Balancing Responsibilities and Rights: A Regulatory Model for Facilities-Based VoIP Competition

An NCTA Policy Paper

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A Regulatory Model for Facilities-Based VoIP Competition

Introduction and Executive Summary

Today, most American households do not have a choice of facilities-based local telephone service providers. They have not realized the benefits of such choices despite nearly a decade of efforts by lawmakers and regulators to promote facilities-based competition in the local telephone marketplace. Although some cable companies are providing an alternative with circuit switched telephone service, with the deployment of cable-based Internet Protocol (“IP”) phone services, customers will enjoy new options for a full suite of facilities-based voice services.

Forms of non-facilities-based Voice over Internet Protocol (“VoIP”) service exist today, but they generally do not offer the reliability and quality that consumers have come to expect from “plain old telephone service” (“POTS”) offered by incumbent local exchange companies (“ILECs”) and most competitive local exchange companies (“CLECs”). Cable communications companies are working to introduce a new generation of phone services that will offer the flexibility and economy of IP technology (i.e., the shared transmission of voice, data, and video information via a managed network) and the reliability and quality of service that consumers desire. Importantly, VoIP services delivered over a broadband cable network will, over time, provide wide-scale residential phone competition that is both facilities-based and sustainable.

The cable industry is excited about the consumer benefits and business opportunities that VoIP services will create, and the industry is devoting capital, personnel, and other resources to make facilities-based VoIP services a marketplace reality. Resources and the state of technological development, however, are not the only factors that will affect the availability of VoIP services. Regulatory uncertainty – and the potential for application of unnecessary or overly burdensome regulation – will also affect whether, when, and how VoIP services are deployed.

The Internet and information services generally have succeeded, in large measure because of regulators’ prescient and courageous decision, made more than
two decades ago, to promote competition in interstate information services and to fence them off from unnecessary federal and state regulation. Commercial mobile radio services (“CMRS”) have similarly been the subject of pro-competitive and deregulatory policies, again with salutary results in terms of investment, speed of innovation, and competition. Unfortunately, this has not generally been the case for CLECs. Although some states have adopted a hands-off approach to regulating new entrants, many states have imposed varying levels of traditional telephone regulation on those new entrants. It is unknown how the costs of this regulation have affected the willingness of companies to commit risk capital and provide competitive alternatives. Establishing a clear legal framework that promotes the emergence of VoIP services and ensures their freedom from unnecessary regulation can have equally beneficial results for the development of telephone competition, particularly in the residential mass market.

Much of the public policy discussion surrounding VoIP has centered on the appropriate regulatory classification of such services. Such an approach, however, has several shortcomings, as each regulatory category carries with it a history of regulatory assumptions that may or may not be appropriate for new technologies such as VoIP and the services they spawn. For that reason, this policy paper chooses instead to describe the cable industry’s vision for a regulatory approach that will lead to efficient and rapid deployment of facilities-based VoIP services. We describe the public policy objectives that should be pursued to encourage the growth of VoIP services. We propose a regulatory roadmap that: (1) assigns to VoIP service providers vital responsibilities; (2) discusses certain responsibilities that VoIP service providers may undertake on a voluntary basis, but which should not be imposed upon them; and (3) identifies rights that are essential for VoIP service deployment. We also establish a baseline definition as to which VoIP services should have such rights and responsibilities. In doing so, we suggest that such an approach be applicable to new entrant VoIP service providers based upon the precise nature of the services they provide, regardless of whether they provide those services over their own facilities or the facilities constructed by others.
Protecting VoIP services from unnecessary regulation does not require that important public policies be neglected. Even under a generally deregulatory regime, any VoIP service that meets a baseline test as proposed herein\(^1\) can, and should, meet certain public policy responsibilities and requirements such as the principles set forth in the Communications Assistance for Law Enforcement Act (‘CALEA’), the offering of 911/E911, access for the disabled, and appropriate contributions to universal service. But the overall direction of public policy should be toward a deregulatory environment in which even the most vital public policy objectives are secured through the lightest possible regulation, so as not to forestall the many benefits of these new services.

Similarly, there are a number of legacy utility requirements that should not be imposed on VoIP service providers. Most such requirements date from the era of a single provider of phone service and are inappropriate for competitors using nascent technologies that offer alternatives to incumbent providers. In particular, a number of legacy requirements relate to billing, payment, credit and collection, and quality of service standards. Competitive marketplace forces, rather than prescriptive rules, can address these issues much more effectively for non-incumbent providers of VoIP services. Regulators should make a comprehensive effort to review and eliminate such regulatory requirements for VoIP services.

VoIP service providers, particularly facilities-based providers, do, however, require certain rights irrespective of whether the provider’s service is ultimately determined to be an “information service,” a “telecommunications service,” or another type of service. These rights relate generally to interconnection and the exchange of traffic, the right to obtain telephone numbers and have them published in telephone directories, the right to access the facilities and resources necessary to provide VoIP customers with full and efficient 911/E911 services, the right to be compensated fairly for terminating traffic delivered from other entities and the right to non-discriminatory

\[^1\] The proposed four-prong test requires that a VoIP service (1) use North American Numbering Plan (‘NANP’) resources, (2) receive calls from – or terminate them to – the public switched telephone network (‘PSTN’), (3) represent a possible replacement for POTS, and (4) use Internet Protocol transmission between the service provider and the end user customer, including use of an IP terminal adapter and/or IP-based telephone set.
access to universal service support. In addition, facilities-based VoIP providers need access to poles, ducts, conduits and rights-of-way, regardless of the ultimate regulatory classification of VoIP services.

In the final analysis, facilities-based VoIP services can be the breakthrough that fulfills the vision of the Telecommunications Act of 1996\(^2\) (“1996 Act”) for vast numbers of residential consumers. The cable industry stands ready to play a lead role, just as it has done in making residential broadband Internet service a widespread and desirable service. This breakthrough will occur most rapidly and ubiquitously if federal and state policymakers and regulators affirmatively promote VoIP services as an important policy objective and adopt a predominantly deregulatory approach to VoIP services.

I. What is VoIP?

VoIP is the convergence of voice and data into a single bitstream, which enables the provision of innovative offerings that integrate the two in ways not possible using traditional circuit-switched technology. Voice communications are digitized into data packets and routed in that form over either managed IP networks and/or over the public Internet to the desired location using IP addressing. As such, VoIP, in and of itself, is not a service. Rather, VoIP is a technology that allows voice traffic to be packetized and transported or routed over privately managed networks as data packets. Because the vast majority of telephone subscribers continue to be served by incumbent LECs on the public switched telephone network (“PSTN”), most VoIP-based calls made today continue to traverse, at some point, the PSTN. As VoIP-based services become more prevalent, however, the technology will eliminate the need for both traditional circuit switching and the public switched telephone network (“PSTN”).

In traditional circuit-switched telephony networks, a dedicated path, or channel, is opened between the parties participating in the call. No other traffic can pass over that channel while the call takes place. This dedicated channel remains open until the parties terminate the call, thus freeing up the channel for use in another call. In VoIP telephony – as with other IP-based services – dedicated circuits are not used. Multiple conversations are sent over the same channel as separate streams of data packets. When there is a lull in any particular conversation, other data packets can be carried over the same portion of the network, thus making the network more efficient than a traditional circuit-switched network. In technical terms, VoIP uses the network more efficiently because it combines, or multiplexes, multiple sets of data over the same physical path.3

VoIP is an attractive technological approach for cable system operators who have already entered the local telephone market as well as those offering voice

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services for the first time. Compared to circuit-switched telephony, VoIP may result in lower (though still significant) rollout costs, increased flexibility, and more innovative and advanced services. More specifically, VoIP allows a provider to avoid the huge capital expenditures and investments needed to purchase and install circuit switches. Furthermore, VoIP utilizes data paths that the cable industry has already invested in and built. These existing paths facilitate easy software changes and additions to service packages, as well as innovative combinations of voice, data, and fax services.

As with many other technical pursuits, standardization is important to VoIP. Cable companies want to be able to purchase equipment from various vendors, and to know that the equipment will be interoperable. To that end, CableLabs, the industry’s research consortium, has been involved in developing uniform technical specifications for many years, including a successful effort to develop cable modem technical specifications. The Data Over Cable System Interface Specification (“DOCSIS”) is also the underlying specification for a CableLabs project known as PacketCable. Very simply, PacketCable is a common platform and set of interoperable interface specifications for delivering advanced, real-time multimedia services, including not only VoIP, but also multimedia conferencing, interactive gaming, and other multimedia applications. The VoIP specifications are written to do exactly what today's analog, circuit-switched phone network does, from dial tone to ring tone. But unlike other VoIP specification efforts that address only individual portions of how to make an IP phone call, PacketCable addresses the entire journey.

