McLean & Brown

ISSUE UPDATE

SPECIAL EDITION

January 18, 2002

The Coming Train Wreck in Universal Service Funding

Why is it coming – and how do we avoid it?

Over the past several years, McLean & Brown has published a series of white papers to contribute to the national debate regarding critical universal service issues.[1] In this paper we examine how several concurrent forces could combine to cause serious problems for the universal service fund. Several factors are causing the fund to grow at a significant rate. At the same time, the current mechanism for funding universal service from assessments on interstate end user revenues is experiencing problems as the fund level increases and assessments rise. If actions are not taken in the near future to address these growing problems, then rural America may indeed face a catastrophe of train wreck proportions.

This paper is divided into three sections. The first section examines the current funding mechanism and the multiple factors that are contributing to the rapid growth of the fund. The second section examines some of the key public policy considerations surrounding the sometimes competing goals of competition and universal service. The final section suggests several action items to help bring these issues to a satisfactory resolution that will benefit the consumers of rural America.

Current Problems

The Existing Funding Mechanism

At present, the interstate universal service fund is approximately $5.6B and is made up of the following components:

Item	Amount
High Cost	$2.73B
Schools and Libraries	2.21B
Low Income	.65B
Rural Health Care	.02B
Total	**$5.61B**

1Q02 funding annualized

The size of the fund has grown considerably since the passage of the Act, with the most significant increases being the introduction of the Schools and Libraries fund, and the movement of $650M of implicit support from Price Cap LEC access charges to explicit funding as a result of the CALLS proceeding.

Under current law, this fund must be recovered from providers of interstate telecommunications services. Once each quarter, USAC publishes the "Contribution Factor" that will be assessed against the Interstate and International end-user revenues of carriers to support the fund. For the first quarter of 2002 this assessment factor is 6.8%. In essence this means that something equivalent to a 6.8% sales tax is assessed on all interstate services.

The current fund suffers from two primary challenges. First, as will be discussed in the remainder of this section, there are forces underway that will further increase the fund size and the level of the contribution factor. Second, even with the size of the current fund, interstate carriers are experiencing market problems in recovering these assessments from their customers.

A good example of these problems is the case of interstate long distance. Due to a number of market forces including competition within the sector as well as from substitute products such as wireless long distance and IP telephony, interstate toll prices and revenues have been declining. Earlier this year AT&T increased its universal service charge from 9.9% of a customer's bill to 11.5%. The fee has traditionally been set two to three percentage points above the contribution factor to recover administrative costs, but it credits the most recent increase in the fee to "shrinking" long distance revenues. Not only is this fee increase being met by consumer and Congressional resistance, but it clearly shows that further increases in the size of the fund will further inflame an already delicate situation. Yet, as shown in the following sections, further increases are coming.

Portability of Current Fund

Section 214(e) of the 1996 Act states that in the case of a rural study area a State commission "may" designate more than one Eligible Telecommunications Carrier

[1] See for example ***America's Telecommunications Revolution – "Not Available in All Locations"*** November, 1999, ***Not Available in All Locations – One Year Later*** November, 2000, ***Universal Service and Access Reform for Smaller LECs – The RTF Recommendation and the MAG Plan*** November, 2000. Copies of these papers may be found on the M&B web site at www.mcleanbrown.com.

(ETC) for receipt of universal service funds. It further states that before designating an additional competitive ETC (or CETC), the State commission shall find that the designation is in the "public interest".
To date, there has been limited activity at the state level to designate CETCs in rural areas. One of the more interesting proceedings was in the state of Washington, where US Cellular was given CETC status in a number of rural study areas. The experience here can give a glimpse at what might happen if similar CETC grants are made across the nation. According to USAC reports, U S Cellular received no universal service support in Washington state for the second quarter of 2001, but by the fourth quarter they were receiving annualized support of $9.1M for serving 44,192 rural lines. This represents approximately 20% of the federal high-cost funding to Washington rural study areas. If this ratio were to be applied to all rural study areas nationwide, this would equate to well over $300M of additional demand on the interstate funds.

