

***Developing a New Paradigm for Communications Regulation***

New Jersey Telecommunications Summit

Keynote Address by

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I want to thank Connie Hughes for inviting me to speak with you today. I have worked closely with Connie on various projects, including the NARUC Committee on Critical Infrastructure, which she chairs. Connie brings incredible energy and dedication to her work, and you are very lucky to have her on the Board of Public Utilities.

I am pleased to be able to speak with you today about the exciting changes underway in the world of communications. We are living in an era of rapid technological transformation, and this brings wonderful new opportunities for consumers. The deployment of new broadband communications networks promotes economic development, creates new educational opportunities, improves our delivery of health care, and delivers a wealth of

information and entertainment to our homes. But along with all of these benefits, the rapid technological changes and new marketplace realities create significant challenges for regulators. Traditionally, regulators applied separate rules to distinct categories of services — such as telephone service, cable television, and wireless services. But increasingly these categories are collapsing as companies are competing to offer bundles of voice, video, and data services over telecommunications networks, cable networks, wireless networks, satellite systems, and even over the electric grid. This convergence of the old categories creates endless interpretive disputes. For example, when a telephone company offers an IP-based video service over a new fiber optic network, should that service be regulated as a telecommunications service, a cable service, or an information service? Similar questions have been raised about voice-over-IP and broadband Internet access services. The Communications Act was written primarily for an analog world in which the different services were subject to disparate sets of rules, and it is not clear which rules

should apply to new broadband networks and IP-enabled services. At the FCC, we have been attempting to update our rules to account for the new services, but our authority is limited and may not enable us to adopt appropriate reforms in some circumstances. For this reason, Congress has been engaged in a reexamination of the statutory framework. Congress has been holding hearings on voice-over-IP services, digital television, and a number of related subjects and may enact new laws later this year — or more likely sometime next year. State legislatures and regulatory commissions around the country also are reexamining the framework that governs communications services.

What I thought would be helpful would be to begin with a brief overview of the new broadband services that are being introduced in the marketplace and what they mean for consumers. Then I will discuss some of the key policy challenges facing regulators. Specifically, I will discuss the FCC's efforts to promote the deployment of new broadband infrastructure and our proceedings regarding the development of a regulatory framework

for voice-over-IP services. In addition, I will touch on the pressures facing our system of intercarrier compensation, and finally the related subject of universal service.

## **The Promise of Broadband**

So before I talk about the regulatory issues surrounding broadband networks and services, let me try to create some context. Why do we spend so much time in Washington and in state government talking about broadband? Is it just hype, or is there something truly important about broadband? When I first heard about broadband years ago, I was tempted to think it just meant faster e-mail — which is nice, but not particularly earth shattering. But now that I have learned more about high-speed communications networks, I have come to understand that the potential benefits are profound. It is increasingly clear that broadband technology will fundamentally reshape the way we communicate, the way we work, the way we learn, the way we receive health care, and the way we are entertained.

One of the most powerful benefits of broadband is its potential impact on our education system. Broadband connections can bring a world of information to rural communities via the Internet, so that school children can have access to the same resources in an Appalachian town as they do in an affluent private school in New York City. Teachers can develop innovative lesson plans based on information stored on servers anywhere in the world. If a school does not have a foreign language teacher, students can use distance learning to study with a teacher in another district. And the benefits are not just for rural areas: Any underserved community, such as inner-city areas, can benefit tremendously from the improved educational opportunities associated with broadband technology. The federal government spends more than \$2 billion annually to subsidize high-speed connections and telecommunications services to schools and libraries, and poorer areas are given priority access to these funds and more significant discounts off retail prices.

In addition to improving education, broadband networks support telemedicine, which gives families in remote areas access to medical specialists without having to travel long distances. I have seen demonstrations of how telemedicine connects patients in remote areas of Alaska to hospitals and clinics hundreds of miles away, often preventing the ordeal and immense cost of air transport. Doctors in advanced hospitals can listen to a patient's heartbeat or view a cardiac ultrasound in perfect fidelity and clarity from hundreds of miles away. And health care professionals now can travel in mobile clinics equipped with broadband satellite links so they can offer sophisticated diagnostic services and treatment to patients who previously lacked any access to health care.