The term “VoIP” encompasses these, as well as many other services, ranging from voice-enabled instant messaging and chat and voice-enabled gaming (such as Xbox Live) to services which replicate POTS. In many instances, “VoIP” will simply support a voice application or software application. Among the services that some cable operators are considering are “unified” messaging (whereby users have a single message platform for e-mail, voicemail, faxes, and the like); personal portals; caller ID on television sets; talking email; and customized dial-tones and greetings. VOIP may also make possible advanced video conferencing services including a combination of
voice, video, and data delivery. Furthermore, with VoIP, some consumers may eventually be able to use the Internet from any location and instruct a home phone to forward calls to another phone number or listen to voicemail via the Internet from any location. Or, in an example offered by FCC Chairman Michael Powell, because “[VoIP] can be readily integrated with other computing systems … you make an Internet call to a doctor’s office to make an appointment. The doctor’s system calls up your medical records, your medications, and your last visit and instantly displays them. It also brings up the appointment times available, allows you to select one and then calls you back, or sends a text message to your cell phone, the day before the appointment to remind you.”

Even among those VoIP services that are “phone-like” there are significant differences. For example, the IP data packets used by services from some of the currently well-known providers, such as Vonage, travel over the public Internet. Facilities-based cable offerings, in contrast, will be able to transport IP data packets over their private managed IP networks with end-to-end quality of service monitoring (while still interconnecting with the PSTN as necessary). Moreover, with a cable-based VoIP service, it is possible to offer a robust VoIP service to a customer that does not subscribe to high-speed Internet access service. At least one cable company is currently offering its VoIP product to customers who do not subscribe to high-speed Internet access.

The VoIP services of particular concern in this paper might be more properly referred to as “IP Phone” services – those that in some ways mimic traditional telephone service. It appears, however, that the term “VoIP” has come to commonly

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4 See The Age of Personal Communications: “Power to the People”, Remarks of FCC Chairman Michael K. Powell Before the National Press Club, Washington D.C. (Jan. 14, 2004), available at http://www.fcc.gov/commissioners/powell/spmkp011404.pdf. In a further example “[s]imilar potential rests with police and fire response systems. The 911 system is vital in our country, but it is limited functionally. In most systems, it primarily identifies the location from which the call was made. But an Internet voice system can do more. It can make it easier to pinpoint the specific location of the caller in a large building. It might also hail your doctor, and send a text or Instant Message alert to your spouse.”
refer to these phone-like services and thus this paper will use that term. It is important to recognize, however, that there remain distinctions among the type of VoIP-based services discussed herein. Indeed, nomenclature may be part of the very debate over VoIP policies. As discussed in more detail below, however, the cable industry believes that regulatory distinctions should be drawn based upon the type of services being provided by new entrant VoIP providers and not whether, for example, the service provider routes calls over the “Internet” or owns the facilities over which it routes calls. Few would argue, for example, that applications, or devices, where voice functionality is ancillary to the actual purpose of the service or device and where such applications do not fall within the specific VoIP service defined herein—as in voice-enabled gaming—should be regulated in the same manner as a traditional phone service.

Given these many distinctions, policymakers should establish a baseline test to determine whether an IP-based voice service should be subject to any regulation at all\(^5\) (as described in Section VI). Specifically, that test should be based on whether the VoIP service in question has the following characteristics:

1. it makes use of North American Numbering Plan (“NANP”) resources;
2. it is capable of receiving calls from or terminating calls to the public switched telephone network (“PSTN”) at one or both ends of the call;
3. it represents a possible replacement for POTS; and,
4. it uses Internet Protocol transmission between the service provider and the end user customer, including use of an IP terminal adapter and/or IP-based telephone set.\(^6\)

\(^{5}\) While it may, however, be warranted to require applications that do not meet this baseline test to provide assistance to law enforcement for security reasons, there appears to be no justification for imposing traditional telephone regulation upon such applications.

\(^{6}\) See Federal-State Joint Board on Universal Service, Report to Congress, 13 FCC Rcd. 11501 (1998) ("Stevens Report"). In particular, the report established a four-part test, with the fourth prong relating to equipment. Given the advances in customer premises equipment, and the blurring of the lines
IP applications such as voice communications overlaid on video gaming or video chat, which do not have the characteristics of the first three prongs above, should not be subject to regulation, much less traditional telecommunications regulation. Such applications generally would not use NANP resources nor would they have the ability to receive calls from or terminate them to the PSTN. The services covered by the four-prong test, as with others that are facilities-based, would fulfill the promise of the 1996 Act in promoting the goal of greater residential competition. Services lacking characteristics of the fourth prong (i.e., lacking an IP based connection to the end user), are not addressed by this VoIP proposal.

II. The Opportunity Presented by Facilities-Based VoIP Services

Over the years, and particularly since the 1996 Act, a consensus has evolved that American consumers will reap the greatest benefits from communications policies that encourage industry investment, foster technological innovation and service deployment, and increase consumer choices. To that end, Congress, in the 1996 Act, declared its intention to promote competition and to eliminate unnecessary regulation. These goals – investment, innovation, choice, competition, and deregulation – should be the primary reference points for policymakers’ response to emerging VoIP services.

A central objective of the 1996 Act was to introduce facilities-based competition into the local phone services market. Nearly eight years later, competition in the local

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7 See 1996 Act at preamble (stating that the purpose of the 1996 Act is to “promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies”) (emphasis added).

8 The FCC has explicitly found that “facilities-based competition serves the Act’s overall goals.” Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket No. 01-338, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36, at ¶ 70 (rel. Aug. 21, 2003). Specifically, “[f]acilities-based competition better serves the goal of deregulation because it permits new entrants to rely less on incumbent LECs’ facilities and on
phone services market remains a hope rather than a reality for the vast majority of residential consumers. Although some markets enjoy the benefits of facilities-based competition from companies who have taken the risk and made the investment, this is atypical. In a majority of markets, residential consumers have no meaningful choice of facilities-based local phone service providers.

This is despite the fact that the cable industry has recognized the importance to its customers of developing robust, competitive local phone services. Companies such as Cablevision Systems Corporation, Charter Communications, Comcast Corporation, Cox Communications, Inc., GCI Cable, Inc., and Insight Communications collectively serve over 2.5 million subscribers with circuit-switched telephone service. And even as these companies maintain and improve existing circuit-switched local telephone operations in their service areas, they are preparing to expand the range of service options – and the places in which those options are available – using facilities-based VoIP technologies.

In other areas where a choice exists, it typically consists of mere resale of the incumbent’s services or the use of the incumbent’s unbundled network elements in a combination known as “the unbundled network element platform” or “UNE-P.” The regulated terms for access and price. And it serves the goal of innovation because new facilities are more likely to have additional capabilities to provide new services to consumers and competitors’ deployment of new facilities is likely to encourage incumbents to invest in their own networks. Facilities-based competition also increases the likelihood that new entrants will find and implement more efficient technologies, thus benefiting consumers. . . . Finally, facilities-based competition creates network redundancy, which increases reliability and enhances national security.” Id. at n. 233 (emphasis added; internal citations omitted).

9 In the former AT&T Broadband territories, Comcast continues to offer circuit-switched telephone services in each of the 18 markets where competitive telephone service was previously offered by AT&T Broadband, and to solicit and process orders from new customers. As of the third quarter of 2003, Comcast had over 1.3 million residential phone customers (including a small number of customers from preexisting Comcast operations in Maryland, Michigan, and Northern Virginia), making it the largest residential facilities-based CLEC in the U.S. Comcast currently offers a facilities-based circuit-switched competitive choice to nearly nine million households.

Cox, a pioneer in circuit-switched cable telephony offers competitive circuit-switched telephone services to over 4 million households in 11 major markets across the country. As of the third quarter of 2003, Cox had nearly 1 million residential phone customers.
regulatory regimes of resale and UNE-P were intended, pending the emergence of facilities-based competition, primarily as transitional mechanisms. Unfortunately, the telecom industry has been mired in nearly eight years of rulemakings and litigation over the UNE regime and related provisions of the 1996 Act. What has languished, especially in the residential marketplace, is the development of the robust facilities-based competition that Congress believed could best provide enduring consumer benefits.