Implementation of ICLS
In the recently released MAG Order, the FCC eliminated the Carrier Common Line (CCL) charge on IXCs, and placed all rural common line revenue requirements not recovered through end user charges or LTS in a new "explicit support mechanism" called Interstate Common Line Support (ICLS). This new mechanism, like the existing HCL, LTS and LSS mechanisms, is proposed to be portable to CETCs. While the exact level of the ICLS fund is not known at this time, preliminary estimates are that it will add approximately $350M to the fund beginning in July of 2002. The ICLS will increase to an estimated $470M in July of 2003 when the RES and SLB SLCs increase to $6.50 per line per month.

In addition to its size, the ICLS as proposed will also create perverse competitive dynamics by having the portable support payment to the CETC be based upon the cost of the ILEC, even if the CETC has a distinctly different cost structure. For example, wireless and wireline networks have very different cost drivers. A wireless carrier could receive an unwarranted windfall if a wireline customer located a great distance from its wireline central office happened to be located close to a wireless tower. The chance for unnecessary enrichment is furthered by the fact that the wireline ILECs are required to provide services that other potential CETCs do not provide. These windfall arbitrage opportunities will further serve to drive up the size of the fund.

The "Non-Rural-Rural" Problem
The November, 2000 ***Issue Update*** stated the following:

> "The true "sleeping dog" issue in the universal service debate is the fate of the high-cost rural areas of the "non-rural" LECs. If policy makers fail to adequately address the needs of the over half of all rural Americans who, through no fault of their own, were once served by an RBOC holding company, then we risk the creation of a caste of second class rural communities and digital have-nots.

Public data from the FCC's proxy model proceeding confirms that over half of the high-cost rural lines in the nation are actually served by "non-rural" carriers.[2] The non-rural high-cost fund is computed using the FCC's HCPM model, and bases funding on the average costs for all non-rural lines within a state. Thus non-rural-rural customers continue to rely on large amounts of unsustainable implicit support from urban areas to support affordable rural service. For 2002, the size of the non-rural high-cost fund is estimated to be $207M.

The same HCPM indicates, however, that if funding rules similar to those used for rural carriers were applied to the non-rural carrier base, then there would be additional federal high-cost funding requirements ranging from $2.6B to $3.5B annually[3]. Currently only $655 million of explicit federal support is provided to non-rural carriers (the FCC estimates $448M of interstate access support and $207M of high-cost support for 2002[4]). This leaves a potential high-cost funding shortfall approaching $2B or higher if the non-rural-rural customers are to receive similar support and services as their rural-ILEC-served neighbors.

Legg Mason recently released a report titled ***Reshaping Rural Telephone Markets***. In this report they state:

> "We believe that one of the major forces is the likely divestiture of large numbers of RBOC rural lines…Over the next 5 to 10 years we believe that [they] will divest 10 million to 20 million and possibly as many as 30 million lines because it is uneconomical for those companies to maintain the properties, in our estimation."

One of the reasons that the non-rural companies will be divesting is that under the current rules they generally do not qualify for explicit support, and implicit support will become more and more difficult to provide as competition develops in the urban markets. There will also be political pressure from legacy-RBOC communities to have access to the same advancing network architectures and services that their rural ILEC-served neighbors enjoy. In the final analysis, solving the non-rural-rural issues will add considerably to the ultimate universal service funding needs.

New Inter-Carrier Compensation Regimes
As discussed previously, the MAG Order concluded that all interstate common line costs would be recovered either from the end user or from explicit support mechanisms, and that IXCs should be relieved of any payment towards the loop revenue requirement. To accomplish this, the FCC created the new ICLS that will significantly increase the size of the high-cost fund. The FCC's Inter-Carrier Compensation NPRM takes this concept several steps further. The FCC suggested

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[2] As cited in the November, 2000 ***Issue Update***, non-rural carriers serve 51.1% of all lines in the 0 – 5 lines per square mile density zone, and 61.2% of lines in the 5 – 100 zone. Non-rural carriers serve 50.4% of lines with proxy cost of over $100 per month, and 55.9% of those costing over $50.

