly when it comes to providing support for different kinds of communications platforms. As members of the Joint Board, do you believe that this remains a valuable principle, and how should it be applied to competition both among and between communications platforms?

Answer. Competitive neutrality seemed an appropriate and important principle when the FCC and the Joint Board were first trying to implement the 1996 Act. At that time the overwhelming objective of Federal policy was to open the local exchange network to competition, and many new policies were aimed at giving a boost to the infant CLEC industry. But Universal Service was also an important goal under the Act. Competitive neutrality should not be an obstacle to the primary goal of preserving and advancing universal service. Neutrality does not provide a sufficient basis for a subsidy that does not demonstrably advance Universal Service goals, particularly when it inflates the contributions required from telephone subscribers.

The Identical Support

Competitive neutrality is often today considered synonymous with the "Identical Support Rule" ("ISR"). Under ISR, a Competitive Eligible Telecommunications Carrier ("CETC") receives per-line support equal to that given to the Incumbent Local Exchange Carriers ("ILEC") serving a customer. If ILEC "A" and an CETC "B" have customers with billing addresses in the same ILEC wire center, they receive equal per-line support.

The ISR, although motivated by competitive neutrality, is not neutral. The ISR allows that carriers A and B both get support based on carrier A's costs. A competitively neutral rule would, for example, award support to each based on its own cost; or it might award support to both based upon some third factor not dependent upon either's network.

Nor does the ISR produce competitively neutral results. While the support amounts are the same for A and B, they may have vastly different cost structures. Most CETCs are wireless carriers. Wireless technology finds classical wire center boundaries largely irrelevant. Wireless carrier costs and deployment are significantly affected by factors, such as topography, that are less important for wireline carriers. Moreover, for many rural customers, their address is largely irrelevant because they cannot receive wireless service at home, but subscribe because they travel. There is no reason to believe that a support dollar given to a CETC under the ISR will produce results anything like the results of giving that dollar to an ILEC.

A second major problem with the ISR is that it, when combined with the legacy procedures for calculating ILEC support, has generated enormous Fund growth. CETCs support has been growing at an annual rate of 101 percent since 2002. CETCs received almost $1 billion in 2006. Because wireless carriers are now applying for CETC status in droves, CETCs are on track to receive over $1.5 billion in 2007.[1]

The ISR did not contemplate that a household would retain its landline and add three or four supported wireless phones as well. Under the ISR, all of these phones can receive an equal subsidy.

---

[1] AT&T *ex parte* filing in Docket No. 96–45 on March 22, 2007.

There is another and more complex reason for the increase. ISR works in tandem with legacy support mechanism of ILECs.[2] The following table illustrates how competition could *increase total* support in a high-cost area more than tenfold, even without the total number of lines increasing.[3]

	Network Operation Cost (000s)	ILEC lines	ILEC per-line cost	ILEC Support per line	ILEC Support (000s)	CETC Lines	CETC Support (000s)	*Total Support (000s)*
No competition	$1,000	10,000	$100	$53	$532	–	–	*$532*
Slight competition	900	8,000	113	63	502	2,000	$125	*627*
Intense competition	800	1,000	800	585	585	9,000	5,267	*5,852*

Commonly, CETC access lines increase faster than ILEC lines decrease. Modifying the preceding analysis to reflect that fact would only increase CETC support more rapidly.

The combined effect of these ISR and legacy ILEC mechanisms has been to subsidize the construction of second, third and fourth networks in high-cost areas where it was historically difficult to finance construction of the original network. This might be a good result in the narrow case of a wireless network extending service to a previously unserved rural area, but is not a sound general policy. There is no indication that the USF was designed, even in part, to subsidize robust competition in hard-to-serve areas.

A third major problem with the ISR is that it generally provides too much or too little support to CETCs. Even if one assumes that there is sufficient support for ILECs,[4] the ISR generally will produce more-than-sufficient or less-than-sufficient support for CETCs.

As the table above shows, support to CETCs can easily be more than sufficient. In a market with intense competition, a CETC with a high market share can receive many times the per-line support ($585) that the incumbent received before competitors arrived ($53). This is particularly incongruous if the CETC has superior technology that provides telecommunications services more efficiently than the legacy technology.

Support to CETCs can also be less than sufficient to support a network capable of serving all customers in the service area. Two wireless CETCs might share a market, for example, and might have similar facilities and receive equal per-line support payments. Yet if one CETC has an 50 percent market share and the second CETC has a 1 percent market share, the first will receive 50 times as much support as the second. This is no recipe for maintaining continued service by the second CETC. On the contrary, this is a potentially unstable condition in which Federal support might be used by larger carriers to drive out smaller competitors.

A fourth major problem with the ISR is that it awards support without any clear objective or meaningful performance expectation. The great majority of CETC money actually goes to wireless carriers, but this has little demonstrable relation to Universal Service goals.

Wireless carriers generally offer nationwide rates. Therefore, although support to a wireless carrier may promote greater service availability, it does not have an effect on whether a customer living in a high-cost area receives wireless service at affordable and comparable rates.

Much of the money transferred to CETCs under the ISR is based on the "IAS" and "ICLS" programs. This funding for ILECs was historically derived from specific access rate reduction decisions by the FCC. The connection to CETCs is tenuous.

---

[2] Legacy support mechanisms for ILECs are intended to provide sufficient support for the ILECs to operate a wireline network. When an ILEC has fewer lines supporting its network that generally increases per-line cost, and that increases per-line support for the ILEC's remaining customers. The EPR then equally increases per-line support to CETCs. Total support thereby increases rapidly as more customers are served by CETCs.

[3] The support mechanism illustrated here is to provide support equal to 76 percent of the difference between per-line cost per month and $30 per month. This is most similar to the support mechanism current used for nonrural carriers. The "intense competition" example here assumes that the ILEC loses 90 percent of its original lines. This is an extreme case chosen to illustrate the point, but it is not totally implausible given the inroads now being made by wireless and VoIP, and the impending widespread availability of VoIP over cable systems.

[4] The Tenth Circuit Court of Appeals found in 2005 that the FCC had not demonstrably provided sufficient support to customers of so-called "nonrural" carriers. *Qwest* v. *FCC,* 398 F.3d 1222 (10th Cir. 2005).

In other words, CETCs today are receiving millions of dollars in support because the local ILEC once had high interstate access rates. For the ILECs, this money may once have had a connection to Universal Service objectives. Porting it over to CETCs does not significantly advance any Universal Service objectives.

Alternatives

The arrival of real competition in high-cost rural areas forces us to face several unpleasant alternatives. If we keep the ISR, the Fund will continue to grow exponentially, and we will pay more to CETCs than they need to provide service.

On the other hand, abandoning the ISR will require us to grapple with some difficult problems. The most immediate would be to determine how many networks merit support in a given area, and how they should be selected. This could conceivably be done by auctions, but auctions have myriad administrative difficulties, and it is not clear these can all be solved.

Second, we would need to decide whether the inherent differences among networks should affect support. Different networks have different cost structures and present different subsidy considerations. Wireless uses different types of facilities with different kinds of propagation characteristics, and this certainly leads to a cost structure that is much different than ILECs. Moreover, wireless carriers often build facilities to serve customers who have billing addresses tens or hundreds of miles away. Wireless carriers also have different kinds of revenues and costs from intercarrier transactions. All of this could be relevant to a support mechanism for wireless carriers.

Another possibility is to cap the total support offered in a study area or state. This has significant risks also. Capped support may not be sufficient for ILECs to keep their retail rates affordable and reasonably comparable. With a cap, there is a risk that all networks would fail or, more likely, constrain service to the lowest cost areas. Failure of the ILEC would be particularly problematic where a CETC depends (as do most wireless carriers) on the ILEC for network transport functions.

Finally, one could adopt separate wireline and wireless Universal Service systems. Such a system would be able to acknowledge the differences between the technologies, derive an appropriate business model for each that leads to a support amount, and thereby provide sufficient support to meet the statutory objectives in Section 254.

Conclusion

My primary conclusion is that the principle of competitive neutrality should be made secondary to other, more important, principles, such as:

- Universal Service support payments should produce a demonstrable benefit to consumers, either in the form of reduced rates or increased availability.
- Funding should be sufficient to ensure that customers everywhere have access to at least one telecommunications service that provides acceptable service at comparable rates. That should include broadband service, at a specific date in the future.
- Public funds should not be provided automatically to every network that is constructed with private capital. Subsidies should go to only a limited number of networks in high-cost areas. For discussion purposes, I would suggest that funding be available in any area to only one wireline and one wireless network. This is not intended to limit in any way the uses of private capital or to limit competition among privately financed networks.
- Universal Service policy can legitimately differentiate among competing telecommunications technologies. Funding should impose an obligation to meet minimum standards, even if this would effectively disqualify a particular technology.
- Universal Service support should be based upon the reasonable financial needs of the supported carrier. This requires consideration of revenues available from all sources, including intercarrier revenues and all subscriber revenues from regulated and nonregulated activities.

My second conclusion is that the ISR should be abandoned. No carrier should receive support based upon another carrier's costs and revenues. Support to wireless carriers could conceivably be based upon a wireless cost model, but these carriers may also need to submit actual cost information and actual facility location information as a prerequisite to support.

Question 2. Section 254(c) of the Telecommunications Act of 1996 defines Universal Service as "an evolving level of telecommunications services" and also sets forth criteria that the FCC considers when it decides which services qualify as "sup-

ported services" eligible for Universal Service support. At present, it is my understanding that the Universal Service Fund does not support broadband service. But then, the question always arises—should it? And if so, when? Do you think that Universal Service should evolve to support broadband services, and if so, what would trigger such a determination? Given that the law defines Universal Service as an evolving level of *"telecommunications services"* and given that the FCC has classified cable modem and DSL services as *"information services,"* would the Congress need to change the statute to make broadband eligible for support?

Answer. Yes, Universal Service should evolve to support broadband services. That decision should be made now, and reasonable target dates should be set for compliance. For example, it might be reasonable to set a target that 95 percent of the American public would have access to a broadband service by 2010. In this context "access" would mean that a person could purchase broadband at his or her residence or place of business from one or more sources at a rate that is reasonably comparable to urban rates. Broadband should be defined in a way that encourages maturation of the network, but that does not disqualify services that are now widely subscribed to.

Congress should amend section 254 of the Act. Regardless of whether it explicitly defines broadband as an "eligible service," it should amend subsections 254(c) and 254(e).

Subsection 254(c)

Subsection 254(c) envisions a binary decision on telecommunications services; services are either included or not included. If broadband were defined as an "eligible service," then three consequences follow: (1) broadband would become part of the minimum standard for eligibility as an Eligible Telecommunications Carrier ("ETC"); (2) broadband costs may be considered when calculating support; and (3) ETCs may spend Universal Service support to maintain broadband facilities. In other words, the current statute requires that each particular service be both mandatory and permitted, or neither.

Some existing ETCs do not offer broadband to all their customers. Therefore if broadband is added to the list under section 254(c), some existing ETCs might be disqualified unless they could offer broadband to all their customers. In my opinion, such mass disqualification would be undesirable, but it is not clear how to avoid this result if broadband is added to the list of supported services. This tension between mandatory and permissive services makes it difficult for the FCC to add services to the list. Although the express intent of section 254 was for Universal Service standards to evolve over time, the structure of section 254(c) makes such evolution a very high stakes process with possibly punitive results.

I do not want to imply that the statute has been an absolute barrier to progress. Universal service payments have actually supported the development of broadband networks in some areas. Notably, the "High Cost Loop" ("HCL") program, the FCC's largest single high-cost program,[5] supports the "loop cost" of hundreds of smaller so-called "rural" carriers. HCL support is calculated based on the carrier's investment level in its "loop" facilities, the wires and distributed platforms that are outside central offices. Many rural carriers have built broadband networks capable of providing DSL services, and some have even built fiber networks capable of delivering video. In most cases these investments have generated HCL support.

Not only does the HCL program support broadband buildout, it seems to have developed a preference for broadband. The HCL program is capped. Many rural carriers increased their per-line investment, and the differential effect has been to draw support away from carriers that merely provide voice service, while adding support to carriers that have broadband-capable and even video-capable networks.

Thus, although broadband has not yet become a supported service, one major FCC program is currently providing *de facto* support for broadband. This result was explained through the Joint Board's policy of avoiding "barriers" to broadband.[6] While

[5] The HCL program's annualized cost is $1.4 billion.

[6] This policy was suggested in 2000 by the "Rural Task Force," which said that there should be "no barriers to advanced services." *See Federal-State Joint Board on Universal Service*, CC Docket No. 96–45, *Rural Task Force Recommendation To The Federal-State Joint Board On Universal Service,* released Sept. 29, 2000, at 22 (policy should incorporate the following principles: a. Universal Service funding should support plant that can, either as built or with the addition of plant elements, when available, provide access to advanced services. State commissions could facilitate this infrastructure evolution and may make an exception for carriers with functional but non-complying facilities. b. Telecommunications carriers should be encouraged by regulatory measures to remove infrastructure barriers relating to access to advanced services. c. The Federal Universal Service support fund should be sized so that it presents no barriers to investment in plant needed to provide access to advanced services. Specifically, to remain "sufficient" under

this was a creative way to advance broadband deployment, it has been controversial, and it has not been applied to all carriers equally. In most states, nearly all of the customers of "rural" carriers have access to advanced broadband networks; but it is also common to learn that their rural neighbors who happen to be served by larger carriers cannot get DSL.

Congress should consider amending section 254 in a way that authorizes support for broadband, but that does not unintentionally disqualify existing ETCs. The chosen path should provide support in rural areas without regard to the size of the carrier that happens to serve the area. One step in the right direction would be to amend section 254(c) to allow some services to be supportable without also being mandatory.