More generally, broadband networks promote economic growth by connecting small businesses to millions of potential customers all over the world and by allowing larger businesses to set up call centers and otherwise tap into a new employee base. Broadband connections allow workers to telecommute with ease. Broadband networks also are inherently more efficient than

narrowband networks, so they allow service providers to lower their costs. So broadband doesn't only lead to better education and health care; it fuels job creation and economic expansion.

### **Promoting Broadband Deployment**

In light of the many benefits of broadband networks and the IP-enabled services they support, it should come as no surprise that the FCC has made it a top priority to encourage investment in new broadband networks. In fact, Congress established broadband deployment as a national priority in section 706 of the Telecommunications Act of 1996. The FCC has accordingly worked on removing regulatory impediments to investment by wireline carriers, allocating more spectrum for wireless broadband services, and fostering the development of other broadband technologies. I'll touch on each of these areas in turn.

Today, cable broadband networks serve roughly 60% of all broadband customers, and DSL providers serve around 40%, with a relative handful of consumers served by alternative platforms. Part of cable's marketplace advantage may reflect superior

technology or more aggressive deployment, but it also may reflect years of disparate regulatory treatment. While cable broadband facilities are not regulated at the federal level, wireline facilities were potentially subject to extensive regulation, until the FCC took important deregulatory action in 2003.

Specifically, the FCC exempted next-generation fiber loop facilities from a forced-sharing obligation we call “unbundling.” The Commission concluded that significant competition would emerge from cable and other technologies — as well as from wireline competitors — without resorting to a forced-sharing regime that is fraught with costs and implementation problems. Just as importantly, the Commission found that imposing unbundling obligations at deeply discounted rates would discourage investment by incumbent LECs and new entrants alike. Relying in part on section 706, we decided to forego an unbundling obligation in order to stimulate new broadband deployment.

In the wake of that decision — which was upheld by the D.C. Circuit Court of Appeals — the Commission made important clarifications to ensure that carriers would not be deterred from serving particular populations or deploying particular network architectures. We made clear that apartment buildings would be subject to the same regulatory treatment as single-family homes; we put fiber-to-the-curb architectures on a par with fiber-to-the-home deployments; and we used our forbearance authority to ensure that the regulatory relief granted under section 251 of the Communications Act would not be undermined by unbundling obligations imposed under section 271.

This string of decisions is unquestionably bearing fruit. Several Bell companies have committed to billions of dollars in new investment in fiber networks, and smaller carriers also have announced plans to step up their deployment.

While it is great that wireline companies are increasing their broadband deployment in the wake of the FCC's action and that cable operators continue to extend their own market-leading

broadband capabilities — that is not enough. The Commission also must promote the deployment of other broadband platforms. While cable and DSL providers serve more than 30 million broadband customers, 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. Some platforms may be better suited for urban areas, while others may be better suited for rural areas. And consumers may choose to make trade-offs among price, capacity, and attributes such as mobility. Moreover, the emergence of new broadband platforms will promote a high degree of innovation, both technologically and in terms of consumer-friendly service packages. Finally, more robust broadband competition may someday enable the Commission to dismantle economic regulation for *all* communications services, including voice services, thereby fulfilling Congress’s goal of developing a procompetitive, deregulatory framework.

With this in mind, the FCC has taken a number of proactive steps to promote the development of wireless broadband services. We have allocated new spectrum for unlicensed Wi-Fi and Wi-Max devices, and we have provided more flexibility for users of licensed spectrum. We have also worked on developing more effective secondary markets for spectrum also will enable more consumers to reap the benefits of broadband technology. And we took several specific steps to facilitate improved access to spectrum in rural areas.

The FCC also has worked hard to enable electric utilities to introduce broadband over powerline, or BPL, services. Electric utilities have field-tested BPL systems and successfully delivered broadband Internet service to a small number of consumers on a commercial basis. I believe that BPL holds tremendous promise for consumers, because it could bring broadband to any home that has electricity. In a proceeding last year, we adopted rules to prevent harmful interference to other licensees, such as amateur radio operators. But we resisted efforts to explore the potential

imposition of economic regulations on BPL services because we want to give this nascent service room to develop before there is any proceeding concerning regulatory obligations.