[3] These estimates are determined by taking HCPM costs at the wire center level and providing support when proxy costs exceed 135% and 115% of the nationwide proxy cost average, respectively.

[4] Public Notice DA 01-2927 released December 18, 2001. The IAS amount is less than $650M since some Price Cap study areas are classified as "rural".

consideration of several "Bill & Keep" regimes under which all costs of connecting an end user to the network would be recovered directly from that end user. This would provide further upward pressure on the high-cost fund to maintain affordable rates in high-cost areas. It also would likely lead to increases in the low-income mechanism as well, as rates for basic service increase in urban areas.

Rate and Support Averaging
The costs of providing telephone service vary widely within a wire center, with customers in densely populated areas close to the wire center often costing $20 per month or less, while customers in sparsely populated areas at great distances from the wire center cost many hundreds of dollars per month to serve. Recognizing this, the RTF proposed that carriers be allowed to disaggregate their support. They realized that if support were averaged at the study area level, then competitors could arbitrage the system by serving only customers in the lowest cost areas, and receive support based upon the study area average. They limited the ILECs' ability to deaverage support, however by limiting this disaggregation to generally no more than two support zones per wire center. This still leaves similar arbitrage issues, albeit on a smaller scale, by averaging support in the higher-cost Zone 2 area.

In crafting public policy solutions that meet the multiple objectives of the 1996 Act, policy makers must realize that there will always be someone ready and willing to compete for the low cost (or lower-cost) customer, even in rural America. However universal service isn't about these customers – it is about the high-cost customers, and, indeed, it is really about the highest cost customer at the very fringe of the network. The Act speaks about affordable service for all Americans. Whenever a CETC receives more in "support" than it costs to serve a particular customer, then money is being taken out of the system that was intended to support some other customer at the extreme. In attempting to balance the universal service and competition aspects of the Act, policy makers must be careful to not do irreversible damage to the ability of these highest-cost customers to fully and affordably participate in the information age.

Note To Readers

Due to the importance of the subject matter, this ***Special Edition*** of the ***Issue Update*** is being made publicly available on the M&B web site, and may be distributed to other parties. Effective November 19, 2001 the McLean & Brown ***Issue Update*** underwent changes to provide more in-depth coverage of the fast moving world of universal service and access reform. At the same time, the publication began distribution on a subscription basis. Recent topics that have been covered in the ***Issue Update*** include:

1/10/02	Replies – Definition of Univ. Svc.
1/9/02	PFRs of MAG Order
12/27/01	ILEC Broadband NPRM
12/24/01	UNE Triennial Review NPRM
11/19/01	Comments – Definition of Univ. Svc.

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Key Public Policy Issues

Implementation of the 1996 Act
The 1996 Act had two major objectives – competition and universal service. In crafting the Act, Congress understood that if they only introduced local competition but did nothing else, then they would harm universal service, particularly in rural areas. In Section 254(b) Congress laid out six principles to guide the development of new universal service support mechanisms. Basically, these principles state that service should be affordable, and that consumers in rural areas should have access to services comparable to those available in urban areas, at comparable rates. They state that there should be "specific, predictable and sufficient" support mechanisms, and that all telecommunications providers should provide funding support.

In implementing the universal service directives of the Act, the Joint Board recommended and the FCC approved the addition of a seventh principle – "Competitive Neutrality". In their Order, the FCC said that universal service support mechanisms and rules should neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another. Since that time, there has been a tension between policies that would favor rural consumers and those that would favor potential rural competitors.