Subsection 254(e)

Congress might also clarify the statutory injunction in section 254(e). This statute limits the uses of support "only for the provision, maintenance, and upgrading of facilities and services for which the support is intended." Several ambiguities arise under this language. Incumbent LECs sometimes argue that this language requires no more than that they continue to provide minimally adequate service over their existing facilities. Since all Federal high-cost support becomes revenue to these carriers, and since they provide the minimally acceptable level of service, this standard in some cases does not have much effect on either services or rates.

Under FCC guidance, ETCs must today make annual reports to the FCC.[7] Those reports must include a report on progress under the carrier's "five-year service quality improvement plan."[8] However, nothing in the current rules requires network improvement plans to include broadband by any date-certain. The reports must also include "the number of requests for service from potential customers . . . that were unfulfilled during the past year" and how the carrier "attempted to provide service to those potential customers."[9]

More rigorous approaches are possible. For example, Verizon-Vermont's "Model-based" high-cost support increased significantly in 2000. That increase has been distributed as explicit credits on monthly customer bills.[10]

If Congress wishes to achieve more significant or more demonstrable results from Universal Service support, it might clarify subsection 254(e). One option would be to mandate that all high-cost funds appear as explicit credits on customer bills.[11] Alternatively, if Congress wishes to allow carriers to continue treating Universal Service support as carrier revenue, it might directly mandate that carriers adopt service quality improvement plans and further mandate that those plans call for broadband by a specific date.

Information Services

As the last part of the question suggests, recent FCC decisions narrowing the definition of "telecommunications services" may have created a barrier to providing Universal Service support to broadband.

Some broadband services still are telecommunications services,[12] but the FCC has declared a wide range of retail broadband services to be "information services," including cable modem service[13] and "facilities-based wireline broadband Internet access service" (DSL).[14] Moreover, the FCC has repeatedly stated that when a service is an "information service" it cannot also be a "telecommunications service."

---

the 1996 Act, the Fund should be sized so that investment in rural infrastructure will be permitted to grow.)

[7] *See* 47 C.F.R. § 54.209.

[8] *See* 47 C.F.R. § 54.209(a)(1).

[9] *See* 47 C.F.R. § 54.209(a)(3).

[10] The current credit for residential customers is $1.41. Higher credits are given to business customers, because they have larger bills.

[11] Carriers are currently explicitly permitted to show Universal Service contributions as explicit charges, and all or nearly all do so.

[12] For example, special access circuits are broadband services, but they do not necessarily connect to the Internet.

[13] *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Internet Over Cable Declaratory Ruling, Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, GN Docket No. 00–185 & CS Docket No. 02–52, Declaratory Ruling and Notice of Proposed Rulemaking, 17 FCC Rcd 4798 (2002) (Cable Modem Declaratory Ruling and NPRM); aff'd *National Cable & Telecommunications Ass'n* v. *Brand X Internet Services*, 125 S. Ct. 2688 (2005).

[14] *Appropriate Framework For Broadband Access To The Internet Over Wireline Facilities*, CC Docket No. 02–33, Report and Order and Notice of Proposed Rulemaking, released Sept. 23, 2005, 20 FCC Rcd. 14,853.

Various provisions of 47 U.S.C. § 254 suggest that Federal support may be provided only to support "telecommunications services." For example, subsection (c)(1) says that "[u]niversal service is an evolving level of telecommunications services." A more specific passage in that same paragraph states:

> 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*. . . .[15]

This implies that only telecommunications services may be included in the definition of "services that are supported by Federal Universal Service support mechanisms." The argument is only strengthened by subdivision (c)(3) which allows the schools and libraries and healthcare programs to support "additional services" not on the official list.

On the contrary, it is also clear that section 254 establishes an overall goal of promoting access to advanced services. This is evident in subdivision (b)(2) which sets the goal of providing "Access to advanced telecommunications and information services in all regions of the Nation." However, such a general goal may not be sufficient to override specific contrary terms in the operational parts of section 254.

On balance, I believe that under the existing statute there are serious questions about:

1. whether Federal funds may be used to support services that are not on the list of supported services under section 254(c)(1); and
2. whether an information service can be a supported service.

I recommend that Congress clarify subsection 254(c) on these points.

Question 3. Currently the wireless eligible telecommunications carriers (ETCs) receive Universal Service support on a "per customer" basis based on the "per line" costs of the *wireline* carrier in the same geographic area. This is sometimes called the "identical support rule" and ensures that different communications platform providers receive the same amount of "per line" support. One criticism of the so-called "identical support rule" for Universal Service is that it results in overly generous support to wireless carriers because levels of support are not based on the per line cost of providing *wireless* services. As a result, I have two questions——

- First, do you believe that Universal Service should support both wireline and wireless services in rural America?
- Second, would it be possible to construct a model for wireless carriers that would calculate support based on costs of *wireless* carriers, and what effect might that have on the size of the fund?

Answer.

Wireline and Wireless

Yes, I do believe that Universal Service should support both wireline and wireless services in rural America. However, as I explained above in some detail I have serious reservations about the Identical Support Rule.

We should seriously consider supporting wireless under a separate program. This would allow the separate programs to be designed more sensibly. They could reflect differences in signal propagation characteristics, differences in the extent of existing deployment, different deployment and service goals, and possibly by different expectations about how funds will be used and accounted for.

I would encourage the Congress to authorize matching grants as a way to increase deployment of both wireless and wireline broadband technologies. While these technologies can create significant revenue streams once facilities have been built, the initial construction costs are daunting, particularly in areas of low density and in areas where rugged terrain limits the propagation of wireless signals.

In my state, we face very real limits in current broadband deployment; but we are working hard to improve the situation. I don't think Vermont is unique in this regard. States can have very detailed and relevant knowledge about where broadband improvements are needed. Particularly if Federal funds are matched, Congress can be sure they will be spent wisely.

Wireless Cost Model

Yes, it is possible to construct a model of wireless costs, and that work is largely complete. A commercially available model was used, for example, in the recent Wyo-

[15] *See* 47 U.S.C. § 254(c).

ming project that Commissioner Landis described in his March 1 oral testimony.[16] There might be issues adapting it for FCC purposes, such as making all of the inputs public, but most of the technical challenges have been solved.

However, that is only a partial answer because a cost model only calculates costs. One also needs a *support model* to calculate support. Support models require additional data inputs and policy decisions. Support models also present the most difficult policy challenges, because they confront most directly the tension between competition and universal service.

One difficult issue for support models is carrier revenues. The common goal of support programs is to manage the payments that the carrier ultimately demands from its subscriber. Support is adjusted to keep these payments within limits, using standards such as "affordable" or "reasonably comparable." In reality, those customer payments are affected by the carrier's entire business model, and that certainly includes payments made to and revenues received from other carriers. Carriers now produce many kinds of revenues, only some of which are "regulated" in the classical sense. Although this is a complex policy area, current FCC support mechanisms could be improved to make these revenue assumptions more explicit and more comprehensive. Notably, we should carefully consider whether to include revenue from unregulated services.

Another difficult issue is the location of the service. Support models typically associate support with particular areas, and they locate customers by their billing addresses. For wireline service, this practice makes sense because wireline customers typically receive and use the service at their billing location. That is not true for wireless, however. A wireless customer's billing address can have little relationship to service; some wireless customers cannot even get a signal at home. Moreover, wireless facilities are often constructed primarily to serve passing customers who are billed in other places. Consider a cell tower located next to a remote stretch of interstate highway. The number of customers who have a nearby billing address bears no relation to the reason that tower was built, and it would be a mistake to assume that the tower is serving only those customers who have local billing addresses.

The most difficult issue for both cost models and support models is how to account for multiple networks. Consider wireline carrier "A" that provides retail telephone service and also provides special access. Consider also wireless carrier "B" that uses A's special access circuits to connect its cell sites.

First, consider the complications for the cost model. A realistic estimate of B's costs requires one to know how much B must pay A for those special access circuits. Furthermore, A and B may share some facilities.[17]

For the support model the issues are even more complex, and they are fraught with policy judgments about whether support should be used to maintain multiple networks. Carrier A's support might be reduced, for example, to the extent it draws (or ought to draw) special access revenue from B. Conversely, if we expect B to continue providing service, it might be necessary to increase A's support as B captures more of A's retail customers. This is exactly contrary to the original expectations of the Joint Board about how competition would affect support, which assumed that support would move away from A when B captured A's customer.

In short, even if one has already developed a good wireless cost model, calculating support still requires resolution of several significant policy issues. Therefore, the availability of a wireless cost model is only the first of several difficult steps in developing a support mechanism.

The current size of the high-cost fund, $4.3 billion, is probably sufficient to maintain a quality wireline and a quality wireless network. However, there are major tasks ahead. We should establish universal or near-universal wireless coverage and broadband coverage, and we should reduce existing inequities that treat some rural customers much better than others. Solving these problems will require us to make a difficult choice between either allowing the Fund to grow still larger or reallocating existing support by employing a new and more rational allocation system.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO HON. JOHN DOWNES BURKE

Question 1. There has been a lot of talk about reforming the USF contribution assessment system. Much of this discussion has focused on moving toward a "num-

[16] The model is sold by CostQuest, a company located in Cincinnati, Ohio.

[17] Similar issues arise between competing wireline carriers. Cost models must make assumptions about the sharing of facilities that are used in common.

bers-based" system that would assess a per-line fee on all working telephone lines. Do you believe that this could be implemented in a way that would not harm low-volume and low-income telecommunications consumers?

Answer. Yes, a numbers-based contribution method could be implemented without harm to low-income and low-volume consumers, but some versions of a numbers-based plan could cause harm.

Currently USF contributions are made as a percentage of interstate and international retail phone bills. Some carriers, such as wireless carriers and VoIP providers, are allowed to use a "safe harbor" calculation that presumes that a fixed percentage of their traffic is interstate and subject to the USF charge.

A customer who avoids all usage charges for interstate and international calls ("toll-free customer") typically pays the USF charge only on the Subscriber Line Charge (SLC). Currently the national average residential SLC is $5.81 and the current USF rate is 11.7 percent. Therefore, an average toll-free customer currently contributes about $0.68 per month to USF.

Low-Volume Customers

Shifting the contribution basis from revenues to numbers would have two effects.

- It would reduce contributions from customers who have large interstate or international service bills but few telephone numbers. Such customers likely include many business customers who have substantial expenditures for interstate services such as toll services and interstate "special access" (point-to-point) lines. Some residential customers also have substantial interstate or international toll calling bills.
- It would increase contributions from customers who have modest interstate service bills or many telephone numbers. Most customers who make few telephone calls would pay larger contributions.

Some proposals for shifting to telephone numbers also would impose the unit USF charge on "connections" or special point-to-point circuits. This question should not be overlooked.

For example, a "T–1" or "DS–1"telephone line can be thought of as a single "connection" or as 24 voice-grade channels. A "T–3" or "DS–3" line can be thought of as one "connection" or as 672 voice-grade channels. A contribution mechanism that imposes some form of charge on such special access circuits would likely reduce charges on low-volume customers. A plan that requires greater contributions from larger capacity special access circuits would further reduce any potential harm to low-volume customers.

As noted above, the current USF charge for a toll-free wireline customer is probably about $0.70 per month. Estimates of a numbers-based contribution methodology were recently filed with the FCC in its intercarrier compensation docket.[18] That filing estimated the effect of collecting Universal Service revenues through a surcharge imposed on 614 million telephone numbers and special access connections.[19] Based on that estimate, current USF costs[20] could be covered by a uniform surcharge of almost exactly $1.00. [21] Therefore a telephone number-based contribution method would likely increase payments by toll-free wireline customers by about $0.30 per month.

Prepaid wireless users often have small monthly bills as well. The current USF charge for a minimally used prepaid wireless customer is about $0.45 per month.[22] A plan that would increase contributions to $1.00 per month would therefore roughly double the burden of USF charges on such customers. *This could also produce significant harm to the carriers that offer prepaid wireless service, reducing the cost advantage they currently enjoy as against post-paid wireless plans.*

---

[18] *See* Letter to Marlene Dortch, Secretary of FCC, January 30, 2007, in CC Docket No. 01–92, Missoula Plan Amendment to Incorporate a Federal Benchmark Mechanism, filed by Indiana Utility Regulatory Commission, Maine Public Utilities Commission, Nebraska Public Service Commission, Vermont Department of Public Service, Vermont Public Service Board, Wyoming Public Service Commission.

[19] Lifeline customers were excluded.

[20] The second quarter USAC report shows high-cost programs costing, on an annualized basis, $4.35 billion, and the entire USF program at $7.36 billion.

[21] The intercarrier compensation filing estimated a charge of $0.95 producing $6.97 billion.

[22] Prepaid wireless customers ordinarily have monthly bills of about $10. Under the FCC's safe-harbor rule for wireless, 37.1% of such retail bills are considered interstate. At the current USF rate of 11.7%, a prepaid wireless customer would pay $0.43 per month in USF charges.

Low-Income

Many low-income wireline customers limit their toll calls, and they can also be expected to avoid the more expensive "bundles" that include unlimited toll services. Therefore, a wireline customer who is a low-volume customer is likely to be a low-income customer as well. The same is true of wireless services. Prepaid wireless services are substantially less expensive than post-paid subscriptions provided by the major carriers. Prepaid wireless carriers assert that they serve predominantly low-income customers.[23] Therefore a change that increases the burden on low-volume customers is likely to increase the burden on low-income customers.

If a per-number contribution mechanism would indeed harm low-income customers, that harm might be mitigated or even offset by exempting Lifeline customers from paying the USF charge.[24]

Question 2. The concept of reverse auctions has been widely discussed as one solution to the problem of unchecked High-Cost Fund growth. How fast do you believe a reverse auction program could be implemented? Why is it better than other approaches—such as study area caps or disaggregation? And, if implemented, what sort of savings do you think reverse auctions would provide?

