Testimony of Glenn H. Brown before the
United States House of Representatives
Committee on Small Business
Subcommittee on Rural Enterprise, Agriculture and Technology
September 25, 2003

Introduction

Chairman Graves, Ranking Member Ballance and Members of the Subcommittee, my name is Glenn Brown, and I am President of McLean & Brown, a telecommunications research and consulting firm specializing in universal service and rural telephony issues. I want to commend you for convening this hearing on this critically important topic, and I greatly appreciate your invitation to testify today.

The title of this hearing is *The Future of Rural Telecommunications: Is the Universal Service Fund Sustainable?* As I will detail in the remainder of my testimony, I believe that unless fundamental changes are made in the way the Universal Service Fund is administered, the fund as we currently know it will not be sustainable, and the ultimate losers will be the consumers and small businesses in rural America.

In January of 2002, McLean & Brown published a white paper titled *The Coming Train Wreck in Universal Service Funding: Why is it coming – and how do we avoid it?*[1] In this paper we outlined several disturbing trends that were occurring with universal service, including significant growth in the size of the fund at the same time that the ability to collect the necessary funding was under stress. Since then, the problems identified in the paper, and in particular the way in which competitive carriers have been granted Eligible Telecommunications Carrier (ETC) status for receipt of high-cost funding, have combined to bring the situation to a point where immediate action is necessary. In too many cases ETC status is being granted by state and federal regulators with a less-than-thorough consideration of the public interest impact, and in many cases, carriers are receiving scarce high-cost dollars for serving primarily low-cost customers. The public interest test must be more carefully focused to include a clearer definition of the public goals and objectives that are to be achieved through universal service funding, and a reasonable evaluation of the public costs and public benefits that will result from such funding. The current regime results in significant waste of scarce public resources, and threatens the viability of affordable and advancing service in the most remote and high-cost regions of the nation. Immediate action to address these problems is needed.

Most of the actions necessary to address these problems ultimately need to be carried out by regulators at the state and federal level. Proceedings are currently underway before the Federal-State Joint Board on Universal Service that have the potential to significantly improve the management of the universal service process. As the architects of the Telecommunications Act of 1996, it is important that Congress clearly reaffirm its intent regarding the goals and objectives of the universal service funding program, and in at

[1] Copies of this and other McLean & Brown white papers on Universal Service can be found on the M&B web site at www.mcleanbrown.com.

least one instance, clarify the intent of the Act to assure continued and sustainable funding for affordable and advancing service in the most remote, high-cost regions of the nation. In this testimony I recommend four specific actions:

1. The public interest test for ETC designation must entail clearly defined public goals and objectives, and include a reasonable balancing of public benefits and public costs.
2. Recipients of public funds must have public accountability for how that money is spent.
3. Support for ETCs should be based on their reasonable cost for achieving the defined public goals.
4. Congress must act to broaden the base of universal service funding to include both state and interstate revenues, as well as all services that benefit from the ubiquitous telecom network, including broadband and Voice over Internet Protocol (VoIP) services.

Background

In the early days of the telephone, the Bell System built its networks in the more heavily populated urban and suburban areas of the country, but bypassed remote rural areas where subscriber density was low and costs were high. Rural telephone companies evolved to meet the needs of consumers in these higher-cost areas. Many of these companies were cooperatives, started and owned by their customers. Later, REA financing, support from nationwide long distance revenue pooling, and the investment of private capital allowed customers in rural areas to enjoy affordable and advancing telecommunications services from rural telephone companies. Following the Bell System divestiture in 1984, the toll pools were replaced with access charges and a system of explicit Universal Service Funds (USF). Today, rural telephone companies rely on USF to cover their costs for serving the remote, high-cost areas at affordable rates. Significantly, rural telephone companies only receive high-cost funding *after* they have made the investment to serve high-cost rural customers.

In introducing competition into local telecom markets, Congress was mindful that a total reliance on competitive forces would harm consumers in the most remote and high-cost areas of the nation. The Telecommunications Act thus struck a fine balance between the twin goals of Competition and Universal Service. Perhaps nowhere has that balance been tested more than in the current debate over the provision of Universal Service support to competitive telecommunications providers.