Now, however, VoIP technology offers the key to this long-awaited competition. The potential exists – by harnessing the same IP technology that is the foundation of the Internet – for a platform other than the incumbents' local exchange network to deliver telephone service on a wide scale, providing residential consumers with real choice in facilities-based local phone service. IP technology offers the additional consumer benefit of enabling third parties to utilize this new platform to provide VoIP service in competition with one another as well as with the incumbent telephone companies.

As a result of more than $84 billion of private investment in upgrades and enhancements to cable technology since 1996, cable operators are preparing to provide innovative facilities-based VoIP services in many areas – services that support 911/E911 and the principles of CALEA and are delivered via a managed network with a quality-of-service standard. VoIP regulatory policy must ensure that cable operators who invest in the platform that makes this competition possible are not disadvantaged by regulation in favor of those who use that platform to compete with cable’s VoIP services. With the right regulatory framework, VoIP technology will increase industry investment, foster innovation, and provide consumers with attractive alternatives to POTS and to other communications services.
III. The Regulatory Challenge of Deploying New Services

Potential providers of any new services face the uncertainty of regulation at the federal, state and/or local level. Until now, consumers and providers have benefited from the decision by policymakers not to legislate or regulate in a manner that discourages innovation and investment in VoIP services. This is particularly so at the federal level. For several years, limited forms of VoIP service have been offered without regulation. While the earliest forms of non-facilities-based VoIP service did not provide traditional phone service quality or reliability, consumers used those services to replace calls to countries with high international toll rates – with the strong encouragement of the Federal Communications Commission (“FCC”). Today, providers such as Vonage, ePHONE, ICG Communications, Inc., and pulver.com are providing forms of VoIP services with little or no governmental regulation.

While the federal government to date has suggested it will take a “hands-off” approach to regulating VoIP, a major concern for would-be VoIP service providers is that one or more states could subject their services to existing state-specific regulatory schemes and/or establish new and equally burdensome regulations for VoIP services. State regulators have recognized the danger inherent in such an approach, as well. For

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10 See, e.g., Stevens Report (noting the FCC’s desire for the VoIP industry to develop from a nascent service prior to making regulatory decisions that could stifle development: “[W]e recognize the need, when dealing with emerging services and technologies in environments as dynamic as today’s Internet and telecommunications markets, to have as complete information and input as possible”).

11 See, e.g., Rules and Policies on Foreign Participants in the U.S. Telecommunications Market, Report and Order and Order on Reconsideration, 12 FCC Rcd. 23891 at ¶ 16 (1997) (noting that new technologies such as “Internet telephony are already putting significant pressure on international settlement rates and domestic collection rates”); see also Kevin Tanzillo, FCC to Teach Old Tricks to New Dogs, Communications News, Jul. 1, 1996 (quoting former FCC Chairman Reed Hundt: “I think that Internet telephony will initially have the biggest impact on the price of international long-distance calls. . . . When China is more accessible to the Internet, it will come to pass that the current $4.35 per minute charge for a long-distance call to China will dissolve like spit in the wind”).

12 See Petition for Declaratory Ruling That AT&T’s Phone-to-Phone IP Telephony Services Are Exempt from Access Charges, FCC WC Docket No. 02-361, Joint Comments of Association for Communications Enterprises, Big Planet, Inc., ePHONE Telecom, ICG Telecommunications, Inc., and Vonage Holdings Corp. (filed Dec. 18, 2002). But see infra Section IV (describing the efforts of some states to regulate VoIP service).
instance, Colorado PUC Chairman Gregory E. Sopkin has warned that the "nascent VoIP industry should not be subject to death-by-regulation, which could well occur by having 51 state commissions imposing idiosyncratic, inconsistent, and costly obligations." 13 (State regulatory activity is described in the next section).

The application of traditional state telephone regulations risks encumbering VoIP services with a web of costly and potentially inconsistent rules that will inevitably deter potential market entrants from offering the services, especially since the efficient multi-state rollouts of VoIP will depend on new centralized ordering, provisioning, and billing systems. Encumbrances are also possible at the local level, where at least some communities argue that all services delivered over cable plant should be subject to separate and duplicative municipal fees, requirements for additional permits, quality standards, privacy rules, and the like. 14 This local layer of regulation makes no sense when the new services can be offered simply by changing the pattern of signaling sent over an existing physical transmission facility, without imposing any additional burden on rights-of-way. This is precisely the situation with cable-delivered VoIP services. 15

13 Colorado’s VoIP proceeding (Dkt. 03M-220T), begun in May 2003, ended based on the “legal uncertainty of whether a state may regulate VoIP services,” concluding that “the most prudent course is to take no action with respect to VoIP pending FCC action.” See TR State Newswire, PUC ends VoIP Investigation, Sopkin voices views on VoIP, Jan 6, 2004. “Sopkin added that VoIP shouldn't be regulated like traditional phone service. 'We should treat VoIP not as a problem, but a new opportunity for regulators to look at changing how the use of wireline infrastructure is compensated - through subsidies, intercarrier charges, and regulated rates.' The chairman called on VoIP providers to seek free market solutions to intercarrier compensation and 911 service issues, urging them to negotiate service agreements ‘to show they are good corporate citizens and to show that traditional regulation is not necessary.’”

14 See Inquiry Concerning High Speed Access to the Internet over Cable and Other Facilities, Appropriate Regulatory Treatment for Broadband Access to the Internet over Cable Facilities, FCC GN Dkt. Nos. 00-185, 02-52, Comments of Alliance of Local Organizations Against Preemption (filed Jun. 17, 2002).

15 Likewise, regulators must not subject VoIP services to financial penalties in the form of high pole attachment fees. VoIP services will normally be carried over pre-existing facilities already attached to utility poles. There will be few if any new poles placed or new trenches dug, and there will be few if any new wires attached to existing poles. VoIP services delivered by cable operators will be offered by simply changing the pattern of electrical and optical signals carried over existing physical facilities already in use for other purposes (e.g., delivery of video entertainment and/or high-speed connectivity to the Internet). Regulators, in considering the issue of pole attachment rates, must therefore avoid
Moreover, local micro-regulation of new services such as VoIP would stifle them. Cable operators today can be subject to dozens or even hundreds of local franchising authorities for their cable systems in a single state. Offering VoIP services would be immensely more difficult with dozens or hundreds of inconsistent regulations.

Congress, the FCC, state legislatures and commissions, and local governments all need to adopt an approach that will encourage the deployment of VoIP services in general, and of facilities-based services (VoIP and otherwise) in particular. Factors warranting emphasis in the analysis include the nascent nature of the services, the desirability of fostering, on a broad scale, a facilities-based alternative to incumbent local phone services, delays in deployment that could result from a tangle of incongruous state and local regulations, the importance of providing regulatory certainty in the near term, and the likelihood that the VoIP services of various providers will include differing capabilities. For all these reasons, it is critical that policymakers and regulators ensure that regulation does not become an impediment to VoIP service testing, investment, innovation, and deployment.

Ultimately, however, much of the responsibility lies with the FCC. The FCC has the ability to bring states and providers together (for example, through its announced intention to issue a Notice of Proposed Rulemaking or “NPRM” on VoIP services soon) to determine on a uniform national basis which regulatory requirements are truly needed and which regulatory requirements will pose unnecessary barriers to entry and growth, as well as to articulate and enforce a suitably deregulatory (but not entirely deregulated) policy framework that allows for maximum flexibility, innovation, investment, and competition. The FCC’s announced NPRM appears to have already applying regulatory categories or regulatory solutions to those new and innovative services developed with other technologies in mind. Clearly, it would make no economic or policy sense for regulators to take a regulatory approach to VoIP services which would result in an unearned windfall to those who control poles merely based on a change in the pattern of optical and electrical signals carried over existing facilities and infrastructure. A change in these signals has no economic or physical impact on poles, conduits, or rights-of-way, yet it is all that is needed to offer VoIP service.
had the effect of convincing states such as California to step back from efforts to possibly regulate VoIP providers as traditional telecommunications carriers.\textsuperscript{16}

The FCC and state regulators, in developing a policy framework, should avoid perpetuating approaches that penalize industries such as the cable industry that have been willing to assume the added financial and other risks of building and continually upgrading the physical infrastructure needed to enable delivery of VoIP services. The FCC and state regulators should instead embrace regulatory approaches that encourage deployment of that competitive infrastructure.