Answer. As I discussed above, current Universal Service policy takes a pro-competitive stance about the number of competitors who can receive support in a single area. The Identical Support Rule ("ISR") treats all ETCs as equal, but it has shown itself incapable of restraining fund growth. I believe we should replace the ISR with a plan that supports fewer carriers in high-cost areas. However, this will require us to differentiate between the winners who will get support and the losers who will not. This is a difficult and distasteful task because of the economic effects of Universal Service support. If we give Universal Service support to a single carrier, that carrier will have an enormous competitive advantage. It may be sufficient to effectively block robust wireline competition in that local exchange market.

Auctions offer the conceptual possibility that we could select one or two networks for support, but without the usual dilemmas. With auctions, the FCC might be able to use a facially neutral process that rewards the most efficient competitor, but without having to overtly pick an exclusive franchisee. In short, auctions offer a theoretical possibility that we could limit fund size in a way that minimally harms competition and which lets the process, rather than the regulators pick the winners.

But I am not convinced that auctions can be implemented successfully as a full replacement for the existing systems. We have received many proposals, but they differ radically on fundamental points. These include:

- Should auctions be held in all areas or only in competitive areas?
- Should there be a separate wireless auction?
- Should there be one winner or many?
- What Carrier of Last Resort obligations should be imposed on winners?

In addition, I have several practical concerns about auctions:

- An auction might simply fail. Bids might be higher than the current amount of support, or there might be no bids at all.
- Networks are interdependent, and awarding support through an auction process disturbs that system. Bidders may be forced to assume that their competitor's wholesale services will always be available.
- Two years ago the FCC was told by the Tenth Circuit Court of Appeals, for the second time, that our current support mechanism for large carriers does not provide demonstrably sufficient support. This is an important problem for rural customers in many parts of the country who happen to be served by Bell companies. Auctions are not likely to address that issue fully.

Study area caps might be imposed to halt growth in the Fund size, but this should be only a very short-term solution because it would perpetuate the inequities in the

---

[23] For example, TracFone Wireles, Inc. filed comments at the FCC in 2002 asserting:

"As a prepaid wireless carrier, TracFone appeals to many low-income customers who are unable to pass a credit check or to afford security deposits required by other CMRS carriers, as well as many wireline carriers. Approximately 11 percent of TracFone's customers have annual incomes of less than $15,000 and approximately 16 percent of TracFone's customers have incomes under $25,000."

Comments of TracFone Wireless, Inc., filed April 22, 2002 in *Federal-State Joint Board on Universal Service*, FCC Docket 96–45.

[24] This was a feature of the per-number mechanism mentioned above that was filed in the FCC's intercarrier compensation docket by several state commissions.

current system. To the extent that the current system provides too much support to some small suburban carriers, and too little support to some large rural carriers, a cap would likely prevent adjustments to those support levels. Networks are dynamic, and telecommunications policies are changing rapidly. Freezing the *status quo* for Universal Service support would ignore the dynamic nature of this network and make the system's current imbalances even worse over time.

Disaggregation is an interesting idea, and it may be desirable, but it is not a plan for fundamental reform. First, most exchanges in the U.S. are already disaggregated. The FCC simply mandated that support be disaggregated for areas served by large, so-called "nonrural" companies. In these areas, changing line counts every quarter increase or decrease the support received by ILECs and CETCs alike. Therefore, disaggregation, even if it were mandated, would likely affect a small number of customers.

Second, disaggregation does not always save money. While the carriers have shown that it would reduce their support in particular cases, this has not been shown to be generally true.

Third, disaggregation maintains the Identical Service Rule ("ISR") but applies it in a more geographically precise way. I explained above my concerns about the ISR. In brief, it relies upon the wireline carrier's exchange boundaries and the wireline carrier's exchange costs in order to calculate support for a carrier that often does not have exchange boundaries and that has different costs. Making such a rule more geographically sensitive might be an improvement, but it ignores more fundamental issues.

Question 3. Can reverse auctions be implemented in a manner that is truly competitively and technologically neutral? Wouldn't such a plan inevitably mandate technology-based "winners" and "losers?"

Answer. I am not sure that it is possible for any Universal Service mechanism that distributes a finite support amount to be "truly competitively and technologically neutral." Inevitably, Universal Service support presents a dilemma. We cannot afford to pay support to all carriers, nor would that accomplish anything useful. Nevertheless, we consider it repugnant to provide support to only one or two carriers, thinking that is inconsistent with neutrality.

The current Fund growth among CETCs illustrates, in my view, why we cannot afford a solution that is truly competitively and technologically neutral. At most, I would suggest that we should seek competitive neutrality within the constraints imposed by other more basic principles.

It is difficult to design an auction that has no technological bias. Wireline and wireless services have different characteristics and deployment levels, and any such difference could be disqualifying. For example, cell site backup batteries generally cannot sustain operations for 12 hours without a recharge. Suppose an auction process required bidders to provide fully functional service for 24 hours following a power failure. That requirement would prevent most wireless carriers from offering bids and thus would not be considered as competitively neutral.

Even when an auction is facially neutral, the award of support to a single bidder is itself likely to create a preferential result. Universal service support can provide a significant competitive advantage to the carriers that receive it.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO HON. BILLY JACK GREGG

Question 1. In 1997, the FCC adopted the principle that its Universal Service policies should be "competitively neutral." In explaining this principle, the FCC concluded that "competitive neutrality means that Universal Service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another." But it seems that people have different views as to how that principle should be applied, particularly when it comes to providing support for different kinds of communications platforms. As members of the Joint Board, do you believe that this remains a valuable principle, and how should it be applied to competition both among and between communications platforms?

Answer. Competitive neutrality remains a valuable principle of universal service. All eligible telecommunications carriers (ETCs) should be eligible for USF support, regardless of the technology used to provide service. However, many people confuse the issue of competitive neutrality with the issue of equal per line support. The two issues are not necessarily the same.

As originally conceived, all high-cost support for all carriers was to be based on the forward-looking economic costs of serving each area, as determined by an econo-

metric model.[1] As a result, the costs of serving a particular area would not be based on any individual carrier's costs, and the per line support available for serving a customer in that area would be the same regardless of the technology used to serve the customer. ETCs, using whatever technology they chose, would compete for this support by competing for customers. Whichever ETC could provide high-quality service in the most cost-effective manner would garner more support than other ETCs. Under this approach new technologies could enter a market and compete on equal footing with entrenched incumbents. In other words, legacy high-cost support would not confer an unfair advantage to the incumbent carrier.

Unfortunately, this is not the way it has worked out. Support based on forward-looking economic cost has never been extended to rural carriers. Instead, support for rural carriers is still based on each rural carrier's embedded (legacy) costs. In addition, access replacement support for both rural and non-rural carriers is still based on embedded costs.[2] Under the equal support rule ETCs with very different cost structures than an incumbent wireline carrier nevertheless receive the same amount of per line support as the incumbent carrier. Ironically, as an incumbent rural carrier loses lines, the amount of per line support goes up, increasing the per line support for the competitive ETC as well.[3]

Even worse, ETCs rarely compete for support. Since the FCC adopted a policy in 1999 of supporting all lines of all ETCs in high-cost areas, wireless ETCs have been able to receive support for providing supplementary lines in high-cost areas. In other words, wireless ETCs—sometimes several wireless ETCs in the same high-cost area—are able to draw new support while the incumbent does not lose any support.[4] This has caused the amount of high-cost support to multiply in many high-cost areas. For example, within the ATT/BellSouth service territory in Mississippi, ATT/BellSouth draws $101.2 million in high-cost support, while sixteen competitive ETCs draw $118.5 million.[5]

The Commission needs to address the equal support rule if support for all carriers is not going to be based on forward-looking costs. As an interim step, the FCC should require support in rural study areas to be based on each ETCs own costs, capped at the costs of the incumbent carrier. While this action may trim some excess, it will do little to address the runaway growth of the Fund which is caused by supporting multiple ETCs in high-cost areas. The high-cost fund can be placed on a sustainable basis only by limiting the amount of support available for each high-cost area, and (1) requiring the ETCs to compete for the limited amount of support, or (2) limiting the support to only one ETC within each area. The first option would place the decision on which carrier wins the subsidy in the hands of the customer. The second option would require a regulatory authority to determine winners and losers among ETCs. This could be accomplished through a reverse auction mechanism.

Question 2. Section 254(c) of the Telecommunications Act of 1996 defines Universal Service as "an evolving level of telecommunications services" and also sets forth criteria that the FCC considers when it decides which services qualify as "supported services" eligible for Universal Service support. At present, it is my understanding that the Universal Service Fund does not support broadband service. But then, the question always arises—should it? And if so, when? Do you think that Universal Service should evolve to support broadband services, and if so, what would trigger such a determination?

Question 2a. Given that the law defines Universal Service as an evolving level of "*telecommunications services*" and given that the FCC has classified cable modem and DSL services as "*information services*," would the Congress need to change the statute to make broadband eligible for support?

Answer. Section 254(c)(1) sets forth the criteria which the Joint Board must consider in determining whether to add services to the definition of "universal service."

---

[1] See, *In re: Federal State Joint Board on Universal Service*, CC Docket No. 96–45, "First Report & Order" (May 7, 1997), ¶¶ 223; 273; 293–295. Larger non-rural carriers were to be moved to model-determined support first, followed later by smaller rural carriers.

[2] Access replacement support is provided by the Interstate Access Support mechanism for price cap carriers and Interstate Common Line Support mechanism for rate of return and average schedule carriers. These two mechanisms paid out $1.95 billion in support in 2006. The FCC has never explained how it will transition away from these embedded cost mechanisms.

[3] See, 47 C.F.R. §§ 36.601 *et seq*.

[4] In some instances wireless carriers were already providing wireless service without a subsidy for many years. Upon becoming an ETC, the wireless carrier is showered with support dollars simply for serving the customers that the carrier was already serving. In these cases, high-cost support to wireless ETCs is truly "found money."

[5] Universal Service Administrative Company, *Federal Universal Service Support Mechanisms Fund Size Projections for the Second Quarter 2007* (Nov. 2, 2006), Appendix HC01.

One of the most important of these criteria is that the service has "through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers."[6] The last time the Joint Board considered adding broadband to the list of supported services in 2002, only 7 percent of residential customers actually subscribed to broadband.[7] According to the FCC's latest report on advanced services, 43.6 percent of residential customers subscribed to broadband as of June 30, 2006.[8] I believe that residential subscribership to broadband has now passed 50 percent, and it is time for the Joint Board to once again consider adding broadband to the list of supported services. However, there may be statutory impediments to taking this action, as discussed in the answer to the next question.

Answer. Obviously, Section 254 is not a model of clear draftsmanship. Section 254(c)(1) states: "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*." I believe the clear intent of Congress was to allow the definition of Universal Service to expand to include broadband when broadband services become a widespread and essential part of the national telecommunications landscape. However, because the FCC has defined cable, wireline and wireless broadband services as "information services" with a "telecommunications component,"[9] broadband may not qualify for inclusion in the definition of Universal Service since it is not a "telecommunications service" as required by the current wording of Section 254(c)(1).

In Section 706 of the Act, 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." In the *Second Report on Advanced Services* the FCC defined "advanced telecommunications capability" and "advanced services" as services providing transmission speeds of more than 200 kilobits per second in both directions (upstream and downstream).[10] The FCC's usage of the term "advanced services" has generally been synonymous with the term "broadband."

The linkage of Universal Service to advanced services is obvious in the wording of the Act. Section 254(b)(2) states: "Access to advanced telecommunications and information services should be provided in all regions of the Nation." Section 254(b)(3) states: "Customers 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." Section 254(b)(6) states: "Elementary and secondary schools and classrooms, healthcare providers, and libraries should have access to advanced telecommunications services as described in subsection (h) of this subsection."[11]

The above-quoted portions of Section 254 appear to give the FCC sufficient authority to support advanced services. In fact, advanced services are currently supported under both the Schools & Libraries Fund and the Rural Health Care Fund of the USF, even though advanced services or broadband are not currently included

---

[6] Section 254(c)(1)(B) of the Act.

[7] *In the Matter of Federal-State Joint Board on Universal Service*, CC Docket No. 96–45, "Recommended Decision" (July 10, 2002), at ¶ 13.

[8] *High Speed Services for Internet Access as of June 30, 2006*, FCC Industry Analysis & Technology Division, Wireline Competition Bureau (Jan. 2007). As shown on Table 3, 50.2 million residential customers subscribed to high-speed broadband services as of June 30, 2006. This represents 43.6 percent of the 115 million households in the United States.

[9] See for example, *In the Matter of Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, CC Docket No. 02–33, "Report & Order & Notice of Proposed Rulemaking" (Sept. 23, 2005), at ¶¶ 12; 105: " The record demonstrates that end-users of wireline broadband Internet access service receive and pay for a single, functionally integrated service, not two distinct services. This conclusion also is consistent with certain past Commission pronouncements that the categories of 'information service' and 'telecommunications service' are mutually exclusive. . . . We conclude now, based on the record before us, that wireline broadband Internet access service is, as discussed above, a functionally integrated, finished product, rather than both an information service and a telecommunications service."

[10] *In the Matter of Inquiry concerning the Deployment of Advanced Telecommunications Capability to All Americans*, CC Docket No. 98–146, "Second Report" (Aug. 21, 2000), at ¶ 11.

