

PRESERVING UNIVERSAL SERVICE IN THE AGE OF IP

KATHLEEN Q. ABERNATHY*

Thank you very much for inviting me to speak with you today. Recently, the Federal Communications Commission (FCC) has been spending a great deal of time and energy considering the best, most appropriate regulation of broadband networks and IP-enabled services.¹ Today, I want to focus on an important aspect of our discussions. Namely, what are the implications of the digital revolution for our universal service program?

The ongoing migration from traditional circuit-switched voice services to packet-switched communications services poses a number of challenges to the existing universal service regime. Some of these challenges are not new; for example, we have been considering changes to the contribution methodology (how we collect funding) and distribution rules for years.² But the accelerating emergence of IP-enabled services brings many of the challenges we face into sharper focus.

I will begin with some background information about the FCC's universal service support mechanism, and then discuss some of the key public policy issues affected by the migration to broadband networks and IP-enabled services.

* This article is adapted from a speech delivered by FCC Commissioner Kathleen Q. Abernathy at the Silicon Flatirons Telecommunications Program conference on "Universal Service and E-911 Policy in an Age of Convergence" held at the University of Colorado School of Law October 21, 2004.

1. See, e.g., *Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities*, *Notice of Proposed Rulemaking*, 17 FCC Rcd. 3019 (2002); *Inquiry Concerning High-Speed Access to the Internet Over Cable & Other Facilities*, *Declaratory Ruling & Notice of Proposed Rulemaking*, 17 FCC Rcd. 4798 (2002), *aff'd in part, vacated in part* by *Brand X Internet Servs. v. FCC*, 345 F.3d 1120 (9th Cir. 2003), *cert. granted* Nat'l Cable & Telecomm. Ass'n v. *Brand X Internet Servs.*, 125 S. Ct. 654 (2004); *IP Enabled Servs.*, *Notice of Proposed Rulemaking*, 19 FCC Rcd. 4863 (2004).

2. See e.g., *Fed.-State Joint Bd. on Universal Serv., Report & Order & Second Notice of Proposed Rulemaking*, 17 FCC Rcd. 24,952 (2002) [hereinafter *Contribution Methodology Order*].

I. UNIVERSAL SERVICE

To start with, what exactly do policymakers mean by the phrase “universal service”? Section 254 of the Communications Act provides an answer: universal service means ensuring that high-quality telecommunications services are available at affordable rates to all Americans, including low-income consumers and those living in rural, insular, and other high-cost areas.³ It also means that the types of services and the rates for those services should be reasonably comparable in urban and rural areas.⁴

The Telecommunications Act of 1996 was a watershed event for many reasons, one of which was that it changed the way we think about how to preserve and advance universal service. In the past, when local telephone companies enjoyed legally protected monopolies, regulators could promote universal service by setting rates in rural areas well below cost, and allowing the carriers to make up the difference by charging above-cost prices in urban areas.⁵ Regulators also supported universal service by building significant subsidies into business rates and into the interstate access charges imposed on long distance carriers.⁶

The introduction of competition into local markets changed all of this. Competition meant that implicit subsidies would be eroded as new entrants undercut rates that were set well above cost, such as business rates in urban areas.⁷ Accordingly, Congress directed the FCC to adopt *explicit* support mechanisms that would be sufficient to ensure that rates remain affordable and reasonably comparable throughout the nation.⁸ In response to this mandate, the FCC has developed several explicit support mechanisms for carriers that provide service in high-cost areas. Collectively, these funds provide over \$3.25 billion annually.⁹

The 1996 Act also expanded the scope of universal service by directing the FCC to establish support mechanisms for schools and libraries and for rural health care facilities. The schools and libraries program (often called the e-rate), provides up to \$2.25 billion in annual support, and has enabled millions of school children and library patrons to gain access to advanced telecommunications and Internet services.¹⁰

3. 47 U.S.C. § 254(b) (2000).

4. *Id.*

5. *Qwest Corp. v. FCC*, 258 F.3d 1191, 1196 (10th Cir. 2001).

6. *Id.*

7. Jim Chen, *Subsidized Rural Telephony and the Public Interest: A Case Study in Cooperative Federalism and its Pitfalls*, 2 J. ON TELECOMM. & HIGH TECH. L. 307, 318 (2003).

8. 47 U.S.C. § 254(e) (2000).

9. UNIVERSAL SERVICE ADMINISTRATIVE COMPANY, 2003 Annual Report 2 (2003), available at <http://www.universalservice.org/download/pdf/2003AnnualReport.pdf>.

10. *Id.* at 31.