Finally, satellite operators also are striving to be part of the broadband future. High-speed services are already available 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 — and hopefully more affordable — broadband services. Such offerings might be especially attractive in rural areas, where terrestrial networks are particularly costly. The FCC has focused on reforming the satellite licensing process, and we hope that this will eventually help speed the delivery of new services to consumers.

### **Creating a Regulatory Framework for IP-Enabled Services**

While the FCC has devoted significant resources to promoting the deployment of broadband *networks*, it is also grappling with how to regulate the IP-enabled *services* that ride over these networks. As I mentioned earlier, many companies are

offering voice-over-IP services, and some telecommunications carriers have recently introduced video-over-IP services. These services supplement the broadband Internet access services that have been available for years, and new and different IP services are certainly on the way.

At bottom, the challenge for regulators and legislators at the federal and state level is to figure out which legacy rules should be carried over into the new environment. In the voice arena, the principal questions are the degree to which common carrier requirements will be imposed on voice-over-IP services. In the video world, questions arise regarding the application of local franchising regulations and related requirements to providers of IP television services. I have spent much of my tenure at the FCC thinking about these kinds of issues, and I have developed what I call the Nascent Services Doctrine as a way to approach the problem. Typically, when a new service is introduced, there will be calls from entrenched incumbent providers to carry forward most, if not all, legacy rules to ensure a level playing field. And

new entrants generally will argue that they should be exempt from such regulations, to avoid choking off investment and innovation.

My own view is more sympathetic to the latter position — we should give new platforms room to breathe instead of saddling them with legacy regulatory requirements. This is the crux of the Nascent Services Doctrine. My view is that reflexively extending legacy rules can do great harm, and is usually unnecessary, because the conditions that justified adoption of such rules seldom apply to new entrants. Most importantly, where the justification for legacy rules was an incumbent provider's market power, it is counterproductive to apply such rules to entities that *lack* market power. Regulatory parity is an important long-term goal, but it should be achieved by lifting legacy restrictions on incumbents once new platforms have emerged, rather than extending those rules to the new platform. This approach is most faithful to Congress's call for a pro-competitive, deregulatory framework, and it also accords with my experience that fully functioning

markets invariably do a better job of maximizing consumer welfare than regulators can hope to achieve.

The Nascent Services Doctrine doesn't call for complete freedom from regulation for new entrants; rather, it calls for adopting *targeted* regulations to ensure fulfillment of core social policy objectives, and ensuring that those rules are *narrowly tailored* to the governmental interests at stake. The wireless experience offers a good model. When broadband PCS services were introduced in the early 1990s, the FCC appropriately refrained from imposing price and service-quality regulations, and instead focused on preventing harmful interference, ensuring the development of E911 capabilities, promoting universal service, and so forth. Likewise, I believe that regulators should avoid imposing economic regulations on VOIP providers. Specifically, we should not attempt to regulate prices or service quality, and we should avoid entry and exit regulation. Such common-carrier-type regulations have been imposed on monopoly providers because competition was insufficient to protect consumers. But VOIP

providers do not have market power, and we accordingly don't need to subject them to traditional utility regulations.

We should, however, employ regulation where necessary to ensure the fulfillment of core social policy objectives. There seems to be a developing consensus in policy circles that VOIP providers should be subject to rules to ensure the deployment of E911 capabilities in a reasonably timely manner; to ensure access for persons with disabilities; to ensure compliance with lawful surveillance requests; and to preserve and advance universal service. Such a framework may be implemented through statutory changes. But since the prospect of legislation is always murky, regulators must proceed in the meantime under existing law. I hope Congress clarifies the FCC's statutory authority, because otherwise we will inevitably face legal challenges over the extent of our authority over IP-enabled services. To the extent those services are classified as information services, which fall under Title I of the Communications Act, the extent to which the FCC may impose regulatory mandates is unclear. And while a

classification under Title II — which applies to common carrier services — would mean broader and more certain FCC rulemaking authority, it too would be subject to legal challenge. A Title II approach also would risk leading to overregulation and would therefore be accompanied by complex forbearance proceedings, which would produce still more legal challenges. Thus, in the absence of legislative reform, any path ahead unfortunately will be marked by a significant degree of uncertainty and litigation.