Notwithstanding the regulatory challenge of deploying new services, cable operators have been among the early leaders in developing facilities-based VoIP technology to serve the residential market. Current company rollouts include:

- **Armstrong** has partnered with VoIP service provider Vonage to offer Zoom phone service to cable customers throughout Armstrong’s 11 cable systems, located in Kentucky, Maryland, Ohio, Pennsylvania, and West Virginia. The service is essentially a private label rebranding of Vonage service. Armstrong’s residential packages range from a $24.99 product with unlimited local and regional calling and 500 minutes of long distance across the US and Canada to a $34.99 product with unlimited local and long distance calling across the US and Canada. Just as with the Vonage product, a potential Zoom customer must subscribe to broadband service and use a digital phone adapter which plugs into the DSL or cable modem (in this case a cable modem). The adapter has “[b]uilt in Quality of Service (QOS) technology [which] prioritizes your voice data over other [I]nternet traffic …”\textsuperscript{17}

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- **Cablevision** launched Optimum Voice, a digital voice-over-cable service, in the fourth quarter of 2003 throughout its New York City metropolitan service area of more than 4 million homes (which includes Bronx, part of Brooklyn, Long Island and the Lower Hudson Valley as well as southern Connecticut and northern New Jersey). Optimum Voice is currently the largest facilities-based VoIP deployment in the United States. The service provides unlimited local, regional, and long distance calling across the US (including Alaska and Hawaii) and Canada for a flat rate of $34.95 per month. It includes five customer calling features (call waiting, caller ID, call return, three-way calling and call forwarding) and E911. Currently, Cablevision is offering Optimum Voice to its more than 1 million high-speed Internet service customers. Area code and phone number assignments are based on the location of the customer's residence.

- **Charter** launched commercial VoIP service in September, 2002 in Wausau, Wisconsin and is now gearing up its marketing efforts. In addition to expanding VoIP in its Wisconsin footprint, Charter will launch VoIP service in several other markets this year.

- **Comcast**, the largest cable company with 1.3 million telephony subscribers nationwide, is currently testing VoIP near Philadelphia, Pennsylvania and plans to trial the service in several markets including Indianapolis, Indiana, and Springfield, Massachusetts in 2004. Comcast has indicated its intention to "differentiate itself from telcos with inexpensive deals on four lines, since they don't cost the provider more than one, and video enhancement of service comparable with instant messaging, Internet chat or voice mail.”

- **Cox** launched its first VoIP service, Cox Digital Telephone, in December 2003 in Roanoke, Virginia, representing the twelfth market in which Cox has introduced

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18 See *Cable VoIP Will Provide the Facilities-Based Phone*, Communications Daily (Dec. 15, 2003), at 6, quoting Comcast CEO Brian Roberts speaking at the Commonwealth Club (San Francisco).
phone service. (In its other eleven telephone markets, Cox relies on traditional circuit-switched technology.) Cox Digital Telephone subscriptions grew on the order of forty percent in 2003. In the past several years, Cox has pioneered cable telephony via circuit switched technology, gaining experience central to its VoIP launch while earning highest honors in J.D. Power and Associates’ 2003 Residential Local Telephone Customer Satisfaction Study in the Western Region. Cox’s telephony launch using VoIP-based technology provides customers with the same lifeline service as traditional telephone service, including E911 access and popular calling features such as call waiting, caller ID and voicemail. Cox’s self-managed VoIP architecture also supports local number portability, enabling customers to switch their existing phone numbers to Cox Digital Telephone service.

According to CNET News “[s]maller markets such as Roanoke represent 19 of the 21 other markets into which Cox wants to expand its voice service. VoIP is an ideal candidate—these areas might not generate the profits necessary to validate the outlay involved with a more traditional system, Cox spokesman Bobby Amirshahi says. ‘In smaller markets, it becomes a major question of whether you can justify the cost of circuit switched,’ according to Amirshahi.”

- **GCI** has begun deployment of a hybrid VoIP/circuit switched service in Anchorage, Alaska, where it currently serves over 40 percent of the market, primarily via UNE-loop. The service being deployed is based on PacketCable standards from the customer premises to a media gateway and then uses GCI’s circuit-switched facilities. As GCI transitions customers to its own loop facilities, it will be able to reduce its use of the incumbent local exchange carrier’s facilities.

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• **Time Warner Cable** launched Digital Phone, its VoIP service, to subscribers in Portland, Maine in May of 2003. By year-end 2003, Time Warner Cable had signed up more than 9,000 subscribers who pay $39.95 (for digital cable television and/or high-speed Internet subscribers) or $49.95 (for customers that do not subscribe to digital cable television or high-speed Internet services) for unlimited local and domestic long distance calling. The service includes call waiting, caller ID and call waiting ID, access to E911, and the option of local number portability. Subscribing to digital cable television or cable Internet service is not a prerequisite to purchase Digital Phone, although a potential Digital Phone subscriber must, at a minimum, subscribe to either cable television service or high-speed Internet service.

Time Warner Cable recently launched its Digital Phone service to select customers in North Carolina and plans to offer the service by the end of 2004 in most, if not all, major markets in the 27 states it serves. This means the company’s Digital Phone product should be available to nearly its entire footprint of over 11 million subscribers and over 18 million homes passed.

In December, 2003 Time Warner Cable announced a partnership with long distance companies MCI and Sprint to assist in provisioning Digital Phone service and to use their networks to carry calls from its cable network to receiving callers served by traditional PSTN-based providers. In addition to providing long distance services, MCI and Sprint will support E911 access and local number portability, permitting Time Warner Cable to continue its aggressive rollout in 2004.

As these services are deployed, cable companies continue to test and develop back-office support systems, provisioning and operational processes (including billing), and marketing programs. These efforts, and the various announced deployments, attest to the industry’s belief that VoIP technology will ultimately permit cable operators to provide innovative, high-value residential local phone services at competitive prices.
Clearly, the industry is excited about and committed to the potential benefits that can result from the widespread availability of VoIP services. Yet, a broad roll-out of these services is not assured. A key factor that will affect the ability of cable companies to offer commercially viable VoIP services is the (de)regulatory framework that applies to these services, particularly the services offered in competition with incumbent providers. Where incumbent utilities offer VoIP services in their legacy franchise or service areas as substitutes for POTS services, it is important for regulators to consider whether to maintain appropriate regulatory safeguards, particularly in light of the goal of promoting facilities-based competition in the 1996 Act.

IV. VoIP Regulatory Proceedings in the States

Some states, such as Colorado, Florida, and Pennsylvania have appropriately taken a deregulatory approach to VoIP services. As described below, other states are applying existing intrastate access charge regimes to VoIP services without awaiting the outcome of FCC proceedings addressing interstate access charges. Still others have required (or are considering requiring) VoIP service providers to comply with most or all state laws and regulations that apply to traditional telephone service. Below is a brief description of the major VoIP proceedings underway in the states:

Alabama – In July 2003 a group of local exchange carriers filed a Petition for Declaratory Ruling at the Alabama Public Service Commission (the “Alabama PSC”) seeking to classify VoIP providers as “transportation companies” under Alabama law, and declaring that they are responsible for the payment of intrastate access charges. In August 2003 the Alabama PSC opened a proceeding to consider that request. Initial comments were filed October 31, 2003, reply comments were filed December 2, 2003, and the matter is under review.