[11] Section 254(h)(1)(B) requires that telecommunications services included in the definition of Universal Service be provided to schools and libraries "at rates less than the amounts charged for similar services to other parties," while Section 254(h)(2) requires the Commission to establish rules "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, healthcare providers, and libraries . . .".

in the definition of "universal service." While an argument could be made that broadband can be supported under the current language of Section 254, to remove all doubt it may be necessary to amend Section 254(c)(1) as follows: "Universal service is an evolving level of telecommunications *and information* services that the Commission shall establish periodically under this section, taking into account advances in telecommunications and information technologies and services." (New language in italics.)

Question 3. Currently the wireless eligible telecommunications carriers (ETCs) receive Universal Service support on a "per customer" basis based on the "per line" costs of the *wireline* carrier in the same geographic area. This is sometimes called the "identical support rule" and ensures that different communications platform providers receive the same amount of "per line" support. One criticism of the so-called "identical support rule" for Universal Service is that it results in overly generous support to wireless carriers because levels of support are not based on the per line cost of providing *wireless* services. As a result, I have two questions——

- First, do you believe that Universal Service should support both wireline and wireless services in rural America?

Answer. Please see my response to the first question above. Currently, both wireline and wireless services are supported. During 2006 wireless ETCs received $1 billion in high-cost support. As discussed above, the problem with the current system is that it supports all lines of all ETCs in high-cost area without any restriction on the total amount of support and without requiring ETCs to compete for the support. The result has been runaway growth of the high-cost fund, from $1.7 billion in 1999 to $4.1 billion in 2006. Under either solution to this unsustainable growth—competition among ETCs or limitation of support to a single ETC—wireless ETCs should be allowed to compete on the same basis as wireline incumbent carriers.

Another alternative would be to create a separate wireless infrastructure fund, similar to the Schools & Libraries Fund, to promote wireless build-out in rural areas. Under this approach, a set amount of support would be made available each year specifically to subsidize construction of additional wireless tower sites in rural areas where such construction is currently uneconomic. Over time, a wireless infrastructure fund would ensure that customers in rural areas would have access to the same level of ubiquitous wireless service as is enjoyed by urban customers.

Question 3a. Second, would it be possible to construct a model for wireless carriers that would calculate support based on costs of *wireless* carriers, and what effect might that have on the size of the fund?

Answer. While it would certainly be possible to construct a separate model for wireless carriers, it would have little impact on the overall size of the high-cost fund. As stated above, the main issue driving the size of the Fund is not equal per line support, or how that per line support is calculated; it is the fact that the current system supports all lines of all ETCs in high-cost areas. It makes no sense to subsidize two, three or more providers in areas where costs are so high that not even a single carrier can provide service without a subsidy. As discussed in answer to the first question above, support should normally go to the carrier that can provide service in the most cost-effective manner in high-cost areas, irrespective of whether that carrier is a wireline carrier or a wireless carrier. As discussed below, one way to get direct information on different carriers' costs is head-to-head competition through reverse auctions.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO HON. BILLY JACK GREGG

Question 1. There has been a lot of talk about reforming the USF contribution assessment system. Much of this discussion has focused on moving toward a "numbers-based" system that would assess a per-line fee on all working telephone lines. Do you believe that this could be implemented in a way that would not harm low-volume and low-income telecommunications consumers?

Answer. No. Any move from a USF contribution system based on usage to a contribution system based on access will inevitably shift cost responsibility from high-volume users of telecommunications services to low-volume users. An access-based contribution system, whether it uses numbers or connections, assesses every point of access the same, regardless of the amount of usage through that point of access. As a result, a customer with $1,000 of monthly usage through a point of access would pay the same USF contribution as a customer with $0 monthly usage. While it may be possible to mitigate the impact on low-usage customers by placing more

USF revenue responsibility on high-capacity data lines, the cost shift to low-usage customers cannot be eliminated.

I believe a better approach to increasing the contribution base would be to remove the current statutory restriction on assessing all revenues. Section 254(b)(4) states: "All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service." However, Section 254(d) limits this obligation to "Every telecommunications carrier that provides *interstate* telecommunications services. . . ." The Fifth Circuit Court of Appeals ruled in 1999 that the statutory language in Section 254(d) limits the FCC to assessing only interstate revenues as the basis for contributions to the USF.[12] In 2003 the Joint Board forwarded to Congress recommended language to broaden the FCC's assessment authority.[13] I continue to support that recommendation. The proposed statutory changes to Section 254(d) are as follows: *"Notwithstanding the provisions of Section 152(b) of this Title*, ~~E~~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." (Additions underlined; deletions of existing language marked by strikethroughs.)

Question 2. The concept of reverse auctions has been widely discussed as one solution to the problem of unchecked High-Cost Fund growth. How fast do you believe a reverse auction program could be implemented? Why is it better than other approaches—such as study area caps or disaggregation? And, if implemented, what sort of savings do you think reverse auctions would provide?

Answer. A reverse auction program could be implemented rather quickly if it was done in the manner suggested by Verizon.[14] Verizon proposes that the high-cost fund first be capped by study area, with a separate cap for wireline and wireless ETCs. Reverse auctions would first be conducted in study areas with multiple wireless ETCs to determine which single wireless ETC would receive support. Reverse auctions could later be conducted between the wireline ETC and wireless ETC in each study area (or within subdivisions of the study area) to determine which single ETC would receive support.

As discussed above, reverse auctions would be used in conjunction with study area caps to maintain stability in the Fund while the auctions were phased in. Over time, reverse auctions should reduce the overall size of the Fund as support for multiple ETCs within the same study area is eliminated. One of the most attractive features of auctions is that they allow market forces to be injected into the USF support system. Periodic reverse auctions will also capture changes in technologies and underlying costs over time.

Savings achieved by auctions in study areas with excessive support could be used along with disaggregation to address the issue of the current maldistribution of support among states and among study areas. In other words, while there are high-cost areas which currently receive too much support, such as the example of Mississippi cited above, there are other high-cost areas that receive no support. This is usually due to the fact that these high-cost areas are served by non-rural instead of rural incumbent carriers. Updated computer models could determine the forward-looking economic cost to serve every area in the United States, irrespective of which incumbent carrier serves that area. These disaggregated costs could then be used as the basis for "reserve prices" in future auctions.[15] Reserve prices could be adjusted to fit whatever total amount of support is available.

Question 3. Can reverse auctions be implemented in a manner that is truly competitively and technologically neutral? Wouldn't such a plan inevitably mandate technology-based "winners" and "losers?"

Answer. By its very nature, a reverse auction will be competitive and will inevitably determine winners and losers of the explicit USF subsidy for serving high-cost areas. If price is the only criteria considered in a reverse auction, then the auction process will favor those technologies with the lowest cost structures. This would tend to favor wireless carriers in most parts of the Nation. However, in any reverse auction the determination of the criteria that all bidders must meet is critical. Under Section 214(e) of the Act, an ETC must be able to deliver all of the supported services throughout the designated area. This may be difficult to achieve for many

[12] *Texas Office of Public Utility Counsel* v. *FCC*, 183 F.3d 393, 448 (5th Cir. 1999).

[13] Letter from the Federal-State Joint Board on Universal Service to the Hon. Conrad Burns, dated May 19, 2003.

[14] See Verizon *ex parte* filing with the FCC, February 9, 2007.

[15] A "reserve price" is a price above which bids will not be accepted. Stated another way, a reserve price is the highest level of support a regulator is willing to pay in a particular area.

wireless carriers, especially those that have not built out their networks in rural areas. This is why I suggested above that a separate rural wireless infrastructure fund may be the most appropriate way to ensure the build out of wireless service to all parts of our Nation.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. DANIEL K. INOUYE TO DAVID CROTHERS

Question. There is a proposal before the FCC to restrain the growth of the Universal Service Fund by using "reverse auctions." Under this proposal, carriers would bid for the right to provide service in a given service area, for a given time with the entity making the lowest bid winning the right to receive support. While I appreciate the benefits of reverse auctions, I also worry about potential costs like lower service quality in rural areas, and the potential for creating "stranded costs" for auction losers that might harm access to capital.

- What effect would the possibility of losing support have on the ability of carriers to attract private investment from capital markets?
- What would happen if a provider wins the auction by bidding too much, and then responds later by raising prices or reducing service quality?
- What effect would reverse auctions have on those providers that fail to win support and their ability to roll out new services in rural America?

Answer. Senator, the North Dakota Association of Telecommunications Cooperatives (NDATC), the National Telecommunications Cooperative Association (NTCA) and the universe of rural communications providers that are members of these two organizations certainly share your concerns with regard to the general concept of reverse auctions for the primary reason that they most certainly would lead to stranded investment, placing systems that were built with Universal Service dollars and Federal Rural Utilities Service loans at great risk of failure. Indeed, last October, NTCA commissioned a review of the subject of using reverse auctions to distribute Universal Service support which concluded that moving in this direction with regard to areas with existing infrastructure and ubiquitous service would be a serious mistake. The paper prepared by Alaska Pacific University Professor Dale E. Lehman demonstrates the difficulties and dangers and inherent issues in applying reverse auctions in areas with existing infrastructure. Based on Lehman's findings, correctly designing and implementing an effective reverse auction mechanism for rural markets will prove tremendously challenging, if not impossible.

According to the comments, while reverse auctions may be an appealing theoretical concept, their practical application is fraught with uncertainty and risk. Additionally, a reverse auction would be time and labor intensive, prohibitively expensive, and technically burdensome. The cost of administering the reverse auctions, preventing fraud, and monitoring the results would ultimately increase the size of the Universal Service Fund and could outweigh any potential benefits gained from the process according to the author.

With regard to your specific question of what effect the possibility of losing support via an auction process would have on a carriers ability to attract private investment, we believe it is undeniable that the impact would be dramatic. For the Nation's smallest carriers the impact would be particularly devastating. Today, policy modifications, or even the potential of such modifications is turning our industry's cost recovery ability and stability on its head. Rural carriers have traditionally not been of a size that they are able to attract the interest of capital markets either nationally or locally. This is why Universal Service is so important to rural carriers. It is a cost recovery source, but it is also a necessary revenue stream that is essential to their ability to secure financing from the three primary sources of capital that are available to them, the Rural Utilities Service, CoBank, and the Rural Telephone Finance Cooperative (RTFC).

Your question regarding what would happen if a provider wins the auction by bidding too much and then responds later by raising prices or reducing service quality is entirely justified. This is a fear that we outlined in our comments to the Federal Communications Commission on the subject of reverse auctions. Indeed, it would be virtually impossible to prevent this sort of scenario from playing out under a reverse auction system. And as your question alludes, the real loser would not be the provider, but the consumer. Again, we think questions like this raise such dramatic possibilities as to invalidate the concept from being considered any further whatsoever.

Finally, on the matter of what would happen to providers that fail to win support under a reverse auction system, the response is very simple. They would quickly fail

and their most rural consumers would be those most hurt by the company's demise because any new carrier would be highly unlikely to extend support beyond the easiest to reach consumers that reside within the town or community itself. There are reasons why the Universal Service policy has evolved in the manner it has to best serve rural markets and that is because they simply cannot be squeezed into an economic theory and be expected to work. During the extensive debate leading to the development of the Telecommunications Act of 1996, NTCA and its Rural Telephone Coalition partners, OPASTCO and WTA prepared and widely circulated a report titled *Rural Is Different.* While its underlying message was so simple and so obvious, it was amazing at how hard we had to work to convince policymakers of its truth. Sadly it appears that only 10 years later, many of your colleagues have already forgotten the reality of this message.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO DAVID CROTHERS

Question 1. Is a reverse auction process the best way to reduce overall Fund growth? What do members of the panel think of other options, such as breaking up (or disaggregating) study areas to target funds to areas that are truly "High-Cost?"

Answer. Absolutely not! And we have been stating this fact *ad-nausea* for the past decade. Frankly Senator, NDATC, NTCA, and their hundreds of members cannot comprehend the reluctance of policymakers, either here on Capitol Hill, or at the Federal Communications Commission (FCC) to look to and apply the most obvious and simple remedies that would easily control the growth of the Universal Service Fund. Repeatedly we have suggested four ideas to accomplish this objective:

1. Apply a meaningful public interest test when considering future eligible telecommunications carrier (ETC) designations;
2. Eliminate the identical support rule that today provides support to competitors based on an incumbent's costs;
3. Provide alternative cost-based support to rural wireless ETCs; and,
4. Expand the base of USF contributors to include all broadband service providers.

Implementing this simple four pronged plan would immediately stem the flow of Universal Service dollars and restore the confidence of all Americans in this time-tested cornerstone of our national communications policy.

Question 2. If we move to a reverse auction process, isn't there a possibility that some providers may bid so low that they end up financially unable to provide service? Furthermore, if an "auction winner" went bankrupt, how can we be sure that households in that area continue to receive service?

Answer. Sir, these are exactly the sorts of questions we posed in our filings to the FCC and in the Lehman paper referenced in our response to Senator Inouye's questions on this subject. That paper was formally filed with the hearing record of this committee. At any rate, we think this is the sort of gamesmanship that could easily take place under the reverse auction scenario. At the very time when so many of your colleagues appear to be concerned about waste, fraud, and abuse with this or any other Federal oriented program, we think it would be unjustified to move in the direction of a concept such as this that sounds interesting in theory but falls apart immediately when looked at as a serious option. And of course you are right—consumers would be the ultimate losers in this scenario. Certainly, if the incumbent carrier had lost the auction to a low bidder, our viewpoint would be that the incumbent no longer has a responsibility of carrier of last resort obligations because they would not have the financial resources to make such a commitment. And, the entity that submitted the unrealistically low bid would be unable to fulfill the commitment as well, so there really would not be a good option for consumers in such a situation. That is why we believe reverse actions have no place in this discussion.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO BRIAN K. STAIHR, PH.D.