The Act clearly differentiates between the provision of funds to ETCs in rural areas as opposed to non-rural areas. In Section 214(e) it states that in non-rural areas support shall be portable to multiple ETCs, while in rural areas support may be portable. The Act 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". Section 214(e) further provides that the State commission will designate the "service area" for purposes of defining universal service obligations if this area is to be different from the carriers study area. There are also provisions in Section 251 that exempt rural areas from some of the competitive market opening requirements of the Act, again subject to State commission oversight The states clearly have an important role to play in identifying where the public interest lies in providing affordable and advancing service in rural areas.

Americans generally tend to believe that competition is a good thing, resulting in greater choice and lower costs for consumers. However this may not be the case in the highest cost rural areas of the nation where large amounts of public support are required to provide affordable service. In his separate statement on the MAG Order, Commissioner Martin provides several profound and thought-provoking observations:

> "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…

I will continue to examine these issues as well as the other concerns raised regarding the impact that our policies may have on rural America. And, in that vein, I am committed to evaluating these issues and remain receptive to making significant changes as we move forward.

If money were no object, then supporting multiple providers in high cost areas in the name of competition might make some limited sense. However as we know, public funds are scarce. There are multiple forces pushing the size of the fund larger, at the same time that the current method of funding is showing signs of strain. Some way needs to be found to control the potential size of the fund, or to find a more sustainable funding mechanism, or to do both.

In addition, a better method needs to be developed to measure the public gains from providing funding to multiple ETCs in high-cost areas against the additional costs resulting from the increased fund size and network inefficiencies. Most importantly, the end result of policy choices which are made must be the assurance of available, affordable and advancing services for all consumers in high-cost rural areas.

A Possible "Solution" That Would Actually Make Things Worse

One scenario that has received some discussion would be to limit support to one "primary" line to each residence. In the spirit of competition, customers would be asked to select a "primary carrier" to receive their support. While such a plan might make sense in a lower-cost urban environment, it would have a serious and potentially disastrous flaw when applied to high-cost rural areas.

The primary line concept is not new. Indeed, the original Joint Board Recommendation, issued in November of 1996, went further and suggested that support be limited not to just one primary line, but also only to one primary residence. In their May 1997 Order implementing the new universal service regime, the FCC concluded that they would continue providing support to all currently supported lines, but stated they would revisit this subject in the context of their examination of the forward-looking cost of universal service. The Commission's discussion of what lines to support, however, was only in the context of a single provider environment. Indeed, they questioned whether there were economies in providing the second line that might obviate the need for additional support. The fact that support is still provided to all lines almost 5 years later illustrates the complexity faced in considering the primary line issue, even in the single provider context. Experience with the primary/secondary line issue in the residential SLC context has also highlighted the administrative complexities and difficulties of such a plan.

The concept of selecting one "primary provider" to receive support for one primary line carries a host of additional complexities in the high-cost rural environment including:

- If a customer were to select a carrier other than the ILEC, what would be the remaining obligations of the ILEC?
- If the ILEC still provided a line to the customer (without support), would the provision of that line be deregulated?
- Would the ILEC be obligated to provide an unsupported line?
- Would the ILEC be obligated to reconnect the customer if they became dissatisfied with the initial "primary carrier"?
- Does the concept of Carrier of Last Resort (COLR) have any meaning in a multi-primary carrier environment?
- Can the ILEC still be required to assume COLR obligation for the most remote high-cost customers as the low-cost customers are gradually picked off?

Each of these questions has profound implications for available and affordable service, particularly for the highest cost areas and for the most costly of customers. If CETCs are able to pick off the "low hanging fruit", it is doubtful that any ILEC or any business entity could make a viable business case out of only serving the customers at the extreme.