California - On September 30, 2003, the California Public Utilities Commission (“CPUC”) asked six VoIP providers, including Vonage and Net2Phone, to apply by October 22, 2003 for the same license that landline phone companies need to operate
in California. In response to that request, all six providers sent letters to the CPUC arguing that their VoIP services are exempt from state telephone regulations because they provide interstate information services that are not subject to the CPUC’s jurisdiction. The CPUC then held a VoIP Forum on November 13, 2003 and has considered opening a formal inquiry into VoIP service regulation. The decision to open such proceedings has recently been at least temporarily delayed at the request of the lead commissioner based on her assessment that California should conduct any proceeding after the FCC has established national policy.20

**Colorado** – The Colorado Public Utilities Commission (the “Colorado PUC”) opened a docket to determine the appropriate regulatory treatment of VoIP in May, 2003. The Colorado PUC closed the docket in January 2004, based in part on the “legal uncertainty of whether a state may regulate VoIP services,” concluding that “the most prudent course is to take no action with respect to VoIP pending FCC action.”21

**Florida** - The Florida legislature in 2003 passed, and the Governor signed, legislation stating “[that] the provision of voice-over-the-Internet protocol (VOIP) free of unnecessary regulation, regardless of provider, is in the public interest.” The law also specifically excludes VoIP from the statutory definition of a “service” subject to regulation, although the question of whether VoIP-based services are subject to intrastate access charges remains under the jurisdiction of the Florida Public Service Commission.22

**Minnesota** - On August 13, 2003, the Minnesota Public Utilities Commission (the “Minnesota PUC”) ruled that Vonage is offering a telecommunications service and


21 Dkt. 03M – 220T, See p. 11 supra.

required Vonage to seek a certificate, file a 911 plan and submit tariffs within 30 days. A US District Court granted Vonage’s request to enjoin that decision on October 7, 2003 and the Minnesota PUC stayed its decision while it is enjoined. The district court ruled Vonage provides an “information service” not subject to Minnesota PUC jurisdiction. The Minnesota PUC requested the district court to amend its findings or to make its injunction temporary and to allow further investigation and discovery or grant a new trial. Oral argument took place on December 13, 2003. The District Court declined to amend any aspect of its order and concluded that a new trial was not necessary. 23

Missouri - On September 12, 2003, while reserving its rights to argue for or benefit from any future regulatory determination relating to VoIP-based services, Time Warner Cable Information Services (“TWCIS”) filed an application for authority to offer IP based voice services in Missouri. The parties to the resulting docket agreed that a general discussion of VoIP was not necessary but, although TWCIS had agreed to abide by existing Missouri telephone rules until the regulatory classification of VoIP is resolved, the parties disagreed about the characterization of the service TWCIS intends to offer and the related regulatory restrictions and obligations associated with that service. Separately, the Missouri Public Service Commission (the “Missouri PSC”) sought comment from the Public Counsel as to whether it should open a generic proceeding to address regulatory issues surrounding VOIP services. The Missouri PSC subsequently chose not to open a generic proceeding, preferring instead to address issues in the context of the TWCIS application. A prehearing conference is scheduled for January 30, 2004. A proposed procedural schedule is to be filed by February 13, 2004.

New York – The New York Public Service Commission (the “NYPSC”) has ruled that VoIP service providers must pay access charges while preserving their right to be granted forbearance from regulation or to be alternately regulated based on any applicable decisions from the NYPSC or the FCC. The decision was based largely on the NYPSC’s view that under the Stevens Report the company was operating as a phone-to-phone VoIP provider offering a “telecommunications service”. Some parties have argued that the decision was based on a misreading of the report.

The NYPSC, pursuant to Frontier Telephone of Rochester’s complaint against Vonage for providing telephone service without complying with state regulation, opened a generic investigation of VoIP issues. Initial comments were due October 31, 2003 and reply comments were due November 14, 2003. The matter is now under review.24

North Carolina – In May 2003, TWCIS applied for a certificate of public convenience and necessity to provide IP based voice services. The North Carolina Utilities Commission (the “NCUC”) granted TWCIS its certificates in July 2003 and rejected efforts by the Alliance of North Carolina Independent Telephone Companies to address a number of issues in the context of the certification proceeding. At the time, BellSouth also sought a generic proceeding to address VoIP issues. The Commission determined that no such proceeding was necessary at that time.

Ohio – The Public Utilities Commission of Ohio (the “PUCO”) opened a generic investigation in April 2003 to examine how VoIP services are provided, and the form and level of regulation that should apply to those services. Answers to PUCO questionnaires were filed in May, 2003; initial comments were filed on June 13, 2003

See, e.g., Complaint of Frontier Telephone of Rochester Against U.S. DataNet Corporation Concerning Alleged Refusal to Pay Intrastate Access Charges, No. 01-C-1191 (N.Y. Pub. Serv. Comm’n May 31, 2002) (subjecting VoIP service to access charges, but preserving US DataNet’s right to be granted forbearance from regulation or to be alternately regulated based on any applicable decisions from the NYPSC or the FCC); Complaint of Frontier Telephone of Rochester Against Vonage Holding Corp. Concerning Provision of Local Exchange and Inter-Exchange Telephone Service in New York State in Violation of the Public Service Law, No. 03-C-1285, Notice Requesting Comment (N.Y. Pub. Serv. Comm’n Oct. 9, 2003) (initiating a similar proceeding involving Vonage).
and reply comments were filed July 7, 2003. Since that time TWCIS has applied for, and has received from the PUCO, authority to provide service, contingent on the outcome of the generic investigation. TWCIS’s application requested authority to provide IP voice services targeting the residential market using VoIP. TWCIS also requested waivers of various rules with which it found difficult to comply for its bundled service offering (in particular, offering stand-alone local service). The PUCO’s decision granted waivers contingent on the outcome of the open investigation into whether VoIP technology should be regulated as a telephone service. Since then, Cincinnati Bell, the Ohio Telecommunications Association, and SBC-Ohio filed applications for rehearing of TWCIS’ application.

Pennsylvania – In May 2003 the Pennsylvania Public Utility Commission (the “Pennsylvania PUC”) opened a generic investigation into VoIP and it is effectively forbearing from regulating those services pending the outcome of that investigation.

Texas – In August 2003, TWCIS filed for a certificate of authority to provide IP based voice services in Texas. Several parties, including the Texas Coalition of Cities (“TCOC”) attempted to intervene. In particular TCOC raised issues regarding the classification and jurisdictional status of the services proposed by TWCIS, and how compensation for rights-of-way would be administered for those services. The Texas Public Utility Commission (the “Texas PUC”) denied intervention for all parties and it granted TWCIS’ application on December 12, 2003.

Wisconsin - On September 11, 2003, the Wisconsin Public Service Commission (the “Wisconsin PSC”) sent letters to VoIP providers 8x8, Vonage, and Delta 3 seeking information on the specific services being offered by those entities in Wisconsin. The PSC’s letters stated that such entities were not permitted to provide resold intrastate services in Wisconsin without certification and that any customer bills for intrastate

25 See Public Utilities Commission of Ohio (Case 03-581-TP-ACE).
services were void and not collectible. 27 The providers filed responses which are under review.

V. NCTA’s Approach: Balancing Responsibilities and Rights

Much of the discussion about VoIP services has focused on whether they should be classified as “information services,” “telecommunications services,” or another type of service. The assumption seems to be that VoIP service offerings first need to be assigned to a preexisting regulatory “box,” from which a variety of regulatory consequences will flow. It is usually assumed that classification of a VoIP service as a “telecommunications service” means that it will be subject to a wide range of traditional Title II requirements, and that classification of a VoIP service as an “information service” means that it will be entirely unregulated. As discussed later in this paper, we believe neither assumption is correct.

Rather than focusing on this regulatory classification issue, NCTA suggests that policymakers focus on the responsibilities and rights that are appropriate for new entrant competitors offering VoIP services, whether they do so through their own facilities or over the facilities of others. The cable industry believes that VoIP service providers that meet the four-prong test described above must assume certain fundamental regulatory responsibilities, including consumer protections of general applicability, assistance to law enforcement, and public safety obligations. The industry also believes that in order to provide service, VoIP providers—particularly those operating their own facilities—must be accorded certain rights. The regulatory classification under which this set of responsibilities and rights is established is

important, though ultimately less important than those responsibilities and rights being established in a minimally regulatory framework.

VI. The Responsibilities and Rights of VoIP Providers

VoIP service providers, particularly those who build infrastructure that enables delivery of these services in competition with established local exchange carriers, must not be subject to unnecessary regulation, nor should they be disadvantaged as compared to VoIP providers who build no facilities. The strong presumption should be that regulations designed for legacy telephone service should not apply to VoIP services unless they are essential to meet the key public health, safety, and other crucial responsibilities described below, even if regulators determine they are necessary for customers of incumbent telephone utilities who may use VoIP technologies in substitution for legacy POTS services. Experience has shown, time and again, that the best way to encourage new and innovative technologies and to secure the resulting public benefits is to ensure that only the most vital regulations apply – and even then, that those vital regulations be adapted to the characteristics of the new technology.