The rural health care mechanism is increasingly being used to fund high-speed connections that are used to provide telemedicine services.

In addition to the high-cost support mechanisms (high-cost carriers) and the programs supporting schools, libraries, and rural health clinics, the FCC's Lifeline and LinkUp programs provide discounts off monthly service charges and connection fees to ensure that low-income consumers have access to basic telephone service.¹¹ Last year, these programs provided over \$ 700 million in support.¹²

Shortly after Congress enacted the 1996 Act, the FCC adopted rules regarding the collection and distribution of universal service support.¹³ Now, with several years of experience under our belts, we are engaged in a reexamination of many aspects of the program to ensure that each component is administered as efficiently and effectively as possible. A host of marketplace and technological developments have already prompted some course corrections, and may ultimately cause us to reassess certain fundamental policy choices made in the initial implementation period. As I mentioned earlier, the rise of Voice-over-Internet-Protocol (VoIP) and other IP-enabled services highlight and intensify the challenges confronting the program.

II. CONTRIBUTION METHODOLOGY

One of the most significant problems confronting policymakers is how to continue collecting sufficient funds for universal service without placing unreasonable burdens on the services that pay into the system. Today, the FCC determines the demand for funding under each program on a quarterly basis, and then sets a "contribution factor" that is applied to interstate telecommunications services.¹⁴ The current contribution factor is just under nine percent.¹⁵ Though not technically a tax, it operates in much the same way in that it is applied to all of your retail charges for interstate telecommunications services. The burden is primarily borne by the long distance carriers.¹⁶

11. Lifeline and Link-Up, *Report & Order & Further Notice of Proposed Rulemaking*, 19 FCC Rcd. 8302 (2004).

12. UNIVERSAL SERVICE ADMINISTRATIVE COMPANY, *supra* note 9 at 29.

13. Fed.-State Joint Bd. on Universal Serv., *Report & Order*, 12 FCC Rcd. 8776 (1997).

14. Fed.-State Joint Bd. on Universal Serv., *Further Notice of Proposed Rulemaking & Report & Order*, 17 FCC Rcd. 3752, ¶¶ 5-7 (2002).

15. Press Release, Federal Communications Commission, Proposed Fourth Quarter 2004 Universal Service Contribution Factor (Sept. 16, 2004), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-04-2976A1.doc.

16. John T. Nakahata, *Regulating Information Platforms: The Challenge of Rewriting Communications Regulations From the Bottom Up*, 1 J. ON TELECOMM. & HIGH TECH. L. 95, 125 (2002).

Several trends have combined to put upward pressure on the contribution factor, and in turn, increase the funding burden on consumers. When the program first began, long distance revenues which constitute the largest category of interstate telecommunications services were on the rise. Since 1997, however, they have been flat or in decline as a result of price competition and substitution of wireless services and e-mail.¹⁷ But because federal universal service contributions by law may be assessed only on interstate revenues, this shrinking of the revenue base has caused the contribution factor to rise steadily.¹⁸

Another important trend has been the increasing prevalence of bundled service plans. For years, wireless carriers have offered buckets of any-distance minutes at flat rates, and now wireline carriers are offering packages that include local and long distance for a single price. In addition, many carriers offer business customers bundles that include local and long distance voice services, Internet access, and customer premises equipment.¹⁹ Such bundling is a boon for consumers, but it creates difficulties when it comes to isolating the revenues from interstate telecommunications services. And the problem is likely to get worse as bundling becomes more and more popular.

The rise of IP-enabled services will only intensify the pressures on the universal service contribution methodology. Some categories of Voice over Internet Protocol (VoIP) including peer-to-peer services such as Free World Dialup and Skype have already been declared to be information services.²⁰ Thus, because they are not statutorily defined as telecommunications services, they are not assessed universal service charges. As minutes migrate from traditional telecommunications platforms to unregulated Internet platforms, the shrinking revenue base will continue to push the contribution factor higher. The FCC has yet to classify VoIP services that are initiated over cable and DSL connections, but if these services also are classified as information services, that will greatly accelerate the migration of minutes away from the buckets that are assessed for universal service purposes.

In December 2002, the Commission adopted a number of measures to stabilize the universal service contribution factor in an effort to mitigate the growing funding burden on consumers resulting from this technological climate.²¹ But we all know that more fundamental reform

17. *Contribution Methodology Order*, *supra* note 2, at ¶ 3.

18. Fed.-State Joint Bd. on Universal Serv., *Further Notice of Proposed Rulemaking & Report & Order*, 17 FCC Rcd. 3752, ¶¶ 5-12 (2002).