Question 1. There is a proposal before the FCC to restrain the growth of the Universal Service Fund by using "reverse auctions." Under this proposal, carriers would bid for the right to provide service in a given service area, for a given time with the entity making the lowest bid winning the right to receive support. While I appreciate the benefits of reverse auctions, I also worry about potential costs like lower service quality in rural areas, and the potential for creating "stranded costs"

for auction losers that might harm access to capital. What effect would the possibility of losing support have on the ability of carriers to attract private investment from capital markets?

Answer. Telecom networks are highly capital-intensive to operate, particularly in rural areas, and investors seek a commensurate level of security to offset the risk associated with the costs of network investments over time. In markets that are otherwise uneconomical to serve, Universal Service support is an important part of that cost recovery. Less certainty over the continued receipt of Universal Service support will translate into a higher cost of capital for telecom operators. In the case of reverse auctions, that uncertainty would have to be addressed by rules that ensure support will be specific, predictable and sufficient.

Question 1a. What would happen if a provider wins the auction by bidding too much, and then responds later by raising prices or reducing service quality?

Answer. Ensuring appropriate network investment, service quality and comparability of pricing is a challenge facing any reform of Universal Service programs. In the case of reverse auctions, we assume participants would be bidding to (at least) meet minimum requirements in each of these categories, as well as living up to the carrier-of-last-resort (COLR) requirements currently imposed on the incumbent carrier. We also assume there would have to be a failsafe mechanism to prevent a winning bidder from defaulting on those requirements.

Question 1b. What effect would reverse auctions have on those providers that fail to win support and their ability to roll out new services in rural America?

Answer. For the rural areas that are truly uneconomic to serve, the withdrawal of support would lead to a substantial elimination of new investment and likely discontinuance of services by those providers, because the ability to recover costs and earn a reasonable economic return on investment would no longer be there. While some rural town centers might continue to receive service from a carrier that failed to win support, those in the outlying areas would have to rely on the provider that *did* win support for service, and it would only be fair to transfer the carrier of last resort (COLR) requirement to the new provider (which would ultimately require cooperation with, or preemption of state authorities). For this reason, it is very important to target support to the geographic areas that need it the most.

Question 2. Dr. Staihr, I was interested in your testimony arguing that support should be provided on a more granular basis. Is this type of granular analysis administratively feasible and what steps would the FCC need to take to institute such a model?

Answer. Especially in recent years, with advancement in computing technologies, mapping software and the online availability of free mapping information, a granular analysis has become administratively feasible. Embarq has demonstrated this to its satisfaction by performing granular analysis on some of our serving areas for proof-of-concept purposes, and it was affirmed by two other witnesses at the February 20, 2007 *en banc* hearing of the Federal-State Joint Board on Universal Service. In an April 12 filing to the Joint Board, Embarq outlined 5 steps that the FCC could take to gather the information necessary for such a model:

1. Collect population density data from companies choosing to submit such data for study purposes;
2. Validate the population density data using Census data and establish the need for granular analysis;
3. Collect customer location data from the companies that qualify for granular analysis;
4. Select a suitable model for estimating cost of service; and
5. Identify the high-cost areas at a granular level using the selected model and submitted data.

These steps are explained in more detail, beginning on page 160 of our *ex parte* presentation, which I've attached, and we would be happy to discuss our proposal in further detail at your convenience.

Question 2a. Also, if distributions were made on a more granular level, what effect would it have on the overall size of the Fund and on the distribution of funds among carriers?

Answer. Making distributions on a more granular level would create countervailing pressures on the size of the Universal Service Fund. On the one hand, an appropriately targeted fund, by dispensing with statewide averaging for some carriers, would bring support to some very rural areas that currently receive no support at all, replacing unsustainable cross subsidies with explicit support.

At the same time, considering town centers separately from outlying areas could eliminate many of the most egregious arbitrage and windfall opportunities that are causing the Fund to grow out of control today. Ultimately, the impact on the Fund size would depend on the particular choices made in implementing more granular targeting. Eliminating the windfall opportunities and supporting rural areas independent of statewide averaging would create a much more equitable distribution among carriers and allow universal services distributions to be more closely aligned with economic costs.

Question 2b. What steps would states and/or the FCC need to take to do this kind of mapping?

Answer. Embarq's proposed steps are outlined in our *ex parte,* attached to this document. We have proposed a cooperative system where carriers could share data, but USAC could also gather publicly available data on population density and other factors affecting network costs.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO BRIAN K. STAIHR, PH.D.

Question 1. Is a reverse auction process the best way to reduce overall Fund growth? What do members of the panel think of other options, such as breaking up (or disaggregating) study areas to target funds to areas that are truly "High-Cost?"

Answer. I've attached Embarq's April 12 *ex parte* detailing our proposal for more granular targeting of support, which has the benefit of eliminating some of the windfall and arbitrage opportunities that are causing the Fund to grow, and ensuring that support flows to the most high-cost areas.

We believe such granular targeting is an important component of any attempt to reform Universal Service, regardless of whether the FCC pursues reverse auctions, provides explicit support for broadband, limits support to one carrier per geographic area or addresses many of the other difficult issues at hand.

After the March 1 Commerce Committee hearing and the tremendous focus on support for broadband, we believe that if Congress or the FCC made the decision to explicitly support broadband, identifying and targeting to the most high-cost areas would be an indispensable step to lay the foundations for such a move.

Question 2. If we move to a reverse auction process, isn't there a possibility that some providers may bid so low that they end up financially unable to provide service? Furthermore, if an "auction winner" went bankrupt, how can we be sure that households in that area continue to receive service?

Answer. Both good points. We assume any reverse auction system would have to include a qualification system to ensure that those who bid for support are capable of meeting the carrier-of-last-resort (COLR) requirements for that area, and are financially stable enough to minimize the risk of bankruptcy. In any event, any kind of USF reform would need a fail-safe mechanism to ensure that consumers and local businesses do not lose service.

EMBARQ™ CORPORATION
April 12, 2007

Commissioner DEBORAH TAYLOR TATE,
Federal Chair, Federal-State Joint Board on Universal Service
Federal Communications Commission
Washington, DC.

Commissioner RAY BAUM,
State Chair, Federal-State Joint Board on Universal Service
Oregon Public Utilities Commission
Salem, OR.

Ex Parte Presentation

RE: HIGH-COST UNIVERSAL SERVICE SUPPORT, WC DOCKET 05–337; FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE, CC DOCKET 96–45.

Dear Commissioner Tate and Commissioner Baum:

Embarq strongly supports the substantial and continuing efforts of the Federal-State Joint Board on Universal Service (the Joint Board) to reform the Federal Universal Service Fund (USF) so it may better advance the Universal Service goals set forth in the Telecommunications Act of 1996. Telecommunications markets have changed substantially in the decade since the current Federal USF was created and, accordingly, substantial reform is necessary to accomplish those goals. To this end, the Joint Board can best ensure that USF reform fulfills the statutory goals for Universal Service by recommending that the Federal Communications Commission:

1. Focus on correcting the structural problems caused by the multiplicity of support recipients and the misallocation of support;

2. Stabilize the current system of Universal Service support;

3. Limit the duration of a freeze or cap so as to make it temporary;

4. Initiate a study to identify the highest-cost areas at a granular level; and

5. Follow a clear and achievable process to complete the study, and then provide support dollars to the areas identified by the study.

If the Joint Board recommends these steps, and the Commission adopts them, Federal USF will become the "specific, predictable and sufficient"[1] program called for in the statute. Federal USF finally will provide "explicit"[2] support to those high-cost areas where it is truly uneconomic to provide service—that is to say where the marketplace conditions would not provide sufficient incentives for any carrier to offer service. This, in turn, will ensure that "quality services [are] be available at just, reasonable, and affordable rates"[3] that are that are "reasonably comparable" in rural and urban areas.[4]

I. The Joint Board Should Recommend Correction of the Structural Problems Caused by the Multiplicity of Support Recipients and the Misallocation of Support

There is widespread recognition that the current USF suffers from significant structural problems. In particular, the current USF does not satisfy important statutory criteria set forth in Section 254 of the Communications Act. It does not provide specific, predictable, and sufficient support in all (or even most) high-cost areas. The Federal USF does not adequately preserve and advance universal service, and it continues to rely on implicit rather than explicit support through extensive use of cost averaging in the face of competition that renders such an approach unspecific, unpredictable, and insufficient. Finally, the Federal USF does not ensure access to supported services at rates that are affordable, reasonable, and comparable to rates in urban areas.[4]

At the outset, Embarq emphasizes that USF reform need not impact many carriers, such as many small and mid-sized, rural incumbent local exchange carriers (ILECs), that are unaffected by the structural problems identified below. Indeed, these carriers would retain all of their current options under Embarq's proposals in this document, which would not necessarily alter USF treatment for those carriers. In particular, the study to more accurately identify high-cost areas to support that which Embarq proposes herein would be *voluntary* and any new support provided to previously-overlooked areas would come directly from correcting the structural problem of duplicative support. The study and related granular targeting of support would not, therefore, necessarily disturb USF treatment of currently-supported ILECs.

The record in this docket contains hundreds of filings, a great many of them detailing the problems and the urgent need for reform, and the Joint Board itself identified the problems and the need for reform at its last *en banc* hearing.[5] This evidence and analysis leads inexorably to the conclusion that the Joint Board should recommend, and the Commission should promptly reform two critically important structural flaws in Federal USF.

1. Duplicative support is being awarded to multiple competitive eligible telecommunications carriers (CETCs) operating in a single market area. This policy has been the primary source of excessive growth in USF support, as noted by Chairman Martin and others.[6] The multiplicity of support and excessive USF growth harms consumers everywhere by increasing both the cost to provide service and the aggregate demand for USF contributions.

2. At the same time, however, many of the highest-cost areas—many designated as "rural" and many others designated as "non-rural"—do not receive "sufficient" high-cost support. This was confirmed by the United States Court of Appeals for the Tenth Circuit[7] for the non-rural fund, and it is equally true for

[1] 47 U.S.C. § 254(b)(5).
[2] 47 U.S.C. § 254(e).
[3] 47 U.S.C. § 254(b)(1).
[4] 47 U.S.C. § 254(b)(3).
[5] Federal-State Joint Board on Universal Service En Banc Meeting February 20, 2007.
[6] Opening remarks of Chairman Kevin Martin, Federal-State Joint Board on Universal Service *En Banc* Meeting February 20, 2007.
[7] *Qwest* v. *FCC*, 398 F.3d 1222, 1234 (10th Cir. 2005).

many carriers that receive support under the rural fund due to the current practice of using averages (on a statewide or study area basis) to determine the need for support.[8] This failure to direct specific, predictable, and sufficient support to all areas that are truly uneconomic to serve harms consumers by inhibiting network investment in high-cost areas and perpetuating implicit subsidies in lower-cost areas.

The Joint Board can best accomplish its objectives by issuing a Recommended Decision that focuses on steps to eliminate these structural flaws. In particular, Embarq agrees with Windstream that the Joint Board should "recommend forward-looking and rational Universal Service reforms that target adequate explicit support to high-cost areas. To do otherwise, would perpetuate the inequities and insufficiencies in the current mechanism to the detriment of rural consumers and the Nation."[9] Moreover, by fixing this structural flaw, the Commission can finally comply with statutory mandates and the remand in *Qwest* v. *FCC*.

II. The Joint Board Should Recommend Stabilizing the Current System of Universal Service Support

The first step to fixing the USF structural flaws is to prevent further harm, and to do so sooner rather than later. The current growth in support, particularly increases that fund competition in areas where it is uneconomic for a single provider to offer service, harm consumers and investment. AT&T and Verizon[10] have each recently filed plans addressing this issue. Both of these plans propose that USF reform occur in two stages: (1) imposing a temporary freeze or cap on USF distributions to stabilize the system and permit the Commission to address current concerns regarding fund size, fund growth, and magnitude of contribution factor; and (2) restructuring the method by which USF support is distributed.

As the first phase of a two-phase plan, a temporary freeze or cap would accomplish the important goal of immediately eliminating any additional upward pressure on the end-user USF assessment, which is currently up to 11.7 percent. For the past 4 years, the overwhelming majority of the growth in high-cost support has been driven by growth in wireless receipts while wireline receipts having stayed constant or declined.[11] This has happened because wireline support has long been subject to a cap. Therefore, the most direct and narrowly-tailored, and competitively-neutral approach to the problem is to address wireless support during this interim period.

Given that the purpose and justification for a temporary freeze or cap is to support longterm reform, it is critical that the freeze or cap be accompanied by a study to identify the truly high-cost areas in the United States. The Joint Board should recommend, therefore, that the Commission conduct such a study during the course of a temporary freeze or cap. The public interest is best served through informed decisionmaking, which can only be helped through a study of the cost of providing service. In fact, this information is vital to any reform the Commission may consider, as explained below. A temporary freeze or cap will help ensure that the study results are relevant (the freeze or cap will help maintain the conditions that will be revealed through study) and accurate (the freeze or cap will help minimize gaming).

All other things being equal, a temporary freeze would be preferable to a cap in economic terms since it ensures that no individual recipient would be made any worse off or any better off as a direct result of the freeze during the interim timeframe. Conversely, a cap on funds may allow for the possibility of individual winners and losers *underneath* the cap as relative support amounts continue to be adjusted. This would be undesirable from a policy perspective as it would make study results less accurate and relevant to the Commission's objectives.

III. The Joint Board Should Recommend That Any Freeze or Cap Be Temporary

There are, of course, some risks involved in implementing any type of freeze or cap; one being the natural tendency to apply a temporary remedy and then act as if the problem has been solved. The Joint Board must emphasize, therefore, that

---

[8] *E.g.*, letter from Eric N. Einhorn, Windstream, to Deborah Taylor Tate, FCC and Ray Baum, Or. Pub. Serv. Cmm'n, WC Docket No. 05–337 filed April 2, 2007 ("Windstream Ex Parte").