A Different Solution is Required

At the time that the RTF made its recommendation to fund multiple carriers in high-cost areas, they were looking only at the existing support mechanisms (HCL, LTS and LSS), as ICLS did not yet exist. Furthermore, their Report included a new support mechanism called the "Safety Valve" that was designed to provide support to exchanges acquired from non-rural carriers. Unfortunately, the RTF included an "example" of the Safety Valve that included a "cap" on this mechanism of 5% of the HCL fund level. In their Order implementing the RTF recommendations, the FCC wrote this 5% cap into its rules, in effect limiting the Safety Valve mechanism to approximately $60 million per year. Given the size of the non-rural-rural problem discussed in the preceding section, however, the Safety Valve will barely make a dent in this problem leaving significant additional funding requirements.

In addition to the growing size of the fund, there is another important reason to rethink the dual and equal funding proposals of the RTF. One of the key considerations is who will maintain the COLR responsibilities. Someone will still need to serve the customers at the extreme. In a world where, as Section 214 states, a CETC uses "its own facilities or a combination of its own facilities and resale of another carrier's services" – who is this "other carrier", and how are these services priced and supported? If some carriers are able to pick and choose who they serve, and receive support based upon average costs, who will be financially able to serve the extreme customer? It would be irrational, illogical, and dangerous under such circumstances to assume that the ILEC will always be able to continue to fulfill these responsibilities.

Of course one solution to this dilemma would be to set up yet another fund. Once the current support (plus ICLS, plus the fall-out from intercarrier compensation, plus the new non-rural-rural funding) is assigned to "zones", and the multiple CETCs have competed for and won their share of the customers they choose to serve, some fund administrator could calculate what is needed to support those extreme high-cost customers that no one else wants. Yet, at the end of the day, what will have been accomplished? The inefficient networks and "ballooning" universal service fund that

Commissioner Martin foresaw will indeed have come to pass.

One Potential Alternative
There is an alternative that could possibly preserve both the universal service and pro-competitive goals of the 1996 Act, and result in a more efficient network and smaller fund than might otherwise be required. That would be to allow carriers to compete for the right to be the Carrier of Last Resort that would be the sole recipient of universal service funding. It could well be that the competitive model that is right for most of America is not the right model for the extremely rural parts of our land. There may indeed be parts of our country where the communications network is a natural monopoly, and where the public interest is best served by one efficient provider receiving public support.

Pro-competitive goals could be advanced in several ways. First, carriers could compete for the right to become the COLR. Some auction or other mechanism could be developed to assure that the most efficient technology is employed, and the fund is kept at the lowest practical level. The catch would be that whoever is the COLR must stand ready to provide service to all customers in the service area. If a new carrier were to displace the incumbent, provisions could be made for the new carrier to purchase any facilities it needed to reach all customers from the incumbent, at compensatory prices. Only the COLR would be regulated. Resale of services could be allowed, however the COLR would retain the support for the underlying facilities.

This alternative is likely but one of a number of possible ways to preserve universal service without creating a fund so large that we won't be able to pay for it. The problem is critical, the time is short, and a better solution than the train wreck course that we are currently on must be found.

What Can Be Done

Delay Implementation of ICLS
ICLS significantly complicates the problem of maintaining the current system of rural high cost funding. It will have an immediate and significant impact on the size of the fund. It also raises important public interest questions regarding the reasonableness of making these costs an element of explicit and portable universal service support. It may overly compensate CETCs for their reasonable cost of providing service, and raises significant questions about whether they will be able to meet the use and sufficiency standards of Section 254(e). These and other issues have been raised by a number of parties in Petitions for Reconsideration of the MAG Order. Furthermore, NECA has stated that, absent modifications, they may be unable to implement ICLS on the scheduled date of July 1, 2002.

The Commission should delay the implementation of ICLS until at least January 1, 2003, if not later. This will provide additional time to resolve these issues, as well as other issues relating to the funding of universal service in rural America. ICLS could well be the "straw that breaks the camel's back" on the current methodology for raising funds from interstate telecom providers. Other than delaying the complete elimination of common line support obligations for IXCs, there would be no harm in delaying implementation of ICLS.