[An early test of our authority may result from the FCC's decision yesterday to impose E911 mandates on VOIP providers. I agreed with my colleagues that fixed-line residential VOIP providers should provide full E911 capability, but I dissented in part because I thought the order went too far. I did not believe the FCC should have attempted to regulate nomadic or mobile VOIP services at this nascent stage of their development, and in any case I thought the Commission needed to provide more time for implementing the new mandate. Moreover, I was concerned about imposing a mandate on VOIP providers without giving them any

rights to obtain the inputs they need from the Bell companies and other ILECs. Add in the fact that our Title I legal authority is uncertain, and it becomes increasingly likely that we will end up resolving some of these issues in court.]

I think it is important to recognize that network owners and other providers of IP telephony services that are a substitute for traditional voice services should not only bear certain *responsibilities*, but should *also* should be granted certain basic *rights*. Such rights would include the ability to interconnect with other network owners on a peering basis and the right to obtain telephone numbers. This notion of adopting basic rights and responsibilities — but avoiding traditional economic regulations — is consistent with my call for the regulatory equivalent of strict scrutiny in this arena. What I mean by strict scrutiny is that we should adopt rules only where necessary to promote *compelling* governmental interests, and we should ensure that any rules we do adopt are *narrowly tailored* to the interests at stake. Again, we

have to ask ourselves repeatedly, what's broken that we are trying to fix?

Lastly, let me say a few words about the appropriate role for states in developing a framework for VOIP or video-over-IP services. As a general matter, I believe the federal government needs to take the lead in classifying these services and developing the basic regulatory framework. That is, are they information services or telecommunications services, and will they be subject to common-carrier-type regulations or instead a lighter touch? IP-enabled services are being deployed on a regional, national, and even global basis. The architecture of IP networks generally leads to information packets being routed without regard to state or even national boundaries. As a result, service providers need a high degree of uniformity to be able to operate on a regional, national, or global scale. Allowing each state to determine the appropriate classification and basic treatment of these services would lead to a patchwork of inconsistent rules that would chill investment and innovation.

That being said, I see an ample role for state policymakers in the development and implementation of any new frameworks. First, we at the FCC are eager to work with our state colleagues on the classification decisions and other fundamental questions. We do this through joint boards and joint conferences, through NARUC meetings, and through our public comment processes. Second, once the basic framework is established at the federal level, the FCC should defer to state government on many questions of implementation and dispute resolution. I have often noted that states should continue to apply consumer protection laws that prohibit fraud and deceptive trade practices. Moreover, I believe that state and local governments are the more appropriate venue to resolve questions concerning right-of-way management, pole attachments, and related matters that have a significant local component. In short, I believe we should continue to pursue a federal-state partnership on policy matters, with each partner taking the lead on particular aspects of the regulatory regime.

### **Shoring up the Intercarrier Compensation Regime**

As this brief overview illustrates, developing a regulatory framework for VOIP services is a complex task. It is even more difficult when you consider the intersection with some of our legacy regulatory regimes that are designed to keep local service rates down in rural and other high-cost areas. I will conclude with a brief discussion of two related matters — our system of intercarrier compensation, and our universal service support mechanisms — to give you a sense of the challenges we are facing.

Inter-carrier compensation refers to the system of payments that carriers make to one another for transporting telecommunications traffic. Traditionally, the most significant payers were access fees paid by long distance carriers to the local carriers at each end of a telephone call. These fees helped the local carriers recoup their costs. In fact, the access fees were deliberately set well above cost to ensure that end-user charges for local telephone service remained reasonable in all areas across the country, including those rural and insular areas where the costs of providing telephone service run very high.

