

*VOIP: The Opportunities and Challenges Ahead*

**Remarks of Commissioner Kathleen Q. Abernathy  
at  
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Thank you very much. It is a privilege to be invited to speak here at the Quello Center. Chairman Quello was not only my former boss at the FCC, but he remains a valued mentor and friend. He set an example that I constantly strive to live up to. And fortunately he remains available for advice and consultation.

Of all the hot topics in telecom policy circles these days, the hottest seems to be Voice over Internet Protocol, or VOIP. So I thought I would focus my remarks on VOIP services, and on the broadband networks that underlie them.

VOIP allows anyone with a broadband connection to enjoy a full suite of voice services, often with greatly enhanced functionalities and at a lower cost than traditional circuit-switched telephony. VOIP provided over cable platforms is increasingly creating the robust, facilities-based voice competition that the framers of the 1996 Act envisioned. Wireline companies also are transitioning their networks from the circuit-switched technology of old to packet-switching networks that utilize IP. And before long, I expect other platforms — including wireless, satellite, and potentially electric power lines — to support widescale VOIP offerings and other IP-enabled services.

Not surprisingly, policymakers and industry participants have begun to debate the appropriate regulatory framework for VOIP services. Last week, the FCC initiated a

broad rulemaking proceeding to build a record on these issues. While deciding the appropriate regulatory framework is critical — and I will speak about that in a few minutes — it is important to remember at the outset that VOIP is simply an *application* that is provided over a broadband network. So we shouldn't put the cart before the horse: We should not presuppose that broadband networks will be ubiquitous; in fact, we are not yet close to achieving that goal. That's why it is critical for the FCC to continue its efforts to facilitate the deployment of broadband infrastructure.

We hope VOIP is the “killer app” that will bolster marketplace incentives to build out broadband facilities to all Americans. But even assuming that the marketplace incentives drive broadband investment, what about the regulatory incentives? I ask this question because a key aspect of my job, pursuant to section 706 of the Telecommunications Act of 1996, is to ensure that the FCC removes artificial regulatory barriers to such deployment. So I want to talk a little about our efforts in that area before jumping into the VOIP debate.

### **Facilitating Broadband Deployment**

Let me start by providing an overview of the FCC's efforts to encourage investment in broadband. According to the FCC's latest broadband report, cable operators have nearly 14 million broadband lines in service, and DSL providers serve nearly 8 million lines. Why such a difference in deployment? Part of cable's marketplace advantage may reflect superior technology or more aggressive investment, but it also may result from disparate regulatory treatment. While cable broadband facilities are not regulated at the federal level, wireline facilities have been subject to extensive regulation.

### *Triennial Review*

Against this backdrop, the Commission last year completed the so-called *Triennial Review* proceeding. That proceeding, among other things, outlined a regulatory framework for wireline broadband facilities. More specifically, we decided to refrain from imposing unbundling obligations on next-generation fiber loop facilities. (That is, local telephone companies are not required to share such facilities with competitors at deeply discounted rates set by regulators.) The Commission found that competition would emerge from cable and other technologies — as well as from wireline competitors — without resorting to a heavy-handed forced-sharing regime. Just as importantly, the Commission concluded that imposing unbundling obligations under the TELRIC pricing methodology would discourage investment by incumbent LECs and new entrants alike. So, relying on our authority under the 1996 Act, the Commission determined that we needed to forego an unbundling obligation in order to stimulate new broadband deployment. In the wake of this decision, several Bell companies announced plans either to begin deploying or to step up their deployment of fiber to the premises. This new broadband deployment will enable the carriers to provide an array of advanced data and video services.

### *Other Platforms*

It goes without saying that I am very pleased that cable operators have been successful in extending broadband capabilities and that wireline companies are increasing their deployment efforts. But that is not enough. The Commission also must promote the deployment of other broadband platforms. As I mentioned a moment ago, cable and DSL providers serve approximately 22 million customers. In contrast, other platforms

*collectively* serve only a small fraction of that amount. Our ultimate goal is for consumers to be able to choose from among a multiplicity of broadband services, rather than just one or two. Why? Because the emergence of new broadband platforms will further promote the benefits of choice, innovation, improved service offerings, and lower prices. More robust broadband competition also may enable the Commission to dismantle economic regulation in this arena, and thus fulfill Congress's goal of developing a procompetitive, deregulatory framework.

The FCC has taken a number of proactive steps to promote the development of wireless broadband services. To begin with, the deployment of Wi-Fi systems in the 2.4 Gigahertz unlicensed band has been rightly hailed as a tremendously promising development, and the FCC recently allocated an additional 250 Megahertz of unlicensed spectrum at 5.8 Gigahertz for Wi-Fi. Thus far, Wi-Fi systems complement, rather than compete with, last-mile technologies. But experiments underway demonstrate that next-generation Wi-Fi systems may have much greater range and capacity, and eventually may serve as a last-mile replacement. By the same token, I would be remiss if I neglected to mention ultra wideband technology. While current applications have been somewhat limited in scope, there is little question that it has great potential.