[9] Windstream Ex Parte, at 3.

[10] *See* Letter from Robert W. Quinn Jr., AT&T, to Deborah Taylor Tate, FCC and Ray Baum, Or. Pub. Serv. Comm'n, WC Docket No. 05–337 filed March 22, 2007 ("AT&T Ex Parte"). *See also* letter from Kathleen Grillo, Verizon, to Deborah Taylor Tate, FCC and Ray Baum, Or. Pub. Serv. Comm'n, WC Docket No. 05–337 filed February 9, 2007 ("Verizon Ex Parte").

[11] *See* Letter from Jamie M. "Mike" Tan, AT&T, to Marlene Dortch, FCC in WC Docket No. 05–337 filed April 2, 2007.

any temporary freeze or cap is a means to an end, rather than an end in and of itself. Accordingly, Embarq agrees with AT&T when it proposes strict time limitations—a maximum of 2 years—on the duration of any freeze or cap.[12] A freeze or cap of any longer duration would only perpetuate the implicit subsidies that plague the current USF.[13]

The Commission has the authority to impose a temporary freeze or cap, particularly in a case like this where the Commission requires market stability while it studies where and how to best allocate USF support to the high-cost areas that most need it. The implementation of a temporary freeze or cap on USF support is logical because it is imperative that the Joint Board and the Commission address the underlying structural problems that are inherent in the current USF system. A temporary freeze or cap will provide the Joint Board and Commission with the necessary stability and time needed to accomplish this structural reform in a manner that ensures the ongoing sufficiency, specificity and predictability of the Federal mechanism.

The Commission enjoys considerable discretion to adopt interim rules while it undertakes long-term changes to its regulations. This is particularly so where the interim rules merely "maintain the *status quo* so that the objectives of a pending rulemaking proceeding will not be frustrated."[14] In the case of USF reform, a temporary freeze or cap is particularly appropriate given the rapid increases in overall support and the substantial changes in support levels for individual carriers, including substantial decreases in support for some carriers. As the United States Court of Appeals for the District of Columbia Circuit has explained, "[a]voidance of [such] market disruption pending broader reforms is, of course, a standard and accepted justification for a temporary rule."[15]

IV. The Joint Board Should Recommend a Study To Identify the Highest-Cost Areas at a Granular Level

During the course of a temporary freeze or cap, the Commission will be in a position to undertake a detailed study that will identify the best means for addressing the structural problems identified above. Windstream is correct when it observes that the public interest will not be served by perpetuating the current system, which is rife with inequities and logical failings. Therefore, the Joint Board should recommend solutions for both structural problems discussed above—duplicative support in some areas *and* inadequate support in others. One approach to solving both problems would be to direct support freed up by fixing the duplicative support problem toward fixing the inadequate support problem.

As described at length during the Joint Board's recent *en banc* on universal service, the ability to accurately identify high-cost areas at a very granular level has reached a level of precision that was unimaginable only a few years ago.[16] Through a combination of advances in modeling, better data, and ever-increasing computing power the Commission has at its disposal a set of tools capable of producing a study to ensure that all high-cost areas that truly require explicit support are adequately supported. This is in stark contrast to the data and modeling capability that was available nearly 10 years ago, when the Commission and Joint Board first considered using a study to determine USF needs.

A study would support, and would be a necessary precondition to implementing a proposal like, AT&T's. AT&T states as much in its *ex parte* presentation where it wrote that, in order to ensure *sufficiency* of support to all high-cost areas—including areas that do not currently receive high-cost support due to averaging—it is necessary to determine the *need* for support at a more granular level (". . . in narrower geographic areas, such as wire centers or Census Block Groups").[17] The Joint Board should recommend this be done by undertaking a comprehensive study that more accurately identifies high-cost areas at a wire center or sub-wire center level.

A study would also facilitate and accelerate the implementation of any recommendation along the lines of a proposal like Verizon's. Should the Commission ultimately choose auctions as the best mechanism for addressing the problem of duplicative support awarded to multiple CETCs in a single area, it is important that the Commission identify the areas that most need support. Conducting a study

---

[12] AT&T Ex Parte.

[13] *See*, 47 U.S.C. § 254 (directing that implicit subsidies be made explicit).

[14] *MCI Telecoms. Corp.* v. *FCC*, 750 F.2d 135, 141 (D.C. Cir. 1984); *see also CompTel* v. *FCC*, 117 F.3d 1068 (8th Cir. 1997).

[15] *CompTel* v. *FCC*, 309 F.3d 8, 14 (D.C. Cir. 2002) (*citing MCI Telecoms. Corp.,* 750 F.2d at 141; *ACS of Anchorage* v. *FCC*, 290 F.3d 403, 410 (D.C. Cir. 2002)).

[16] *See* presentation of Jim Stegeman, CostQuest Associates, Federal-State Joint Board on Universal Service *En Banc* Meeting, February 20, 2007.

[17] AT&T Ex Parte, at 8.

would help the Commission avoid many of the uncertainties and risks inherent in using an untested approach such as reverse auctions to determine which areas would be in need of support. The structural problems with the current USF make it a poor guide for identifying the right areas to support. Moreover, it is important to understand the costs of serving areas on a granular level in order to correctly size the individual auction areas. Therefore, a granular understanding of which areas are truly high-cost is essential to ensure that the areas to be "bid" on in any auctions are those that best serve the public interest and fulfill the objectives of the Communications Act.

In sum, a granular study would facilitate any long-term USF solution, and it would do no harm. Moreover, a granular study identifying the truly high-cost areas to serve will also produce the information needed by the Joint Board and Commission to evaluate future directions for the Federal USF mechanism and for USF policy in general. For example, the granular study would serve as an effective tool for identifying areas where it is uneconomic for the market to deploy broadband. The Commission's long-stated goal of advancing broadband deployment—whether as a supported service or not—requires a comprehensive understanding of the geographic hurdles (density, distance, absence of critical mass of consumers) and incremental investment needs that currently providers face as they bring advanced services to the most rural, high-cost areas.

V. The Commission Should Follow a Clear and Achievable Process To Study High-Cost Areas, and Then Provide Support Dollars to the Areas Identified by the Study

The actual process for conducting a study to identify high-cost areas in need of USF support is clear and achievable. First, Embarq proposes that the Commission should maintain the support rules for companies that choose not to submit data for a study. Then, the Commission should follow a five-step process to study high-cost areas and identify new areas that should receive support. Finally, the Commission should use study results to direct adequate support to the newly-identified high-cost areas.

A. The Commission Should Maintain the Support Rules for Companies That Choose Not To Submit Data for a Study

Embarq proposes that ETCs have the option not to participate in the study. Such ETCs would continue to receive support as they do today. They would, however, remain subject to any applicable reforms, such as auctions (which may only apply to a subset of ETCs under some of the proposals before the Joint Board). It is also important to note that a solution to this structural problem concerns identifying which areas should receive support and directing to those areas the support that is currently misallocated due to the first structural flaw discussed above—supporting duplicative ETCs. The question of which carriers should receive support and how that support is to be calculated will be resolved in these new areas using the same methodologies that are chosen for currently-supported areas. In particular, ILEC costs are used to identify high-cost areas today, and the study would follow this approach.

B. The Commission Should Follow a Five-Step Process To Study High-Cost Areas and Identify New Areas That Should Receive Support

The Joint Board should recommend that the Commission determine that cost of service is directly related to population density, and that study-area averaging masks wide variations in the true cost of service. In general, low density translates to high-cost. Because all network technologies (even wireless) exhibit economies of scale and economies of density, there is a strong inverse relationship between cost and customer density. This relationship can be used to begin the process of accurately identifying high-cost areas. Many study areas exhibit a large degree of variation in density, which translates to a large degree of variation in costs. The current system of using study area averages masks this variation in costs within a single study area. In particular, the assumption that costs can be averaged is no longer valid because of competition in low-cost areas, which prevents companies from realizing greater margins in those areas and using those returns to support below-cost service in high-cost areas.

The actual process for completing such a study is relatively straightforward, and the study can be completed within the two-year time-frame of the freeze or cap. The Joint Board should, therefore, recommend that the Commission take the following actions:

1. Collect population density data from companies choosing to submit such data for study purposes;

2. Validate the population density data using Census data and establish the need for granular analysis;

3. Collect customer location data from the companies that qualify for granular analysis;

4. Select a suitable model for estimating cost of service; and

5. Identify the high-cost areas at a granular level using the selected model and submitted data.

1. *Collect population density data from companies choosing to submit such data for study purposes.* In the first phase, if a company believes that the use of study area averaging masks its high-cost areas, and therefore its need for USF support, such companies could choose to submit disaggregated density data (for example, by wire center or at a sub-wire center level) to the Universal Service Administration Company (USAC). The National Exchange Carrier Association (NECA) could also submit data on behalf of pooling companies that choose to participate but which may not feasibly be able to submit their own data. The purpose of this showing would be to demonstrate that significant variation in the density of areas served by the carrier causes the carrier to experience significant variation in costs.[18]

2. *Validate the population density data using Census data and establish the need for granular analysis.* USAC would independently verify this data using publicly available Census data to determine whether the data showed significant variation in density. If so, the strong density/cost correlation would allow USAC to conclude that this area exhibited significant variation in costs (regardless of how costs might be calculated). The preliminary evaluation would serve as an initial bright-line test that this company's need for USF support must be determined at a more granular level.

3. *Collect customer location data from the companies that qualify for granular analysis.* At that point, a company that had initially submitted density data and passed the bright-line test would then have the option of providing additional data to USAC regarding wire center boundaries (just as it now provides Form 477 data at a Zip Code level). The company would also have the option of submitting customer location data to USAC. Location data could be actual geo-coded locations, billing addresses, or service addresses.[19] This data would remain proprietary and would be held by USAC. It would be combined with public data (such as CB boundaries, road systems) to be used to calculate costs (and ultimately, support).

4. *Select a suitable model for estimating cost of service.* Because companies' actual cost records do not generally exist at granular levels, it will be necessary to use a model to estimate the cost of providing service of companies that choose to submit the above-referenced data. The Commission would direct USAC to identify a model that would most accurately estimate costs and partner with the model's developer on an ongoing basis to ensure that the use of the model would achieve the goals set forth by Congress for Universal Service support mechanisms. Models are currently available that are capable of producing cost estimates for the entire country at an extremely precise level, such as a single census block (CB) as identified by the U.S. Census Bureau. To attain the level of accuracy necessary, the model must incorporate—to the greatest extent possible—real-world engineering practices and real-world network characteristics (such as road systems), as well as geo-coded customer locations into its forward-looking costing methodology.

5. *Identify the high-cost areas at a granular level using the selected model and submitted data.* To determine which areas are uneconomic to serve and therefore require support, the company-provided data (combined with publicly available data) would be input into the selected model. Costs would be calculated and then produced at a level below the study area level to maintain a reasonable degree of granularity. Results would initially be produced at the individual wire center level, which would yield an independently-identified list of high-cost wire centers that are

[18] Until and unless a rule change is implemented that wireless carriers would receive USF support based on something other than ILEC costs there would be no need for wireless carriers to submit data. If such a change is made, competitive ETCs could, at their own choosing, also submit density data regarding their designated service areas (which in many cases mirror existing study areas.)

[19] Since wireless recipients are already required to provide "line" counts to USAC at the wire center level all wireless companies that are USF recipients already have the capability of providing their customers' locations "by wire center" even though they themselves do not operate a network based on the concept of wire centers, if such a rule change occurred as described in the footnote above.

currently masked by the averaging process.[20] This would give the Commission an accurate compilation of high-cost areas—in some cases entire study areas, in some cases individual wire centers (or possibly zones)—all of which are truly uneconomic to serve and therefore in need of explicit support.

C. The Commission Should Use Study Results To Direct Adequate Support to the Newly-Identified High-Cost Areas

Upon completion of the study, the Commission would still need to determine how to provide adequate support to high-cost areas that are not currently receiving it. In particular, the Commission would likely want to consider how support could be provided to these areas without significantly increasing the size of USF. In the short term the Commission could implement a pilot program to begin providing some level of support to the highest-cost wire centers that had been identified by the study; wire centers where the need for explicit support has been masked by the use of study area averages. Funding for this support could come, for example, from AT&T's proposal for a 25 percent reduction in wireless receipts from the IAS and ICLS funds.[21]

In the longer term, the answer can be found through a solution to the first structural problem listed above—that of duplicative support going to multiple ETCs in a single geographic area. To the extent the Commission undertakes action to reduce the number of recipients in an area—and thereby reduce the dollars flowing to those redundant ETCs—the existing support dollars that are "freed up" can be distributed to the newly identified high-cost areas using the cost of providing service and an appropriate revenue benchmark.

VI. Conclusion

In conclusion, the Joint Board can best ensure that USF reform serves the public interest and benefits consumers by recommending that the Federal Communications Commission: (a) focus on correcting the structural problems caused by the multiplicity of support recipients and the misallocation of support; (b) stabilize the current system of Universal Service support; (c) limit the duration of a freeze or cap so as to make it temporary; (d) initiate a study to identify the highest-cost areas at a granular level; and (e) follow a clear and achievable process to complete the study, and then provide support dollars to the areas identified by the study. Through this process, the Commission will accomplish all of its goals; it will:

- Eliminate redundant, duplicative support;
- Control fund growth; and
- Identify accurately and direct support to all high-cost areas, including those that have been overlooked because of the Commission's study-area averaging approach.