19. *Id.*

20. Petition for Declaratory Judgment Ruling that Pulver.com's Free World Dialup is Neither Telecommunications Nor a Telecommunications Serv., *Memorandum Opinion & Order*, 19 FCC Rcd. 3307, ¶ 9 (2004).

21. *Contribution Methodology Order*, *supra* note 2.

will be necessary to ensure the sustainability of universal service funding in the long term.

There are two primary reform options. One would be to expand the revenue assessment to cover other services, such as cable modem services and VoIP, thereby expanding the pool of contributors. However, while broadening the contribution base makes some sense, its implementation likely will be difficult for several reasons. First, the extent of the FCC's authority is subject to dispute, and the issue certainly would be litigated. Second, even assuming the FCC has authority to assess contributions on the "telecommunications" portion of information services, exercising that authority would require complex cost allocations that would be hard for regulators to monitor and burdensome for service providers. Third, it is unclear how the FCC could collect universal service contributions from VoIP providers that are located overseas, even if it wanted to do so.

In my view, the second reform concept is simpler and more straightforward: replace revenue-based charges with flat charges that would be assessed on every physical network connection to the customer or, alternatively, on every telephone number. The elegance of such an approach is that once a flat charge is imposed based on the network connection or telephone number, it no longer matters whether a particular service is interstate or intrastate, or classified as a telecommunications service or an information service. And, because the number of connections or telephone numbers is far more stable than the amount of revenues from interstate telecommunications services, the contributions would be more predictable over time. The system would be far less vulnerable to gaming, as there would be no point in misallocating revenues to some service categories instead of others. Many proponents of reform estimate that total funding demand could be met by a charge of a little more than a dollar per connection or number.²² Like the expanded revenue methodology, moving to a system based on connections or telephone numbers would entail legal risk. But I believe the FCC may be forced to take action in 2005 because it is increasingly difficult and anachronistic to collect funds based on a single category of services when the marketplace is eroding the boundaries between the interstate and intrastate jurisdictions, and between telecommunications services and information services.

22. *Id.* at ¶ 17.

III. DISTRIBUTION OF HIGH-COST SUPPORT

In addition to reviewing the contribution methodology, the FCC also has been considering various reforms regarding the *distribution* of high-cost support. Here, too, many of the key issues are complicated by the emergence of broadband networks and IP-enabled services.

Last year, the FCC reviewed the list of services that are eligible for universal service support.²³ Currently, supported services include voice-grade local service, access to 911, access to interexchange services, and other basic local services. The key question in recent years has been whether the list should be expanded to include broadband services.

Many advocates argue that the FCC should use universal service funding to support broadband deployment. Leaving aside the questionable wisdom of this policy, and whether it would be affordable, it presents a complex legal problem in light of the way the 1996 Act is written. First, universal service support may be provided only for telecommunications services.²⁴ Thus, to the extent that broadband access services or IP-enabled services are deemed to be information services, they do not appear to be eligible for funding.

Second, even assuming that obstacle can be overcome, the statute does not appear to contemplate that funds will be provided *until* a service has become widely available, even if a case can be made that subsidies are needed to arrive at that point. Specifically, the statute directs the FCC to consider, among other things, whether a service has been subscribed to by a “substantial majority of residential customers,” and also whether it is “essential to education, public health, or public safety.”²⁵ The FCC concluded last year that these standards are not yet met when it comes to broadband access services, but that is just a matter of time.²⁶ And, of course, Congress may someday revise the standard. But even if it does not, I would not be surprised if broadband penetration increases to the point at which the existing statutory standard is satisfied. For the time being, however, universal service subsidies are unlikely to be made available to broadband providers in light of the framework set forth in section 254 of the Communications Act.

Finally, the FCC and the Federal-State Joint Board on Universal Service, which I chair, have been considering the intersection of competition and universal service in rural areas. In particular, federal and

23. Fed.-State Joint Bd. on Universal Serv., *Recommended Decision*, 19 FCC Rcd. 10,812 (2004).

24. 47 U.S.C. § 254(c)(1) (2000).

25. *Id.*

26. Fed.-State Joint Bd. on Universal Serv., *Order & Order on Reconsideration*, 18 FCC Rcd. 15,090, ¶ 8 (2003).

state regulators have been considering the rules that should govern the ability of new competitors to become eligible to receive universal service funding.²⁷ Before the advent of local telephone competition in 1996, incumbent local exchange carriers (ILECs) were the only entities eligible for support. In recent years, however, many wireless carriers and a smaller number of competitive local exchange carriers (CLECs) have become eligible. In the future, I would expect that some cable operators providing VoIP similarly will seek to become eligible.