The system of intercarrier compensation is under great strain for two primary reasons. First, determining the jurisdictional nature of a call is increasingly difficult as the line between local and long distance calling is eroding. Service providers such as AT&T have resorted to numerous theories to argue that their calls are interstate, rather than intrastate, because intrastate access charges are generally far higher. (I know that it is counterintuitive that in-state calls would cost more to transport than out-of-state calls, but this is an artifact of regulation that has been particularly hard to change.) Wireless carriers also have been mired in disputes with local providers about which rate category their calls fall under. As long as there are separate rates applied to local, intrastate toll, and interstate toll calls, there will be disputes about which rates should apply. And the carriers that pay the fees will continually look for means — legal or otherwise — to avoid those charges altogether.

This brings us to a major second strain on the system, which is the classification debate over VOIP services. The FCC's rules

apply access charges to telecommunications services, but not to information services. Thus, voice-over-IP providers generally argue that there are providing information services that are not subject to the access charge regime. Not surprisingly, local carriers take a contrary position. It is easy to see how the uncertainty regarding the regulatory framework for VOIP is of great concern both to access charge payers seeking to minimize their costs and to local carriers that rely on access charges for cost recovery — especially rural LECs who are more heavily dependent on those fees.

The FCC has been reviewing its intercompensation rules for some time, and NARUC has been actively exploring reform proposals. Most industry participants and consumer groups have come to recognize that we need to replace the system of different rate structures for different kinds of traffic with a unified intercarrier compensation scheme that applies a single rate to all traffic. A unified system would reduce or eliminate incentives for arbitrage, and it would lead to far more certainty for payers and

recipients of access charges. But there are significant hurdles to overcome. Rural LECs tend to argue for a unified scheme based on their embedded costs, which can run quite high. At the other end of the spectrum are those calling for a bill-and-keep regime, which in sense is a unified intercarrier compensation scheme where the rate is zero. There are major questions about the FCC's statutory authority to impose a unified system, and if individual states adopt their own rules, it is unclear whether the reform effort will produce a coherent and workable outcome for national service providers. Whatever the solution is, I hope the FCC takes prompt action, because the current uncertainty is very damaging to the entire industry.

### **Reforming Universal Service Support**

The last subject I wanted to cover is universal service. Access charges support universal service by keeping local rates down in rural areas. But an equally important part of the universal service regime is the system of direct subsidies that are paid to carriers serving high-cost areas. The FCC administers a number of

different support mechanisms, which in the aggregate redistribute over \$7 billion annually. We have mechanisms for schools and libraries, rural health care clinics, and low-income consumers, but the largest single component of the fund is the mechanism that supports rural carriers serving high-cost areas. While there are many debates underway regarding the *distribution* of universal service support to carriers — for example, should it be frozen or reduced, and to what extent should wireless services be funded — given the shortness of time I will limit my remarks to the *contribution* methodology that funds the system.

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. 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. The current contribution factor is more than 10 percent. It is not technically a tax, but it operates the

same way in that it is applied to all of your retail charges for interstate telecommunications services.

Several trends have combined to put upward pressure on the contribution factor, and in turn increased the funding burden on consumers. When the program first began, long distance revenues — which constitute the largest category of interstate telecom 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. 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.

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. Such bundling has been a boon for consumers but has made it difficult to isolate 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 VOIP — including peer-to-peer services such as Free World Dialup and Skype — have already been declared to be information services. Thus, because they are not telecommunications services, they are not assessed universal service charges. As minutes migrate from traditional telecom 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. But more fundamental reform 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. While broadening the contribution base makes some sense, it might be hard to do for several reasons. First, the extent of the FCC's authority is subject to dispute, and certainly would be litigated. Second, even assuming the FCC has authority to assess contributions on the "telecommunications" portion of information services, that 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 other reform concept is simpler and more straightforward, and thus preferable. This concept is to 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 simple elegance of these approaches is that, once a flat charge is imposed based on the network connection or telephone number, it longer matters whether a particular service is intrastate or interstate, or classified as a telecommunications service or an information service. And because the number of connections and telephone numbers is far more stable than the amount of revenues from interstate telecom 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. 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 this year or next, 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 telecom services and information services.