Respectfully submitted,

BRIAN K. STAIHR, PH.D.
DAVID C. BARTLETT
JEFFREY S. LANNING

cc: Members and Staff of the Federal-State Joint Board on Universal Service

---

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO RICHARD N. MASSEY

General Comments On Recent Joint Board Recommendation

The Joint Board recently adopted a Recommended Decision proposing a "cap" on funding to competitive ETCs, while continuing to ensure that ILECs receive every dollar that is currently disbursed to them. The Joint Board's proposal would cut

[20] A carrier could also request the calculation of an added level of granularity. In many cases there is significant cost variation within a single wire center, as described in Embarq's many filings in this docket. This variation can be masked by the wire center's average cost, just as wire-center-level variation often is masked within a study area average. A carrier requesting increased granularity could request that the model's results (which would have been calculated by that time) be disaggregated to a more granular level, such as zones within a wire center. This would be a very simple procedure because the actual model processing operates even more granularly. For a company that requested additional granularity, the CB level costs could be aggregated up to (for example) an inner- and outer-zone per wire center, based on contiguous CBs above-or-below a certain density. The result, in this case, would be an independently-identified list of high-cost zones whose cost characteristics are currently masked by the averaging process.

[21] AT&T Ex Parte at 10–11.

funding to wireless and other competitive providers of Universal Service by 50 percent or more, while having no impact at all on funding to ILECs. This unfair and anti-competitive recommendation effectively would hinder Universal Service by making it harder for rural consumers to access the type of services that a majority of consumers want—affordable, high-quality mobile universal service.

The statutory principle of competitive neutrality prohibits the discriminatory approach recommended by the Joint Board, which both Democratic and Republican members of this Committee have directly opposed. The Joint Board's recommendation flies in the face of S. 101, introduced in 2007 by Sen. Stevens, which properly would codify the existing requirement that "[u]niversal service support mechanisms and rules should be competitively neutral"—*i.e.,* that such rules must "neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another." The version of H.R. 5252 adopted by this Committee in 2006 included an identical provision. The Joint Board's recommendation also defies the request of Senators Rockefeller, Pryor, Dorgan, Klobuchar, and Smith, not to adopt a purportedly "interim" cap, "especially one imposed only on certain carriers," because it would "limit[] rural consumers' options" and would impede the development of "competitively neutral" and "even-handed interim and long-term reform measures." Likewise, the Joint Board ignored Senators Sununu, McCain, DeMint and Ensign, who urged the Board not to adopt a "plan that would cap only one select group of providers but not another as we believe such a fix would unfairly skew the marketplace." These Senators urged the Board "not to use interim measures, such as a temporary cap," and not to "pick winners and losers or favor one technology over another."

Alltel recognizes the widespread interest in controlling the growth of the Universal Service Fund. But such controls can and must be accomplished without compromising the principle of competitive neutrality or interfering with consumers' access to wireless and broadband services. As Commissioner Copps recognized in his testimony before this Committee, "Bringing high-speed broadband to every corner of the country is the central infrastructure challenge we face." In dissenting from the Joint Board's recommendation, Commissioner Copps also expressed "serious concerns that such a cap will be misinterpreted as a solution, even though it does not address—or pretend to address—the fundamental, comprehensive reforms needed to carry a viable and improved system of Universal Service forward in the twenty-first century."

The Universal Service system must be reformed in a manner that advances that core objective, not in a way that obstructs the deployment of competitive broadband facilities and services. Significantly, FCC data confirm that wireless carriers are rolling out broadband services to consumers much more rapidly than any other telecommunications industry sector. Consumers in rural and high-cost areas would be the ultimate losers under proposals that would substantially reduce or eliminate the support needed to stimulate the deployment of wireless broadband networks and services.

Question 1. There is a proposal before the FCC to restrain the growth of the Universal Service Fund by using "reverse auctions." Under this proposal, carriers would bid for the right to provide service in a given service area, for a given time with the entity making the lowest bid winning the right to receive support. While I appreciate the benefits of reverse auctions, I also worry about potential costs like lower service quality in rural areas, and the potential for creating "stranded costs" for auction losers that might harm access to capital.

- What effect would the possibility of losing support have on the ability of carriers to attract private investment from capital markets?
- What would happen if a provider wins the auction by bidding too much, and then responds later by raising prices or reducing service quality?
- What effect would reverse auctions have on those providers that fail to win support and their ability to roll out new services in rural America?

Answer. Alltel shares many of these concerns. A "winner takes all" auction—in which only one provider could receive support funds at the end of the auction—would eliminate support for many wireless and wireline carriers that currently provide Universal Service throughout their designated service areas. This would make it difficult or impossible for these wireless and wireline carriers to continue investing resources to provide high-quality, ubiquitous service in these high-cost areas.

Alltel believes that the public interest would not be served either by reverse auctions or by other changes to the high-cost funding rules—whether characterized as "interim" or long-term—in which arbitrary reductions in support are imposed on certain carriers or categories of carriers. Universal Service reform—whether through

auctions or some other reform measure—must be based on rational, well-supported, analysis and decisionmaking.

Alltel has proposed a modest $25 million pilot program using reverse auctions to promote broadband deployment in unserved or underserved rural markets that would be designed to supplement, rather than replace, existing support mechanisms. Under Alltel's pilot proposal, and under any other form of competitive bidding process, reverse auctions should not be used to *select a single ETC* to receive support in any geographic area, but only to *set the amount* of high-cost support funding per line for all ETCs in each area. "Winner takes all" auctions would improperly distort competition by having the government pick winners or losers. Instead, auctions should be used, if at all, only to determine an efficient level of support that is the minimum necessary to ensure the desired level of service in each geographic area. Once that level of support is established, all carriers that satisfy the ETC requirements should receive the same (or comparable) amount of support per line, regardless of which one submits the lowest bid. In other words, rather than trying to use competitive bidding as a *substitute* for actual competition, an auction-based funding system could *complement* the competitive market's incentives for carriers to efficiently invest in rural markets and to provide high-quality service to rural consumers.

Such an auction structure would avoid distorting the marketplace after the auction is concluded and ensure that consumers receive the benefits of both Universal Service and competition. It also would address concerns about a single auction winner later undermining Universal Service by raising prices or reducing service quality. If multiple ETCs are receiving funds and providing the supported universal services after the auction, then market competition would protect consumers. If one ETC were to raise prices or reduce service quality, then consumers could opt to purchase service from an alternative carrier that also receives the needed support to serve the area. Also, an auction in which multiple carriers continue to receive support would reduce the likelihood that any one auction participant would offer an unreasonably low bid, because each bidder, as an ETC, would be required to provide all the required elements of Universal Service to all consumers throughout the area, consistent with § 214(e)(1) of the Act.

Alltel opposes proposals, such as the Verizon plan, to use auctions for competitive carriers, while retaining existing support mechanisms for the ILECs. These anti-competitive plans would likely eliminate funding for the majority of wireless carriers, lead to substantial reductions in funding to remaining wireless Universal Service providers, while maintaining existing funding for wireline ILECs in most cases. This outcome would unreasonably discriminate against wireless companies, in violation of the Act and well established law, and to the detriment of consumers and intermodal, facilities-based competition. It also would thwart efficient investment in rural areas. Instead, if any reverse auction plan were adopted, it must be structured to have all ETCs in a given geographic area participate in a single auction, regardless of the technology they use and regardless whether they are incumbents or competitive entrants.

Question 2. Mr. Massey, would it be possible to construct a Universal Service support mechanism for wireless providers that would be based on the cost of providing wireless services?

- In your view, what would be wrong with such an approach?
- What effect would tying wireless support to wireless costs have on the size of the fund?

Answer. Cost models could be developed to estimate the costs of providing service in rural areas using both wireless or wireline technologies, and Universal Service mechanisms could be developed to set support levels based on those costs. Ideally, however, the Universal Service support mechanism would provide funding to *every* ETC based on the cost of the *most efficient* (least cost) technology available to serve all customers in the geographic area—wireless or wireline. This would "right size" the Universal Service Fund by preventing excessive disbursements to some carriers just because those carriers have received large amounts in the past, while also ensuring that sufficient funds are available to enable carriers to provide the supported services in high-cost areas. It also would create incentives for all carriers to operate as efficiently as possible and would avoid giving discriminatory advantages to one group of carriers and disadvantages to others.

Most importantly, a competitively neutral Universal Service system—based on the costs of the most efficient technology, rather than based on an individual carrier's past investment decisions—would avoid distorting competition and would protect consumers' rights to select their preferred services in a competitive marketplace. By contrast, it would make no sense to provide greater funding to more inefficient car-

riers (those that incur greater costs to serve consumers in a given area) and less funding to more efficient carriers. Such a non-competitively neutral system would create perverse incentives for carriers to operate as inefficiently as possible. It also would discriminate against efficient service providers by depriving them of revenues that are available to carriers that operate in a more costly manner.[1]

The 1996 Act requires that all Universal Service funding be competitively neutral. In order to ensure competitive neutrality, all funds must be "portable"—*i.e.,* available regardless whether a consumer decides to purchase service from an ILEC or a competitive ETC—as West Virginia consumer advocate Billy Jack Gregg explained in his March 1, 2007 testimony (see page 21), and as the FCC and the courts have affirmed many times. This means that neither a wireline company nor a wireless company should receive different amounts of support funding for providing service to a given customer in a particular geographic area.

It would be inappropriate to depart from competitive neutrality by retaining current funding levels (based primarily on embedded or historical costs) for ILECs and disbursing a reduced level of support to wireless or other competitive ETCs. The answer does not lie in trying to develop a new, separate set of rules for funding competitive ETCs, while allowing the ILECs to continue to operate under a monopoly-inspired form of regulation, *e.g.,* guaranteed rate of return on embedded costs, regardless of efficiency and effectiveness in serving rural areas. And it would be impossible as a practical matter to set wireless carriers' funding based on their "own" embedded costs, using cost studies that parallels the approaches used by the rural ILECs—*i.e.,* using factors such as nationwide average cost per loop, subscriber line charge revenue and DEM weighting. The application of these monopoly-oriented, ILEC-based standards to wireless carriers would be a contrived and convoluted process, and ultimately would make no sense.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO RICHARD N. MASSEY

Question 1. Is a reverse auction process the best way to reduce overall Fund growth? What do members of the panel think of other options, such as breaking up (or disaggregating) study areas to target funds to areas that are truly "High-Cost?"

Answer. In the very short-term, the best way to limit overall Fund growth would be to adopt a competitively neutral proposal such as that advanced by West Virginia consumer advocate Billy Jack Gregg. As an interim measure, Mr. Gregg has proposed a single inflation-adjusted cap on the growth of the total high-cost support disbursed to *all* categories of ETCs (including ILECs and competitors). Funding would be distributed among all eligible wireline and wireless carriers in each area, with proportional adjustments based on each ETC's share of customer lines. Mr. Gregg's proposal would prevent undue growth in the overall level of funding while also spreading the impact of the Fund growth limitation proportionately among all ETCs. Unlike a wireless-specific fund cap, Mr. Gregg's proposal would avoid severe reductions in total support or per-line support to any category of carriers, would avoid distorting competition or favoring one technology over another in rural areas, and would avoid imposing barriers to entry.

In the medium- to long-term, Alltel agrees with Senators Rockefeller, Pryor, Dorgan, Klobuchar, and Smith that "the Board should seriously consider competitively-neutral proposals, ensure accountability for how funds are used, and promote advanced services in rural regions through effective targeting of funds to high-cost areas." In particular, regulators could control Fund size while also advancing Universal Service more effectively by targeting funds to the highest cost "disaggregated" geographic areas, regardless of whether those areas were served by a small, mid-sized, or large ILEC in the past. The current system disburses much more funding to smaller ILEC "study areas" (even where the supposedly small ILEC operating companies are owned by large holding companies), and improperly requires mid-size and larger ILECs to support the high-cost portions of their study areas using implicit subsidies from low cost to high-cost areas. This system also harms wireless ETCs such as Alltel that focus on serving consumers in rural areas. Instead, high-cost support funding should be targeted to consumers in outlying rural areas.

---

[1] For similar reasons, the public interest requires the elimination of the so-called "rate of return" system, in which some components of the existing Universal Service system reimburse ILECs for each dollar they spend. This system creates perverse incentives for these carriers to operate as inefficiently as possible, and unfairly guarantees these carriers' revenue streams while imposing marketplace risks on competitive carriers. The FCC has stated repeatedly, ever since 1997, that it intended to eliminate this obsolete system, and Alltel filed a petition asking it to do so in 2003. But thus far the FCC has failed to deliver on this commitment.

Alltel also believes Fund growth can be controlled by imposing more rigorous oversight to ensure that Funds are actually being used in a manner that furthers the goals of the Universal Service Fund. Competitive ETCs are currently required to submit detailed annual reports regarding their plans for network construction and service quality improvement, as well as information on the amounts of Universal Service support received and how such support was used to improve their networks and benefit consumers. However, in most states ILECs are not subject to comparably rigorous reporting standards—but they should be, in order to ensure the integrity of the program. In addition, the oversight and processing of ILEC funding should be entrusted to a neutral administrator subject to strict FCC oversight (*i.e.,* USAC), rather than the rural ILEC-controlled advocacy organization (NECA) that controls this process today.

Question 2. If we move to a reverse auction process, isn't there a possibility that some providers may bid so low that they end up financially unable to provide service? Furthermore, if an "auction winner" went bankrupt, how can we be sure that households in that area continue to receive service?

Answer. Alltel shares many of these concerns, and we have addressed them in the response to Chairman Inouye's questions for the record. In short, we oppose a "winner takes all" auction, in which the auction would select a single ETC to receive support and other ETCs would receive no support funds. Such a system would have government pick winners and losers and would deprive consumers in these high-cost areas of access to service from a range of competing service providers. Instead, reverse auctions should be used, if at all, only to set the efficient level of high-cost support funding per line for all ETCs in each area.