This approach would encourage innovation, conserve regulatory resources, derive the greatest public benefits and provide the certainty in the marketplace that investors need in order to support the deployment of facilities-based VoIP services. The alternative – presuming that legacy regulations do apply, unless expressly found not to apply – is a recipe for doubt and delay. Few, if any, competitive communications technologies have ever achieved widespread market acceptance where government has followed that path; policymakers should be careful to avoid it here.

The set of responsibilities to which providers of services meeting the four-prong test should adhere may be broken into several categories: public health and safety; universal service; intercarrier compensation; and consumer protections of general applicability.
Public Health and Safety

Providers of VoIP services meeting the four-prong test should have the following responsibilities, implemented in a manner appropriate to the technology.  

• The obligation to cooperate with law enforcement, including compliance with the principles of CALEA based upon an IP-specific standard endorsed by an industry body.

• The obligation to provide consumers access to 911/E911 capabilities and to collect and remit funding for state or municipal 911/E911 systems. (In turn, statutory and other liability limitations for the provision of 911/E911 services should also apply.)

• The obligation to make services available to disabled consumers, in a manner consistent with Section 255 of the 1996 Act, and to collect funding for state and federal TRS systems.

Universal Service

In addition, regulators should expect VoIP services that make use of NANP resources to ultimately contribute to federal and state universal service programs on a par with other contributors. The principle of universal service—ensuring that affordable telephone service is available to high-cost areas and low-income users—has long been

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28 The FCC has ruled, for example, that, while facilities used solely for the provision of information services are not subject to CALEA, facilities used to provide both telecommunications and information services are subject to the requirements of the Act. See Communications Assistance for Law Enforcement Act, Second Report and Order, 15 FCC Rcd. 7105 at ¶¶ 12, 27 (1999). However, for both CALEA and 911/E911, some adjustments may need to be taken into account related to the specific features and capabilities of VoIP services.

29 As with all service providers that offer 911/E911 capabilities, VoIP service providers should be protected by statutory and other limitations on liability pertaining to the provision of 911/E911 services.

30 These rules have already been extended beyond the conventional range of Title II-type services, and the same considerations may apply to VoIP service. See Implementation of Sections 255 and 251(A)(2) of the Communications Act of 1934, as Amended by the Telecommunications Act of 1996, 16 FCC Rcd. 6417 at ¶ 8 (1999).
a cornerstone of communications policy. The 1996 Act codified principles of universal
service and extended them to schools, libraries, and nonprofit rural health care
providers. 31 Cable companies that offer telecommunications services subject to
assessment currently pay into the fund.

At some point, VoIP services that make use of NANP resources should also pay
into the fund. It would be premature to impose such an obligation, however, without
resolution of several critical issues related to universal service, which the FCC is
examining. 32 Among these issues is the question of whether the federal universal
service fund is properly sized and funded.

It is critical that policymakers recognize the need to modify the current universal
service contribution mechanism, particularly with respect to VoIP services. 33 Under the
current contribution mechanism, assessments are based on *interstate
telecommunications* revenues. Applying this mechanism to VoIP service would be
fraught with difficulty for several reasons. First, because most consumer VoIP services
today are offered without regard to interstate and intrastate distinctions, arbitrary
judgments would be required as to which portion of VoIP service revenue is interstate
and which is intrastate. Second, because the regulatory classification of VoIP service
has not been determined, an arbitrary judgment would be required as to what portion of
VoIP revenue is *telecommunications* revenue.

The best solution to this problem would be the adoption of a numbers-based
contribution mechanism. 34 Any service which makes use of NANP resources would be

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32 In addition to the assessment methodology, other major unresolved issues include determining how
high-cost support is computed; designating “eligible telecommunications carriers”; and reviewing the
operations of the schools and libraries program (which the FCC had initially planned to conduct as
part of a comprehensive universal service review in 2001, but which has not yet been initiated).
33 See *Federal-State Joint Board on Universal Service, Report and Order and Second Further Notice of
34 See Reply Comments of the National Cable & Telecommunications Association in *Second Further
assessed on a per-number basis (special access and private line services would be assessed in a manner which results in a contribution approximately equal to that of today). This is also consistent with the four-prong test previously described. Under such a system there would be no need to distinguish, for universal service purposes, between various types of VoIP offerings. e.g., a voice service with the potential to substitute for a POTS line vs. a gaming service with a voice component. VoIP services that use telephone numbers would be assessed; those that do not use telephone numbers would not. At the same time, VoIP providers must be afforded nondiscriminatory access to universal service support. Any other approach would fail the competitive neutrality principle for universal service and discriminate against otherwise eligible providers based on technology.

**Intercarrier Compensation**

Similar considerations apply to intercarrier compensation rules. The issue here is not whether the rules should or should not apply but how to reconcile the many different rules – and different prices – that apply to exchanges of traffic. Those differences, in turn, dictate not only different prices per unit of traffic, but also which party pays. The FCC has a proceeding under way to resolve these issues.

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36 Today, the exchange of traffic is governed by a hodgepodge of different rules depending, for example, on whether an ILEC is exchanging traffic with a neighboring ILEC, a CLEC, an interexchange carrier (“IXC”), a CMRS provider, or an information service provider, and also depending on whether the traffic is deemed to be “intrastate” or “interstate.”

37 For example, an ILEC handing off a call to a CLEC is required to pay that CLEC, but when an ILEC hands off a call to an IXC, the ILEC receives, rather than pays, compensation.

that proceeding is concluded and the system has been rationalized, the new rules should apply to VoIP-based services that utilize the PSTN as well.39

**Consumer Protection**

In addition, generally applicable consumer protection rules that apply to all businesses should apply to VoIP service providers. These include such requirements as “do not call” and “do not mail.” By contrast, as explained below, requirements that were developed to protect consumers from the monopoly utility in a single-provider environment are unnecessary and inappropriate.

**Inappropriate Legacy Utility Requirements**

VoIP services provided in competition with incumbent utility phone services should *not* be subject to legacy utility requirements designed largely in a monopoly environment. Most such requirements date from the era of a single provider of phone service and are inappropriate for competitors that offer alternatives to the incumbent providers. Legacy utility requirements all impose substantial burdens, none of which are justified in the case of competitive facilities-based VoIP services. The provider-subscriber relationship would be better served by consumer protection rules of general applicability, including appropriate disclosure requirements of any limitations of nonessential utility requirements, rather than the full panoply of detailed and cumbersome requirements applied to some public utility providers. In particular, a number of legacy requirements relate to billing, payment, credit and collection and quality of service standards. For example, many states have rules dictating the format and content of customer bills; rules regarding permitted forms of payment, the allocation of partial payments, and in-person payment obligations; and rules regarding call center

39 This proposal presupposes that equitable rules will be established for all classes of entities that exchange traffic. If classification as an interexchange carrier, Internet service provider, etc. triggers differing compensation regimes, then the problems of arbitrage and gamesmanship will be perpetuated. Under the current rules various classes of entities may have an economic incentive to
metrics, installation intervals, and service establishment requirements. This is but a partial list of utility provider requirements that typical competitive entrants should not face.

As competition increases, marketplace forces, rather than prescriptive rules, can address these issues much more effectively – subject to informing potential customers, so they can make judgments about the service. For instance, because of the industry-wide trend (spurred by consumer demand) towards bundled products and services, various legacy utility mandates such as equal access, tariffing, and dialing parity are simply inappropriate, and particularly so where VoIP services are bundled with services which are not subject to such requirements. VoIP providers may, however, choose to adopt them on a voluntary basis. But, any unnecessary rules will increase costs for VoIP providers and deter investment, delay deployment, and slow the growth of these promising new services. Regulators should make a comprehensive effort to identify and eliminate all such unnecessary rules. This will be an essential element of a successful VoIP policy.

**Rights of VoIP Providers**

Just as VoIP service providers meeting the four-prong test must accept certain responsibilities, such providers require certain rights. These rights must be available to the provider irrespective of whether the provider’s service is ultimately determined to be an “information service,” a “telecommunications service,” or another type of service. Additionally, granting these rights should not influence the regulatory classification of the VoIP service.