Licensed spectrum also holds great promise as a broadband platform. In cooperation with NTIA, the FCC allocated 90 Megahertz of spectrum for 3G services, and we recently issued licensing and service rules. I have also supported granting providers flexibility to provide new services in existing bands, such as the ITFS and MMDS bands, and I am optimistic that the FCC's efforts to develop secondary markets will enable more consumers to reap the benefits of broadband technology.

Satellite operators also are striving to be part of the broadband future. High-speed services are available now from DBS providers, and other companies and joint ventures are preparing to launch a new generation of satellites that will be capable of providing more robust broadband services. Such offerings might be especially attractive in rural areas, where terrestrial networks are particularly costly. I also believe that the FCC's recent efforts to reform the satellite licensing process will eventually help speed the delivery of new services to consumers.

Another promising technology is broadband over powerline, or BPL. Electric utilities have field-tested BPL systems and successfully delivered broadband Internet service to a small number of consumers. I recognize that amateur radio licensees have raised concerns about harmful interference, and that is something that will have to be addressed before any mass market deployment can occur. But if the engineers can find a technical solution that prevents harmful interference, BPL represents a tremendous advance for consumers, because it could bring broadband to any home that has electricity. And because it would be an add-on service to the existing electrical grid, it might represent a cost-effective alternative for rural areas and other underserved communities.

#### *Removing Other Regulatory Barriers to Deployment*

Finally, in addition to promoting additional infrastructure investment, the Commission must continue to break down other barriers to deployment. One important area concerns right-of-way management. There is no doubt that local governments have legitimate interests in regulating rights-of-way and recovering the cost of digging up streets (and any other costs). But in some cases, service providers have complained of

burdensome application processes, excessive processing delays, and exorbitant fees that appear to bear no relation to cost. The Commission has been working with state and local governments to address these concerns and to develop best practices. In particular, Commissioner Bob Nelson and his colleagues on the Michigan Public Service Commission have played a lead role in bringing key parties together and issuing a roadmap for resolving disputes. The FCC should continue to work with our state and local colleagues in this area to ensure that right-of-way management does not become a barrier to deployment.

In addition, as I mentioned earlier, the Commission has been considering the appropriate regulatory framework for broadband Internet access services provided over cable and DSL networks. These proceedings have been delayed temporarily as a result of litigation in the Ninth Circuit, but the Commission will continue its efforts this year to harmonize the disparate regulatory regimes and provide as much certainty as possible.

### **Regulatory Framework for VOIP**

So now more about VOIP. I think it is beyond dispute that, as broadband networks become increasingly ubiquitous, VOIP services are set to take off. Although VOIP is still a nascent service today, given the continuing evolution of technology and the clear advantages of packet-based communications, I expect most of our communications to be IP based in the not-too-distant future. And that is why service providers, regulators, and consumers have asked many questions about the appropriate regulatory framework. We at the FCC have responded by launching a rulemaking to tackle these important issues. We also recently adopted a ruling clarifying that peer-to-peer services such as Pulver.com's Free World Dialup service, which does not use

conventional telephone numbers and never touches the public switched telephone network, are unregulated information services. In contrast, most of the services at issue in our rulemaking proceeding intersect with the PSTN in some way, since most customers will want to place calls to and receive calls from parties that use conventional phones.

While I am still formulating my thoughts, I do enter into this rulemaking debate with certain predispositions.

First, I believe that VOIP is an inherently interstate service, and thus should be subject to regulation, if at all, primarily at the federal level. Traditionally, regulatory authority was divided between the FCC and state regulatory commissions depending on the jurisdictional nature of a telephone call. The FCC regulated long-distance (or interstate) calls, and states regulated local or (intrastate) calls. The FCC also set certain policies at the national level where a unified approach was needed; for example, the FCC has played a lead role in promoting universal service and assigning telephone numbers, even though both policies touch heavily on local services. This joint system has served us well, and it has usually been relatively clear which services were subject to each jurisdiction.

But when it comes to VOIP, concepts such as federal vs. state jurisdiction appear to be obsolete. When people make calls over IP-enabled services, the bits often travel from router to router across state — and often national — boundaries. More fundamentally, people can use most VOIP services without regard to their physical location. For example, if I subscribe to a service like Free World Dialup, I can log on from my home computer, my office, a coffee shop, a hotel, or a PDA — and the service provider has no idea which state I am in when I make a call. In such a scenario, distance

becomes irrelevant, and as a result our system of jurisdictional separations becomes an anachronism.