The language governing the provision of universal service support to competing carriers is found in Section 214(e) of the Act. Section 214(e)(1) states that, to be eligible for ETC status, a carrier must offer the defined universal service elements (the FCC rules currently define nine elements) throughout the service area for which the designation is received, and advertise the availability of such services in media of general distribution. Section 214(e)(2) states that the Commission *may*, for rural telephone companies, and *shall* for non-rural companies, designate more than one ETC (emphasis added). It further states that, "before designating an additional [ETC] for an area served by a rural telephone

company, the State commission shall find that the designation is in the public interest." If congress had intended that multiple ETCs be funded in all rural areas, then this additional language and public interest test surely would not have been necessary. Yet today we find regulators at the federal and state levels routinely approving competitive ETC requests in even the most rural areas. Usually this is done in the name of advancing competition.

The "Competition" Issue

The debate over providing universal service funding to multiple ETCs often gets miscast as a question of "Whether there should be *competition* in rural telephone company areas?" Stating the question this way confuses the issue because there already *is* significant telecommunications competition throughout rural America today. Rural consumers have a choice of wireline, wireless, and often cable service providers of telecom services. Wireless providers, in particular, have built networks in cities and towns and along major highways throughout rural America without universal service support. Indeed, in its recently released 8th Annual Report on CMRS Competition, the FCC concludes that there is effective competition in rural areas, that rural counties on average have 3.3 mobile competitors, and that the average price for mobile service in rural areas appears to be very similar to that in urban areas.[2]

Wireless carriers have built their networks in towns and along major highways because those are the areas where customer concentration is high, and their costs are low. Where mobile service is not always available is in the "hinterlands" between population clusters and away from heavily traveled thoroughfares. In these remote areas customer density is low and cost are high, both for wireline and wireless network providers. An efficient universal service regime would support the development and construction of new facilities and services in unserved and under-served areas, if and when such expenditure of public funds would serve the public interest. Unfortunately, as I will discuss in the next section, one of the problems with the current system is that competing ETCs are receiving "high-cost" support even if they do nothing more than continue to serve only the lower-cost areas they currently serve. This does little to advance the cause of competition, and represents a significant drain on a critically important national resource.

There is also a reasonable question whether wireline and wireless services are indeed competitive services or if the are more likely complimentary services. In testimony before the United States Senate earlier this year, Dr. William R. Gillis, Director of the Center to Bridge the Digital Divide at Washington State University, and former Chairman of the Rural Task Force stated:

> [I] would observe mobile wireless and traditional telecommunications are not for the most part competing services and have been inappropriately characterized as such. With the exception of those cases where mobile wireless has resulted in the ability of customers to eliminate their traditional telecommunications connection,

[2] Eighth Report in WT Docket No. 02-379, Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Released July 14, 2003 at paragraphs 13, 113, and 118.

> we are discussing complementary services, both desired by consumers for different reasons.

In addition to often serving different consumer needs, wireline and wireless service differ in other significant ways. Wireless service provides the advantage of mobility, and generally offers a larger toll-free calling area.[3] Wireline service has the advantages of high-speed data applications, is available over wider service areas, and may be better able to survive disaster situations. The two services also use different technology, and have significantly different cost drivers.

Problems With the Current System

The "Public Interest" Test

While the Act is specific that funding a second ETC in the service area of a rural telephone company requires a public interest finding, it is not clear on how that public interest test should be applied. In many regulatory decisions at both the state and federal level, the logic for granting an ETC application has gone something like this – 1) Competition is in the public interest, 2) Approval of ETC status will advance competition, therefore 3) ETC status is in the public interest. Missing in most of the decisions made thus far is any analysis of the public benefits that a specific ETC designation will bring (beyond the most generic platitudes regarding the benefits of "competition"), or any consideration of the often considerable costs that will be created through increased public assessments. Many ETC decisions have approved wireless ETCs for a service area smaller than the incumbent's study area, and there is generally no requirement to build out to serve the entire service area for which ETC status has been granted. Earlier I mentioned that wireline incumbents must first incur the cost of building into the remote areas before they qualify for high-cost support. Under the current liberal service area rules and the fact that competitive ETCs receive the same per-line support as the incumbent (see next section), they receive high-cost support *as if* they were serving these high-cost areas even if they never venture beyond their current lower-cost areas.

In a speech earlier this year, FCC Commissioner Jonathan Adelstein summed up the need for a more rigorous public interest standard rather well:

> I'm encouraging state commissioners to carefully consider the public interest when making their eligibility determinations, as is required by the Act. Specifically, states must make sure that the new market entrants receiving universal service meet all the obligations required by the Act. These include providing service throughout the service area and advertising its availability. They also need to consider whether the new service proposed is an enhancement or an upgrade to already existing or currently available service. Another consideration is the effect it will have on the cost of providing service. As the fund grows, so does the level of contribution. We must ensure that the benefits

[3] The ability of wireless carriers to offer wider toll-free calling areas is more a result of legacy regulatory constraints on incumbent wireline carriers than on any technical advantage of wireless technology.