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40 Notions of “equal access” may be inapplicable to (or prevent the offering of) innovative service packages that give a customer a fixed quantity of usage for a set monthly price, and/or where there is no price differentiation between local and long distance calls.
These rights include, but are not limited to: (1) the right to interconnect and efficiently exchange traffic and control signaling with both IP and PSTN entities on a peer-to-peer basis;\(^{41}\) (2) the right to obtain telephone numbers, including numbers secured through number portability, to assign those numbers to VoIP customers and to have them published in the telephone directories; (3) the right to access the facilities and resources necessary to provide VoIP customers with full and efficient 911/E911 services (e.g., interconnection to incumbent utility E911 selective router switches, and Master Street Address Guide and Automatic Location Identification database uploads); (4) the right to be compensated fairly for terminating traffic delivered from other entities, in accordance with the results of an industry-wide review of payments for traffic termination and origination that specifically addresses VoIP service;\(^{42}\) and, (5) the right to non-discriminatory access to universal service support.

Policymakers must also ensure that facilities-based VoIP service providers have the right to use rights-of-way, including pole attachments, ducts, and conduits. Moreover, VoIP services delivered by cable operators will normally be conveyed over pre-existing facilities already attached to poles, located in underground conduits or crossing rights-of-way. Accordingly, policymakers must ensure that cable operators are not subject to additional or incremental assessments and fees when they change the pattern of signaling in their pre-existing physical transmission paths to add VoIP services to their existing video and Internet offerings. In addition to unnecessarily and unjustifiably burdening cable operators' VoIP services, such fees and assessments would put cable operators at a competitive disadvantage vis-à-vis incumbents who usually control such essential facilities, and non-facilities based providers of VoIP

\(^{41}\) Including access to codes needed for network interconnection and traffic exchange with other providers and the PSTN, NPAC databases and capabilities, SS7 interconnection for call management between VoIP calls and the PSTN, and customer service records housed in ILEC/CLEC databases.

\(^{42}\) This is an area where it would be sensible for a PUC to await FCC rulings on petitions pending before that body, rather than to make determinations applicable only to intrastate VoIP service traffic, or that might be out of harmony with what federal regulators ultimately require for interstate VoIP traffic.
services who utilize cable facilities to make their offerings available. In particular, higher pole rates should not be a barrier to entry for facilities-based VoIP providers.\footnote{The FCC has statutory authority to establish an appropriate pole attachment rate for attachments by cable operators. Setting an appropriate rate would be an important part of creating a hospitable environment to encourage the deployment of facilities-based VoIP offerings. \textit{See National Cable Telecommunications Association v. Gulf Power}, 534 U.S. 327 (2002).}

\section{VII. Regulatory Restraint and Regulatory Classification}

As noted, the cable industry’s approach to a VoIP regulatory framework is to focus on the responsibilities and rights appropriate for providers meeting the aforementioned four-prong test, rather than focusing on the regulatory classification of those services. But those issues cannot be avoided. NCTA supports the view of FCC Chairman Michael Powell that VoIP services warrant a fresh assessment, from a highly deregulatory perspective. We agree that policymakers should, as Chairman Powell has stated; “build from a blank slate up as opposed to from the myriad of telecommunications regulations down. . . . [I]t is a nasty, entangled litigious exercise to start from a phone company world of regulation and work your way down this way, rather then to try to say, no, this is something new.”\footnote{See Remarks of FCC Chairman Michael K. Powell at the Meeting of the Technology Advisory Council, at 2 (Oct. 20, 2003). \textit{See also} Powell VoIP Forum Remarks at 1 ("As one who believes unflinchingly in maintaining an Internet free from government regulation, I believe that IP-based services such as VoIP should evolve in a regulation-free zone. No regulator, either federal or state, should tread into this area without an absolutely compelling justification for doing so."). The results of this exercise may also produce insights that could also be applied to traditional circuit-switched, facilities-based CLEC services. Clearly, all CLECs lack market power, and sound public policy (as well as the dictates of the 1996 Act) commands that all unnecessary regulation of telecommunications services should be avoided.}

Though complex, the challenge of developing an appropriate regulatory framework for new network applications is not entirely new to the FCC. The FCC’s decision in the \textit{Second Computer Inquiry (Computer II)}\footnote{\textit{See Amendment of Section 64.702 of the Commission's Rules and Regulations}, Final Decision, 77 FCC 2d 384 at ¶ 84 (1980) ("Computer II"), aff'd sum nom. \textit{Computer & Comm. Ind. Ass'n v. FCC}, 693 F.2d 198 (1982) (subsequent history omitted). It was \textit{Computer II} that prevented federal or state}
“enhanced services” and customer premises equipment led to investment and innovation that reverberates more than twenty years later. Likewise, the Commission’s decision to forbear from entry and exit regulation as well as tariffing requirements for CMRS produced similarly salutary results.

Conversely, application of the full panoply of traditional telecommunications regulation would impede deployment of facilities-based VoIP services. Only in an environment in which the burdens of regulation are kept to a reasonable minimum will potential VoIP providers be in a position to deploy sustainable facilities-based VoIP services quickly and to their full potential. Such an environment enjoys broad governmental and industry support. In this regard, Congress has directed the FCC regulation of interstate information services. See 77 FCC 2d 384 at ¶ 7. Computer II also ensured the deregulation and competitive provision of customer premises equipment (“CPE”). See id at ¶ 9.

See Implementation of Sections 3(N) and 332 of the Communications Act, Regulatory Treatment of Mobile Service, 9 FCC Rcd. 1411 at ¶¶ 173-182 (1994) (subsequent history omitted) (forbearing from many Title II requirements, stating that “Congress and the Commission have determined that the public inherently benefits from the promotion of competition among the carriers that results from market-based pricing for their services”). See also Petition of the People of the State of California and the Public Utilities Commission of the State of California to Retain Regulatory Authority over Intrastate Cellular Service Rates, Report and Order, 10 FCC Rcd 7486 at ¶¶ 96-97 (1995) (denying a California PUC petition to extend state regulatory authority over CMRS services). Recognizing that wireless services operate without regard to state boundaries, Congress also preempted state and local rate and entry regulation of CMRS. 47 U.S.C. 332(c)(3).

See Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Eighth Report, 18 FCC Rcd. 14783 at ¶ 57 (2003) (noting the results of the deregulatory environment created for wireless carriers by the FCC: “Continued downward price trends, the continued expansion of mobile networks into new and existing markets, high rates of investment, and churn rates of about 30 percent . . . demonstrate a high level of competition for mobile telephone consumers”). This report also noted that wireless subscribership increased in 2002 to over 141 million users in the U.S., see id. at ¶ 59, a tenfold increase in less than a decade.

While it is clear that unnecessary regulation would create a significant business problem for circuit-switched CLECs, the case against excessive Title II regulation of VoIP services is even more compelling. Circuit-switched telephony is an existing service, using proven technologies. By contrast, VoIP service uses nascent technologies that have yet to be deployed on any significant commercial scale, and which could present a host of as-yet-undetermined financial, technical, and operational challenges. As noted above, the development of a minimally regulated environment for VoIP services ought to provide a basis for revisiting -- and reducing -- the regulatory requirements that apply to traditional circuit-switched, facilities-based CLEC services.

Numerous policy leaders (including many in the FCC and in state government), industry representatives and others have recognized the importance of limiting regulation of facilities-based
and the state PUCs to “encourage the deployment on a reasonable and timely basis of advanced telecommunications” by “utilizing . . . regulatory forbearance . . . [and] other regulating methods that remove barriers to investment.”

For the reasons detailed above, public policy strongly and unquestionably favors a pro-competitive, deregulatory approach to facilities-based VoIP services. Fortunately, federal law and FCC precedents are largely consistent on this point. However, state laws and regulation are varied; as described above, states have taken widely differing approaches to VoIP – ranging from minimal regulation in states such as Florida to attempts to apply full common carrier service regulation in states such as Minnesota. NCTA’s view is that state regulation of VoIP services should be consistent with FCC regulatory treatment. State consistency with federal regulation is important because an Internet-based service has an interstate (even global) reach; 51 different approaches would make it difficult to develop VoIP service.