Such an auction structure would avoid distorting the marketplace after the auction is concluded and ensure that consumers receive the benefits of both Universal Service and competition. It also would address concerns about a single auction winner later undermining Universal Service by raising prices or reducing service quality. If multiple ETCs are receiving funds and providing the supported universal services after the auction, then market competition would protect consumers. If one ETC were to raise prices or reduce service quality, then consumers could opt to purchase service from an alternative carrier that also receives the needed support to serve the area. Also, an auction in which multiple carriers continue to receive support would reduce the likelihood that any one auction participant would offer an unreasonably low bid, because each bidder, as an ETC, would be required to provide all the required elements of Universal Service to all consumers throughout the area, consistent with § 214(e)(1) of the Act.

Question 3. Alltel and Verizon have presented separate proposals for a reverse auction process. Can you explain what specifically makes your proposal superior? Also, how do your plans differ from the reverse auction proposal presented by CTIA?

Answer. Alltel opposes Verizon's plan and other proposals to conduct multiple separate auctions for different technologies or classes of carriers. These anti-competitive plans would likely eliminate funding for the majority of wireless carriers, lead to substantial reductions in funding to remaining wireless Universal Service providers, while maintaining existing funding for wireline ILECs in most cases. This outcome would unreasonably discriminate against wireless companies, in violation of the Act and well established law, and to the detriment of consumers and intermodal, facilities-based competition. It also would thwart efficient investment in rural areas. Instead, if any reverse auction plan were adopted, it must be structured to have all ETCs in a given geographic area participate in a single auction, regardless of the technology they use and regardless whether they are incumbents or competitive entrants.

By contrast to Verizon, Alltel has proposed a modest $25 million pilot program using reverse auctions to promote broadband deployment in unserved or underserved rural markets that would be designed to supplement, rather than replace, existing support mechanisms. Verizon's plan would continue to focus funding on traditional "plain old telephone service;" Alltel's reverse auction plan is more forward-looking because it would target funding to encourage deployment of new broadband networks and services.

Alltel's and CTIA's auction plans are similar in most respects. Both Alltel and CTIA support auctions in which multiple ETCs would be able to compete in the provision of supported services after the auction concludes, and both Alltel and CTIA oppose "winner takes all" auctions, for the reasons discussed above. CTIA has indicated that, if needed to encourage low bidding, the auction winner (*i.e.,* the lowest bidder) could receive slightly more funding per line than other ETCs in the area ("winner takes more"). Alltel believes that it would be preferable for all ETCs to receive the same amount of funding, but would not object to CTIA's approach as long

as there is only a small difference between the amounts disbursed to low bidders and to other qualifying ETCs.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DANIEL K. INOUYE TO THOMAS J. TAUKE

Question 1. There is a proposal before the FCC to restrain the growth of the Universal Service Fund by using "reverse auctions." Under this proposal, carriers would bid for the right to provide service in a given service area, for a given time with the entity making the lowest bid winning the right to receive support. While I appreciate the benefits of reverse auctions, I also worry about potential costs like lower service quality in rural areas, and the potential for creating "stranded costs" for auction losers that might harm access to capital. What effect would the possibility of losing support have on the ability of carriers to attract private investment from capital markets?

Answer. There are several different proposals before the FCC regarding the use of competitive bidding or reverse auctions to distribute Universal Service support. Under Verizon's proposal, the only carriers that could "lose" USF support are those in areas where the system is supporting more than one network. Those carriers that demonstrate their efficiency by winning the auction will continue to receive support in the amount of their bids. Thus, the auction process itself will help capital markets identify efficient carriers, which could well promote private investment.

Verizon's proposal would not "flash cut" to auctions, but would phase them in over time, and would provide sufficient transitions for carriers that are currently receiving support. Verizon has proposed that the FCC phase in separate and parallel auctions: one auction in areas with more than one wireless provider receiving USF funds and one auction in areas with more than one wireline provider receiving USF funds.

Auctions initially would be held only among wireless ETCs and only in areas where there is more than one wireless ETC. In this first phase, auctions would not affect funding for rural telephone companies. After the wireless auctions have been completed, the FCC would hold auctions among wireline ETCs in areas where there is at least one wireline ETC. Because there are relatively few wireline CETCs today, this part of Verizon's proposal would affect very few areas. After both sets of auctions are completed, Verizon suggests that the FCC could assess the results of the auctions held so far, and determine next steps.

Question 1a. What would happen if a provider wins the auction by bidding too much, and then responds later by raising prices or reducing service quality?

Answer. Consumer choice is the most effective check on prices, and that would not change if auctions are used to identify the most efficient carriers in high-cost areas. More than ever before, consumers of communications services have options—from both traditional service providers and new offerings by cable, Voice over IP, and wireless providers—and they are taking advantage of them. Many of these providers operate without any Universal Service support, which constrains the prices all carriers can charge. There may be some areas where wireline providers do not face competition; in those areas, Verizon does not propose to hold USF auctions, and in any event the auction process would not impact existing price regulations.

Every purchasing government agency that uses contractors must be concerned with quality of service. In this context, as in the government procurement context, the auction process itself can ensure that a supported provider offers a minimum level of service. In an USF auction, a document like an RFP (request for proposal) or an RFQ (request for a quote), which are used in other types of government procurement, would be issued. That document would define the obligations of the winning bidder in an auction. The bidder would know these obligations in advance and, by bidding, would agree to accept them. Once the auction was over, the winning bidder would also sign a contract that would outline these responsibilities and which would help ensure that service quality benchmarks are satisfied.

Question 1b. What effect would reverse auctions have on those providers that fail to win support and their ability to roll out new services in rural America?

Answer. Auctions do not prevent carriers, even those carriers that participate in but do not win the auction, from providing service in an area. Again, many providers—especially new intermodal providers—operate without any Universal Service support, and would presumably continue to do so even in areas where an auction has been held. Verizon supports targeting USF support to where it is truly needed; in areas where a provider is able to operate without support, the presumption should be that we do not need USF in that area to ensure that consumers have affordable access. Moreover, auction results would not stand forever. Carriers that do

not win the auction will have opportunities to bid again for support in the same areas and to nominate other areas for auction.

We also must remember that today's Universal Service system, which bases support on a carrier's costs, does not create ideal incentives for carriers to innovate and develop new services. In contrast, an auction process would reward carriers for introducing new services because those carriers would have a stronger business plan and would be better positioned to win an auction. Competition in the marketplace has served American consumers well, and Verizon's proposal would bring those same incentives to bear for the benefit of consumers in rural areas.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO THOMAS J. TAUKE

Question 1. Is a reverse auction process the best way to reduce overall Fund growth? What do members of the panel think of other options, such as breaking up (or disaggregating) study areas to target funds to areas that are truly "High-Cost?"

Answer. Disaggregation of support from study areas to wire centers or the sub-wire center level is one potential solution, but it is a potential solution for a different problem—how to better target high-cost funds to areas where they are truly needed.

We should keep in mind that targeting to smaller geographic areas is not a way to control the Fund's size. On the contrary, if the current funding mechanism were to be modified to use smaller geographic areas to distribute support, the result could be a much larger fund.

Verizon is supportive of efforts to target support to areas where the need is greatest. In fact, our proposal makes it possible to target the funding to smaller geographic areas without making the Fund bigger, because we also suggest a cap that provides immediate control of Fund growth and an auction mechanism that determines just the right amount of support for each targeted area. Gaining control of fund growth through a reasonable cap is a critical first step that will give us breathing room to implement fundamental, long-term reforms.

Question 2. If we move to a reverse auction process, isn't there a possibility that some providers may bid so low that they end up financially unable to provide service? Furthermore, if an "auction winner" went bankrupt, how can we be sure that households in that area continue to receive service?

Answer. In any government procurement process, the responsible entity must ensure that the winning bidder will perform as specified in the contract. Auctioning USF obligations is no different.

In the USF context, this can be accomplished by qualifying prospective bidders to ensure that they are technically and financially able to perform, posting of bonds, and the enforcement of penalties for nonperformance. Another enforcement mechanism could be disqualification from future bidding if a company fails to perform.

Question 3. Alltel and Verizon have presented separate proposals for a reverse auction process. Can you explain what specifically makes your proposal superior? Also, how do your plans differ from the reverse auction proposal presented by CTIA?

Answer. Verizon has proposed the most effective and workable path to Universal Service reform. We propose immediate action in the form of reasonable caps at current funding levels to address the most immediate crisis the Fund faces: its rapid and unsustainable growth. We propose implementing competitive bidding quickly but on limited basis (first in areas with multiple wireless ETCs), and where it can provide the greatest benefit. We then propose to give the Joint Board and the FCC the flexibility to assess the results of these steps and to decide whether to extend the reforms more broadly.

In contrast, Alltel does not propose a solution that will properly stabilize and rationalize the fund. Alltel proposes only to cap the per-line amount of support in each area. This capping proposal would be ineffective. It ignores the main source of growth in the fund: support provided to the growing number of wireless handsets. Moreover, Alltel only supports the use of auctions for a small fraction of the Fund ($25 million) and only for new broadband services. If it is necessary for government to intervene in broadband deployment, there are better ways to target broadband support than by including broadband in the definition of services supported by the current Fund.

CTIA is supportive of auctions, but suggests that auctions should be designed so that multiple providers continue to receive support with the auction winner receiving a higher amount of support (which CTIA calls "winner takes more.") However, an auction that has more than one winner and no "losers" would neither rationalize nor stabilize the system, and would not contain the growth of the fund.

A "winner takes more" approach does not provide the proper incentives for participants to submit bids that are no larger than necessary to provide supported services, and could lead to collusion and strategic behavior that would skew the auction's results. For example, if all the bidders knew that no bidder could truly lose the auction, there would be strong incentives for all the bidders to collude and submit large bids so that all of the participants received higher levels of support.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. DANIEL K. INOUYE TO W. TOM SIMMONS

Question. There is a proposal before the FCC to restrain the growth of the Universal Service Fund by using "reverse auctions." Under this proposal, carriers would bid for the right to provide service in a given service area, for a given time with the entity making the lowest bid winning the right to receive support. While I appreciate the benefits of reverse auctions, I also worry about potential costs like lower service quality in rural areas, and the potential for creating "stranded costs" for auction losers that might harm access to capital.

- What effect would the possibility of losing support have on the ability of carriers to attract private investment from capital markets?
- What would happen if a provider wins the auction by bidding too much, and then responds later by raising prices or reducing service quality?
- What effect would reverse auctions have on those providers that fail to win support and their ability to roll out new services in rural America?

Answer. As stated in my written testimony, the continued growth in the size of the Universal Service Fund is a matter of significant concern to the cable industry for a simple reason—these costs ultimately are borne by consumers. Based on the anticipated growth of cable telephony services, and the corresponding growth in the share of the program that will be funded by cable consumers, our industry supports efforts to reduce the burden of Federal support programs by more efficiently distributing support.

The above questions suggest concern about the impact reverse auctions would have on existing networks. As network-based companies, we appreciate that concern. In reforming the program for distribution of Federal Universal Service support, however, it is important to keep in mind that the program was created to benefit consumers, not carriers. The subsidization of networks through a government fund is simply a means to that end in situations where market forces would not otherwise meet consumers' needs. Where market forces can meet those needs, as is increasingly likely given the growth of cable voice services, government subsidization is unnecessary and potentially counterproductive.

Reverse auctions are a mechanism by which government can take advantage of market forces (*i.e.,* the presence of multiple networks in areas previously served by a single network) to distribute support more efficiently. *If structured properly*, they offer an opportunity not only to reduce the size of the fund, but also to promote competition in high-cost areas by making support available on a more equitable basis. The challenge is to reduce the burden on consumers and promote competition, without sacrificing the level of service provided in these areas today. We believe that an auction program can do this by specifying minimum levels of service to be offered and establishing obligations to be met by all bidders. This should include some sort of carrier-of-last-resort obligation, which will ensure that the fundamental goal of providing service to all consumers is met. Any facilities-based provider that commits to meeting these requirements should be eligible to participate in the auction.

Implementing a reverse auction process for Universal Service should not result in stranded costs. If the auction takes place in an area with multiple networks, all those networks have an incentive to compete for customers (because they need the revenue to cover their costs) regardless of whether they win or lose the auction. Even if an ILEC loses customers, the investment generally is not stranded because it can be used if the carrier wins the customer back, which it has every incentive to do.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO W. TOM SIMMONS

Question 1. Is a reverse auction process the best way to reduce overall Fund growth? What do members of the panel think of other options, such as breaking up (or disaggregating) study areas to target funds to areas that are truly "High-Cost?"

Answer. As stated in response to Chairman Inouye's question above, we believe that reverse auctions, if structured properly, offer an opportunity not only to reduce the size of the fund, but also to promote competition in high-cost areas by making support available on a more equitable basis. NCTA's view is that reverse auctions can be effective only if they cover relatively small service areas. Not only is this critical to ensuring that the bidding process is competitively and technologically neutral, it also has the effect of targeting more support to truly high-cost areas while reducing support to those areas where market forces are most active. NCTA would not oppose consideration of other methods of targeting support if they could be accomplished in a manner that reduces overall Fund size.

Question 2. If we move to a reverse auction process, isn't there a possibility that some providers may bid so low that they end up financially unable to provide service? Furthermore, if an "auction winner" went bankrupt, how can we be sure that households in that area continue to receive service?

Answer. As noted above, NCTA believes that a minimum set of binding service obligations should be part of any auction program. In addition, in establishing the ground rules for such a program, the FCC could establish procedures to ensure continuation of service and to address the consequences of a bankruptcy filing.

○