This raises a number of hard questions for policymakers. First, we need to ensure that any expanded funding is devoted to infrastructure investment, rather than simply padding the bottom line. To this end, the Federal-State Joint Board has recommended a number of minimum standards, including build-out requirements that regulators should employ in considering applications to receive support.²⁸ The FCC is reviewing these standards and should arrive at a decision in early 2005.

Second, the FCC and the Joint Board have been considering the appropriate basis for funding eligible carriers.²⁹ Currently, the largest telephone companies that qualify for the universal service fund receive support based on a forward-looking economic cost model, and smaller rural carriers receive support based on their embedded or historical costs.³⁰ For years, the FCC has been considering whether to harmonize the two systems, and that effort remains underway today.³¹ Some advocates contend that universal service funding will spiral out of control unless all carriers, including rural carriers, receive support based on estimates of forward-looking economic costs. Otherwise, the argument goes, there is no incentive for rural carriers to become more efficient. Opponents argue that this would leave rural carriers with a shortfall that would dramatically drive up rural telephone rates and undermine universal service. The Joint Board is considering comments and will recommend a decision some time in 2005.³²

A related issue concerns the basis of support for competitive carriers. Currently, competitors such as wireless carriers receive support

27. See, e.g., Fed.-State Joint Bd. on Universal Serv., *Recommended Decision*, 19 FCC Rcd. 10,812, ¶¶ 26-28 (2004).

28. Fed.-State Joint Bd. on Universal Serv., *Recommended Decision*, 19 FCC Rcd. 4257, ¶ 24 (2004).

29. Fed.-State Joint Bd. on Universal Serv., *Order*, 19 FCC Rcd. 11,538 (2004).

30. Fed.-State Joint Bd. on Universal Serv., Multi-Ass'n Group (MAG) Plan for Regulation of Interstate Serv. for Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, *Fourteenth Report & Order, Twenty-Second Order on Reconsideration, & Further Notice of Proposed Rulemaking*, 16 FCC Rcd. 11,244 (2001).

31. Fed.-State Joint Bd. on Universal Serv. Seeks Comment on Certain of the Comm'n's Rules Relating to High-Cost Universal Serv. Support, *Public Notice*, 19 FCC Rcd. 16,083, ¶¶ 20-34 (2004).

32. *Id.*

in rural areas based on the ILEC's costs.³³ Rural LECs decry this "identical support" rule because it produces a windfall for wireless carrier, since their costs are often lower.³⁴ Wireless carriers counter that providing them with a lower amount of support than wireline carriers would produce an uneven playing field favoring incumbents, and would eliminate any incentive for incumbents to become more efficient. This debate remains underway in front of the Joint Board, and will probably be resolved in tandem with the question of how to harmonize the separate mechanisms for larger and smaller carriers.

Finally, the FCC is considering the appropriate scope of support in areas with competition.³⁵ Currently, the rules do not limit how many carriers may receive support in high-cost areas, nor the number of supported connections each provides to a customer.³⁶ For example, it is possible that the universal service fund will be used to subsidize two wireline connections and four wireless connections, all for a single household. Many have argued, myself included, that this unconstrained approach could eventually bankrupt the system and, just as importantly, goes well beyond the statutory goal of ensuring that all consumers are connected to the network.³⁷ Defenders of the status quo argue that limiting federal subsidy support to a single connection per customer would undermine investment in rural areas, leave rural customers with fewer choices, and would be difficult to manage from administratively.³⁸

These criticisms have some force, but I believe that regulators must find some way to constrain the growth of the fund and to rein in the flow of subsidies. As new wireless and IP technologies drive down the cost of serving rural areas, our goal should be to reduce reliance on subsidies, rather than to expand the flow of dollars exponentially. This will require some hard choices and political compromises, but it is a challenge we will have to confront to prevent the universal service system from collapsing under its own weight.

There is no question that our universal service system has been, and continues to be a critical component of U.S. telecom success. The question we must ask ourselves today is where do we go from here? How do we update the rules and the distribution mechanisms to keep pace with the ever-changing technologies used for communications?

33. *Id.* at ¶¶ 35-37.

34. *Id.*

35. Fed.-State Joint Bd. on Universal Serv., *Notice of Proposed Rulemaking*, 19 FCC Rcd. 10,800 (2004).

36. Fed.-State Joint Bd. on Universal Serv., *Recommended Decision*, 19 FCC Rcd. 4257, ¶ 58 (2004).

37. *Id.* at ¶¶ 62-71.

38. Fed.-State Joint Bd. on Universal Serv., *Notice of Proposed Rulemaking*, 19 FCC Rcd. 10,800, ¶ 116 (2004).