> that come from increasing the number of carriers we fund outweigh the burden of increasing contributions for consumers.[4]

As it has become apparent that the "competition is in the public interest" argument is working, the body of wireless carriers requesting ETC status and USF funding has grown from a handful of small regional carriers to now include larger providers such as Alltel Nextel and Sprint. In their recent filing with the FCC for approval for ETC status in rural areas of the state of New York Nextel explained why approving this request was in the public interest by stating:

> [d]esignation of competitive ETCs promotes competition and benefits consumers in rural and high-cost areas by …provid[ing] a valuable alternative to the existing telecommunications regime in these areas. In addition, designation…will provide an incentive to the incumbent LECs in designated areas to improve their existing networks in order to remain competitive, resulting in improved service to consumers.[5]

We are also beginning to see that when one carrier receives ETC status in an area, other wireless competitors in that market come in with similar "me too" applications for ETC status and funding. I am personally aware of a number of managers of small telephone companies with both wireline and wireless operations who believe that liberal wireless ETC funding is wrong, but have reluctantly come to the conclusion that with their wireless competitors applying for and receiving ETC status, that they too must apply. A wireless carrier would be failing in its fiduciary responsibilities to its owners if it fails to apply for federal funding that appears to be so readily available. If all wireless carriers nationwide were to receive ETC status, then the demands on the current universal service fund would increase by over $2 billion per year.[6] This would push the current funding mechanisms over the brink, and would harm rather than enhance the public interest.

Support Based on Wireline Incumbent's Cost

Under current FCC rules, when a competitive provider receives ETC status they receive the same per-line support as the wireline incumbent. This can make for some odd situations that often provide windfall support, particularly when the competitive ETC uses a different technology, or doesn't have the same service obligations as the wireline incumbent. Among other differences, the ILEC has Carrier of Last Resort (COLR) responsibility, and is required to provide equal access to all long distance carriers. Wireless carriers have no COLR responsibilities, and have actively fought requirements to provide equal access. Wireline networks can usually carry much faster data speeds, and are usually designed to be more resilient in disaster situations. All of this adds cost to the wireline provider that wireless networks may not have.

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[4] Remarks of Commissioner Jonathan Adelstein before the National Telephone Cooperative Association February 3, 2003.

[5] Petition of NPCR, Inc. d/b/a Nextel Partners for Designation as an Eligible Telecommunications Carrier in the State of New York (filed April 3, 2003), p. 6-7

[6] This estimate was first reported in the M&B white paper *One Year Later, One Year Closer – The Coming Train Wreck in Universal Service Funding, released January 18, 2003. Updating this estimate with data from the 8th Report on CMRS Competition and 4Q03 funding levels the current number would be $2.4B.*

Rural wireline carriers often have high costs both because of the nature of the territory that they serve, as well as smaller scale of their operations. Wireless carriers usually serve throughout the state, and often throughout the region or the nation, and thus their scale of operations is generally much larger. An example of the kind of anomaly that this can cause is found in the application of the Local Switching Support (LSS) mechanism. LSS is available to ILECs with 50,000 lines or less, to account for the higher cost of maintaining smaller switches in remote rural areas. Wireless carriers do not deploy switches into the remote areas and generally switch calls through large, centrally located switches. Thus it makes no sense for them to receive LSS support, yet under the current equal-per-line support rules they do.

Another anomaly under the current support rules comes from the fact that support is provided on a "per-line" basis. In a wireline network a "line" from the central office to the customer's premise is a readily identifiable commodity, and a large portion of a rural ILEC's cost is represented by these lines. There is no direct equivalent of a "line" in the wireless network. Most of the costs of a wireless network are in its towers and related equipment. For purposes of USF funding, however, wireless carriers report the number of wireless handsets with billing addresses in each wireline carrier's serving area. One possible way in which the fund could be "gamed" would be to seek out areas where the per-line support is high ($50 to $100 per line per month or higher is not unusual in the more rural parts of the country) and provide each subscriber with multiple handsets to use with their contracted "bucket" of minutes. This would not significantly increase the wireless carriers costs, however it could significantly increase its draw from the fund as each handset would qualify for additional "per-line" support.