I believe that these inherent technical characteristics of VOIP communications warrant classifying VOIP service as interstate. While it is possible that some IP calls will remain within a single state's borders, it may be impossible to tell. In such a situation, a predominantly federal regime seems imperative, recognizing, of course, that states will continue to have an interest in consumer protection issues and the like. But when it comes to the regulatory framework, classifying VOIP services as interstate will allow policymakers to craft a unified federal strategy. As providers gear up to roll out services regionally or nationally, they should not be burdened with a patchwork of disparate state regulations. Given the importance of Internet-based communications to our economy, I believe we should strive to facilitate, rather than hamper, such deployment.

So if the regulatory regime should be predominantly federal, the next question is, what should it look like? Many policymakers, myself included, have answered that question by stating that we should employ a light touch. Chairman Powell, for example, has said that we should ensure that any regulatory requirements are clearly necessary. In the same vein, I have stated that, when it comes to nascent services such as VOIP, we should employ the regulatory equivalent of strict scrutiny: We should make sure that our rules are narrowly tailored to the governmental interests at stake.

Moving beyond generalities, I believe it is clear that we should avoid imposing any kind of *economic* regulations. For example, I cannot at this time discern any rationale for regulating VOIP prices or service quality. Such regulations, which we have traditionally imposed on local exchange carriers, have been employed to restrain the



market power of monopoly providers. Providers of VOIP services, on the other hand, are new entrants. Rather than reflexively extending our legacy regulations to VOIP providers, we need to take this opportunity to step back and ascertain whether those rules still make sense for *any* providers, including incumbents.

In several respects, we can draw powerful lessons from our experience with wireless services. When PCS services were introduced in the 1990s, some called for the imposition of price and service regulations, based on the supposed entrenchment of the analog cellular providers. The FCC wisely employed a light touch, and its restraint helped the wireless sector grow into a vibrantly competitive and highly innovative industry. Also critical was Congress's enactment of section 332 of the Communications Act, which preempted state regulation of entry and rates. This approach recognize the fact that 51 disparate regulatory regimes would preclude carriers from pursuing nationwide business strategies. I think the wireless experience suggests that VOIP services will flourish under a predominantly federal scheme that employs a light regulatory touch.

While I believe we should be circumspect about regulating VOIP services, I have no doubt that *some* regulatory intervention will be necessary. Just as the FCC has regulated wireless services to prevent harmful interference, to promote E911 and local number portability, and to achieve other *social policy* objectives, so too will regulation be necessary to ensure that VOIP providers fulfill such obligations. At the FCC's public forum in December, it appeared there was consensus that VOIP providers will need to contribute to universal service, ensure access to 911 services, enable law enforcement agencies to intercept communications, and ensure that persons with disabilities are not

denied access. I do not know at this point, however, what specific approaches will make the most sense. For example, I do not know whether we can rely on industry best practices in some instances, or whether we will need to impose prescriptive regulations. But my basic approach will be to minimize regulatory intervention where possible, while ensuring that these critical policy objectives are met. While I do not believe that states should attempt to impose economic regulations on VOIP services, I hope and expect that states will work collaboratively with the FCC in furthering our joint social policy objectives.

Finally, although I am committed to a hands-off approach for VOIP services, we should not assume that *any* use of IP technology necessarily transforms a circuit-switched service into VOIP. When I talk about creating a new regulatory framework for VOIP, I have in mind services that use Internet protocol over the last mile, at least on one end of the call. By contrast, a call that starts on the PSTN and ends on the PSTN does not necessarily warrant different regulatory treatment from other circuit-switched calls simply because a long distance carrier chooses to use IP technology at some mid-point in the network. Long distance carriers, local carriers, and enhanced service providers all have raised questions about the applicability of our intercarrier compensation rules and other requirements to these phone-to-phone services, and I believe the Commission should provide clarity as soon as possible. As I have often stated, most businesses would prefer even an adverse decision to no decision at all. The present uncertainty is likely distorting competition and the flow of capital, as some providers price their services based on the assumption that they do *not* have to pay access charges, while other competitors price services on the assumption that they *do* have to pay. I therefore hope

that the Commission will soon clarify the applicability of its existing rules, in addition to proposing a new regulatory framework for VOIP services.

Not surprisingly, technology is moving faster than government regulators. And that is as it should be, because regulatory change has always been prefaced by the advent of exciting new technologies. Our job is to ensure that we do not inadvertently stifle the innovation by reflexively applying yesterday's regulatory framework to new products and services. Instead, we should give new technologies the breathing room to revolutionize how we communicate, how we receive health care, how we are educated. I am committed to this path, and I am optimistic that, working with my colleagues at the federal and state level, we will be able to accomplish these goals.