Expand the Funding Base
The current system of funding universal service strictly from interstate services is straining at the seams, even at the present funding levels. As described above, the level of needed funding is likely to increase significantly. In the interest of maintaining the universal service goals of the 1996 Act, a broader and more sustainable funding base must be established.

One alternative would be to assess both interstate and intrastate services. While a prior Court of Appeals decision struck a similar approach down in the past, there are ample reasons to make a new attempt to broaden the funding base. First, a major portion of the high-cost fund actually supports costs assigned to the intrastate jurisdiction through the Separations process. The High Cost Loop (HCL) fund takes loop costs in excess of 115% of the nationwide average and moves revenue requirements from the intrastate jurisdiction to interstate. Also, the Schools and Libraries fund provides discounts for services that are both intrastate and interstate in jurisdiction.

Finally, with advances in markets and technology, it is becoming increasingly difficult to determine what services and facilities are interstate and which are intrastate. The FCC recently released the Separations Joint Board's ***Glide Path*** paper which seeks to find a new direction for the Separations process in a world where the jurisdictional classification of services and facilities is becoming increasingly difficult, and its impact on the prices consumers pay is becoming less significant. The time may be right to provide for the broadest possible funding base to preserve and advance the important principles of universally available and affordable service. Whether this can be accomplished through regulatory initiative, or whether legislative change will be necessary, planning must begin now to assure a sustainable funding base.

AT&T and several long distance companies have suggested that all federal universal service funding be obtained through a flat-rate assessment on all end users. First, this would be a direct violation of Section 254(b)(4) of the Act, which states that "all providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service". Furthermore, it would disproportionately impact low-volume users of long distance, and effectively be an increase in basic service rates.

Understand Universal Service Disaggregation Options
The FCC has provided carriers with the opportunity to disaggregate their receipt of universal service support. Carriers have until May 15, 2002 to elect one of three disaggregation Paths recommended by the RTF and adopted by the FCC. Carriers receiving more than $5 per line per month of support should conduct a preliminary analysis of their study area to understand their disaggregation options and support arbitrage vulnerability. Carriers will always be better off if their receipt of support is more closely aligned with the cost of serving customers. A properly crafted disaggregation plan will avoid arbitrage of valuable support dollars by would-be competitors.

Carefully Consider Inter-Carrier Compensation
The Bill & Keep proposals in the recent NPRM would shift the vast majority of local network costs to the end-user. While this might have appeal in urban markets and other specialized circumstances, if applied too liberally to rural markets it is likely to highlight and exacerbate the magnitude of support necessary to preserve affordable and advancing service to rural America, and increase the size of the needed fund.

Proceed With State Access and Universal Service Reform
The MAG and CALLS plans have dramatically reduced interstate access charges. Unless corresponding changes are made to intrastate access charges, disparate price levels, plus the growing inability to distinguish between interstate and intrastate services, could lead to arbitrage and revenue loss. Since intrastate access contributes significant implicit support to affordable local service, state universal service funds will need to be reviewed and updated as appropriate.

Assure That the Public Interest Comes First.
Universal service funds do not become portable until and unless the state commission makes a finding that multiple ETCs will serve the public interest. In making these determinations, states must carefully consider what constitutes the public interest, and whether the benefits of providing funding to multiple ETCs in high-cost rural areas will exceed the costs. Parties should be required to submit facts and data regarding the customer density and relative cost of customers throughout the service area, and what additional services and benefits will become available to consumers as a result of the ETC grant. Parties should address how grant of additional ETCs will advance or harm the public interest, particularly as regards the highest cost customer groups. In cases where an existing carrier with an existing customer base seeks ETC designation, the commission should evaluate the benefits that will be achieved in return for the immediate increase in funding to the existing customer base. In the final analysis, it is the public interest, not the interest of any single provider or technology group, that must be served.

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