Another problem with the equal-per-line support rules, particularly when the competing carrier employs a different technology, is the impact that is has had on carrier decisions regarding disaggregation of support. The Joint Board recommended and the FCC approved plans that would allow ILECs to disaggregate their support into up to two support zones per wire center based upon the relative cost of serving the different zones. The problem is that what might be a high-cost customer for a wireline carrier might be a low-cost customer for a wireless carrier. I am aware of a number of situations where an ILEC had customers located at long distances from their switching location (making them high-cost for the ILEC) but in close proximity to an interstate highway (and therefore wireless towers, making them low-cost for the wireless carrier). This disparity would have provided an unwarranted windfall to the wireless provider which made no sense. As a result, many ILECs decided not to disaggregate their support, at least until more rational portability rules were developed.

Finally, perhaps the most serious problem with equal per-line support is that it eliminates much of the incentive for carriers to invest to expand their networks into sparsely populated, high-cost areas. Unlike the incumbent wireline carrier that has to actually invest to get its high-cost support, a wireless ETC gets "high-cost" support from day-one for all of its existing lower-cost customers.

Some Areas may not be Able to Support Multiple Funded Competitors
Perhaps the best commentary on the problems with funding multiple carriers in a sparsely populated area was made by Commissioner Kevin Martin:

> "I also note that I have some concerns with the Commission's policy – adopted long before this Order – of using universal service support as a means of creating "competition" in high cost areas. I am hesitant to subsidize multiple competitors to serve areas in which costs are prohibitively expensive for even one carrier. This policy may make it difficult for any one carrier to achieve the economies of scale necessary to serve all of the customers in a rural area, leading to inefficient and/or stranded investment and a ballooning universal service fund."[7]

The economic phenomenon identified by Commissioner Martin applies to both wireline and wireless networks, as both have a high concentration of fixed costs, costs that are incurred regardless of the number of customers in a given area, in their networks. In a wireline network the fixed costs are the poles, trenches, and switches. In the wireless network the major fixed costs are in the towers and associated radio and transmission equipment. While the cost of installing and equipping the tower is largely fixed, the cost per-customer is determined by the number of subscribers within the radio "footprint" of that tower. In sparsely populated areas the cost per customer is high, and in more densely populated areas the cost per customer is lower. When two or more wireless carriers compete in the same area, the number of subscribers each carrier serves within their respective footprints is necessarily smaller, and thus their effective cost per subscriber is larger. In densely populated areas this phenomenon is not a problem, as there are sufficient numbers of potential customers so that multiple carriers can each have an economically viable business. In sparsely populated areas, however, there may not be sufficient customer density to allow multiple carriers to be economically viable without dramatically increasing the amount of support provided to each competitor. This leads to the situation described by Commissioner Martin of inefficient investment and a ballooning USF. A similar phenomenon exists for wireline networks, with per-subscriber costs increasing dramatically as subscriber density decreases in the more sparsely populated areas.[8]

Stress on Funding Resources
Under current rules, the funds necessary to pay USF recipients are collected through an assessment on interstate end-user revenues. Currently, this assessment level is over 9%, and is growing, as demands on the fund increase while the level of interstate end-user revenues is actually decreasing.[9] This is a trend that cannot continue too much longer.

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[7] 2nd R&O and FNPRM in CC Docket No. 00-256, 15th R&O in CC Docket No. 96-45, and R&O in CC Docket Nos. 98-77 and 98-166, Released November 8, 2001, *Separate Statement of Commissioner Kevin J. Martin.*

[8] For a more complete discussion of the impacts of supporting multiple ETCs in sparsely populated areas please see the M&B white paper *Universal Service Portability – Getting it Right, released June 25, 2002.*

[9] Much of the recent growth in the high-cost fund has been due to shifting costs that were previously recovered through access charges to long distance carries to the universal service fund. This does not

The current universal service fund totals $6.2 billion, made up of High-Cost ($3,258 million), Schools and Libraries ($2,168 million), Low Income ($728 million) and Rural Health Care ($26 million). If the demands on the fund grow to the point where the current funding sources are not sustainable, then it is likely that funding to all USF recipients would need to be scaled back. This could be particularly harmful to rural telephone companies serving the most remote high cost areas, and to their customers.

Several potential solutions are currently being considered, including broadening the assessment base to include both state and interstate revenues, and changing the collection methodology to assess a flat fee for each connection to the network. As difficult as solving the Universal Service problem is, it will be far easier if there are sufficient resources to pay for USF programs that serve the public interest. It is important that all users who benefit from the ubiquitous telecommunications infrastructure contribute to funding its support. This includes broadband and VoIP services. While it is true that VoIP providers do not use the public switched network to originate calls, their services would be worthless were it not for the ability to terminate calls to all telephones nationwide. Those who benefit from this ubiquitous infrastructure have a duty to contribute to its preservation.

What Should be Done?

Following are four specific recommendations of changes that could greatly improve the current Universal Service process.

1. Focus the Public Interest Standard

The public interest test, necessary before funding for multiple ETCs in a rural area, should be more precisely defined to include a clearer definition of the public goals that are to be achieved through such funding, and a reasonable evaluation of the public costs and public benefits that will result from such funding.

Much of the problem in the current system comes from placing emphasis on an amorphous concept of "competition", rather than focusing on more concrete public goals and objectives that could be furthered by funding multiple network providers. The current universal service system had its genesis in a desire to develop a ubiquitous, high-quality wireline infrastructure, and in this regard it has been largely successful. It may well be that an equally valid public goal is to develop a ubiquitous wireless infrastructure. If this is the case, then policy makers could evaluate alternative ways to achieve wireless ubiquity, and determine the most cost-effective way to achieve this goal.

It is highly likely that, in this context, the most effective way to achieve wireless ubiquity will not be to provide an average of 3.3 wireless carriers with identical per-line funding to the wireline incumbent for all of their existing customers, and hope that this will encourage them to construct new facilities in sparsely populated areas that currently lack adequate wireless coverage. The competitive marketplace should deliver service as far as is economically reasonable without support. Policy makers can then identify areas that

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change the revenue flow of the wireline incumbent, but does increase the amount of funding potentially portable to competitive ETCs.

lack coverage and develop plans and programs to encourage wireless carriers to serve these areas. Wireless carriers would then apply for ETC status, and the right to receive public funding to accomplish the defined objectives.

2. Increase Accountability

When a carrier accepts public money to construct their network, it takes on a responsibility to the public to account for how that money is spent, and the services that it provides to the public. The Organization for the Promotion and Advancement of Small Telephone Companies (OPASTCO) has prepared a white paper titled *Universal Service in Rural America: A Congressional Mandate at Risk*, that contains a number of specific recommendations that will assure that recipients of public funding are accountable for its use. I was a member of the team that prepared this paper, and would recommend that the principles contained in that paper form the basis for the universal service administration process.

3. Support Based on Cost

Universal Service support for any carrier should be based on its reasonable cost for accomplishing the defined policy objectives. Incumbent wireline carriers have a choice from among two methodologies for the receipt of their support. They can either use an "average schedule" support methodology where a pre-approved formula is applied to the characteristics and metrics of their network, or they can submit their actual cost for use in computing their support requirements. Wireless carriers could be offered a similar choice. An "average schedule" could be developed based upon factors that influence the cost of a wireless network, such as population density. Carriers could also have the option of submitting their actual costs for accomplishing the defined policy goals.

4. Broaden the Funding Base

As difficult as solving the universal service problems will be, it will be far easier if policy makers have adequate funding resources to meet the defined policy goals. Congress should take actions to clarify that universal service funding should be obtained on an equitable and non-discriminatory basis from both state and interstate end user revenues. States should also be given the opportunity to utilize both state and interstate revenues as a funding base for any additional universal service programs that they may develop. The funding base should include all service providers who benefit from the ubiquitous telecommunications infrastructure, including broadband and VoIP providers.

Thank you again, Mr. Chairman, for the opportunity to provide this testimony, and I look forward to questions from the Committee.

Curriculum Vitae
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Education

BS – Engineering, Lehigh University, Bethlehem, PA
MBA – University of Colorado, Boulder, CO

Professional Experience

1998 – Present	President, McLean & Brown, Chandler AZ
1993 – 1998	Executive Director – Public Policy, US West, Washington, DC
1987 – 1993	Executive Director – Regulatory Operations, US West, Denver, CO
1985 – 1987	Assistant Vice President – Marketing, US West, Denver, CO
1971 – 1985	Mountain Bell, Denver, CO (various management positions)

Major Publications

The Intercarrier Compensation Debate: Bill & Keep – Bad for Universal Service and Rural America, July, 2003

One Year Later – One Year Closer – The Coming Train Wreck in Universal Service, January, 2003

USF Portability – Getting it Right, June, 2002

The Coming Train Wreck in Universal Service Funding – Why is it coming, and how do we avoid it?, January, 2002

America's Digital Divide – Not Available in All Locations, February, 1999

Rule XI, clause 2(g)(4) Disclosure

McLean & Brown has not received any federal grant, contract or subcontract in the current year or in the two proceeding years.