And federal leadership for the states will also prevent a legal logjam where one state regulatory regime, if appealed, becomes law in that region of the country while the rest of the nation comes to follow the federal scheme. This anomaly is not theoretical. One panel of the U.S. Court of Appeals for the 9th Circuit ruled that its earlier decision on the regulatory classification of cable modem service – reached before the FCC had made its own regulatory determination – continued to govern. That prior determination held, regardless of the analysis made by the FCC and despite the usual deference

VoIP services. FCC Chairman Michael Powell and FCC Commissioners Martin and Abernathy have called for regulatory restraint with respect to VoIP services. See, e.g., Cable Monitor, FCC and NTIA Call for Regulatory Protection for VoIP, Aug. 26, 2002. Similar – if not more strongly deregulatory – statements were made by multiple FCC Commissioners at the FCC’s Dec. 1, 2003 VolIP Forum. Acting NTIA Administrator Michael Gallagher is reported to have said that “any regulation of VoIP should be ‘minimalist and narrowly tailored’ to meet public interest goals” and that excessive regulation could drive providers overseas. See Communications Daily, Powell Sees FCC Focusing on Discrete Issues on VolIP, at 2 (Dec. 2, 2003) (“CommDaily Report on VoIP Forum”).

50 Pub. L. No. 104-104 § 706, 110 Stat. 56 (1996); see also 47 U.S.C. § 157(a) (establishing federal policy of encouraging the provision of new technologies and services to the public).
owed to expert agencies over just these sorts of policy questions.\textsuperscript{51} A premature state
decision could lead to a similar unfortunate result in the VoIP policy context.

In considering how to proceed under the Act, both state and federal regulators
would do well to consider the “nascent services doctrine,”\textsuperscript{52} articulated by FCC
Commissioner Kathleen Abernathy. It is a set of principles, which, while not a legal
mandate, is instructive for policymakers.

This doctrine recommends that regulators exercise restraint when dealing with
new technologies and services and to reevaluate the need for any regulation of those
technologies and services as they evolve. Such restraint would facilitate the
development of facilities-based VoIP services that compete with the established
telephone companies without the burden of anachronistic regulations and would
promote the goal of enhancing facilities-based local telephone competition.\textsuperscript{53}

The doctrine further suggests that once new facilities-based competitors
demonstrate their viability, policymakers and regulators reexamine the overall

\textsuperscript{51} See Brand X Internet Services v. FCC 345 F.3d 1120 (9th Cir. 2003) (per curiam); AT&T Corp v. City of
Portland 216 F.3d 871 (9th Cir. 2000). See also Chevron U.S.A., Inc. v. Natural Resources Defense

\textsuperscript{52} The Nascent Services Doctrine, Remarks of FCC Commissioner Kathleen Q. Abernathy Before the
Federal Communications Bar Association, New York Chapter (Jul. 11, 2002), available at

\textsuperscript{53} In a sense, this is what the Commission did in the Stevens Report where, by essentially deciding not
to address the regulatory classification of VoIP services, it allowed for five years of technology
development, service experimentation, and capital investment. See Stevens Report, 13 FCC Rcd.
11501 at ¶¶ 86-93 (1998). Similarly, in the AT&T/TCI Merger and in the first Report to Congress
under § 706, the FCC declined to interfere with emerging high-speed cable Internet services, thereby
fostering the massive investment that today makes broadband service available to 80 percent of
American homes. See Applications for Consent to Transfer the Control of Licenses and Section 214
Authorizations from Tele-Communications, Inc., Transferor, to AT&T Corp., Transferee, Memorandum
Opinion and Order, 14 FCC Rcd. 3160 at ¶ 94 (1999); Inquiry Concerning the Deployment of
Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and
Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications
Act of 1996, First Report, 14 FCC Rcd. 2398 at ¶ 106 (1999); National Cable & Telecommunications
Association, Cable & Telecommunications Overview, Mid Year 2003 at 10, at
http://www.ncta.com/pdf_files/Mid'03Overview.pdf (stating that 85 million of approximately 106 million
U.S. homes had access to cable broadband service at the end of 2002).
regulatory scheme applicable to incumbent providers in the marketplace to assess whether existing regulations applicable to incumbents should be modified. If appropriate, regulatory schemes over time would be harmonized, but with much less regulation than previously, reflecting the effects of competition.

The focus of the “nascent services doctrine” is not on establishing the appropriate regulatory classification (i.e., whether a VoIP service is a “telecommunications service,” an “information service,” or another type of service), but on how best to allow both facilities-based and non-facilities-based VoIP services to develop naturally in the marketplace in response to consumer demand and technological innovation. Applying this doctrine, regulators would avoid those regulations that will unnecessarily hinder the evolution and growth of a new service, and ultimately lessen all regulation as competitive circumstances warrant.

While adherence to the principles of the nascent services doctrine is a worthwhile goal, policymakers must follow such principles within the context of an appropriate statutory framework. Based on the appropriate set of responsibilities and rights, as articulated above, VoIP providers need an approach which either begins with Title I and layers on responsibilities and rights, or begins with Title II and forbears significantly from a number of responsibilities -- effectively a Title “1.5.”

More specifically, the FCC and the states can secure a reasonable and minimally regulatory environment for VoIP services through classification of VoIP applications as “information services” under Title I of the Communications Act. An alternative but potentially more problematic approach would be to use the FCC’s “forbearance” and preemption powers under Title II to minimize regulation. Each path is discussed briefly below.

**Title I Regulatory Approach**

The designation of certain VoIP services as information services – and the use of Title I ancillary authority to impose only those regulations that are essential to helping
regulators meet key public health, safety, and other responsibilities – is the primary way in which policymakers could minimize burdens on these emerging services. Since Computer II, designation of a service as a Title I information service has meant that it is deregulated, in the sense that it is not subject to common carrier regulation by federal or state regulators.54 Even a Title I service, however, can be regulated under the FCC’s “ancillary authority,” but only in furtherance of specific statutory objectives.55

A pure Title I approach may be particularly well suited to certain forms of VoIP services that provide capabilities and features that make them markedly different from conventional phone services. Examples of such services may include video phone, voice chat, and video chat services. Depending on their characteristics, however, even VoIP services that more closely resemble conventional telephone offerings may well meet the definitions of an information service. Specifically, VoIP services could be designed in ways that easily satisfy the statutory definition, i.e., “the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications.” 56 They could even more easily be designed to satisfy the enhanced service definition of Computer II, i.e., services “which employ computer processing applications that act on the format, code, protocol or similar aspects of the subscriber’s transmitted information; provide the subscriber additional, different, or restructured information; or involve subscriber interaction with stored information.”57

As noted above, classification of a service as an information service does not necessarily mean that it should be exempt from all regulation. The FCC retains “ancillary authority” under Title I to adopt those regulations that are reasonably

54 See Computer II, 77 FCC 2d 384 at ¶ 84 (1980).
55 See People of State of Cal. v. F.C.C. , 905 F.2d 1217, 1241 at n.35 (9th Cir.) (1990).
57 47 C.F.R. § 64.702(a).
necessary to advance explicit statutory objectives.\textsuperscript{58} We have already outlined the social responsibilities appropriate for VoIP providers whose service meets the four-prong test described above, where those responsibilities are associated with certain rights. Significantly, classification of VoIP service under Title I does not mean that those rights could not be conferred on VoIP providers. For example, it is likely that the Commission could order local exchange carriers to interconnect with Title I VoIP providers or even provide unbundled network elements. Prior to 1996, using its Title II authority over local exchange carriers, the FCC ordered the Bells to interconnect with information service providers in the\textit{Expanded Interconnection}\textsuperscript{59} and\textit{Computer III}\textsuperscript{60} proceedings.

After enactment of the 1996 Act, the Commission sought comment on whether those requirements were still valid and appropriate.\textsuperscript{61} As of now, the requirements remain in effect. Nevertheless, it is an open issue whether the 1996 Act, by establishing specific interconnection and unbundling duties of local exchange carriers that are owed only to providers of telecommunications services, precludes the Commission from imposing the same or similar duties on carriers for the benefit of VoIP providers.

NCTA emphasizes that the rights set forth in Section VI supra are critical to any VoIP regulatory regime under Title I, including interconnection, eligibility to receive universal support and participation in a sustainable intercarrier compensation regime.

\textsuperscript{58} \textit{See People of State of Cal. v. F.C.C.}, 905 F.2d 1217, 1241 at n.35 (9th Cir.) (1990).


Regulatory Forbearance and Preemption Under Title II

The FCC has (and PUCs may have) considerable authority to decide that even “telecommunications services” need not be subject to various requirements under Title II of the Communications Act. For example, the FCC’s Competitive Carrier rulemaking, which scales regulatory responsibilities according to the presence or absence of market power associated with a particular service, allows the FCC to eliminate regulations for entities or classes of providers that have low market shares and no potential to acquire and to wield market power.\(^62\) Obviously, facilities-based VoIP service providers, newly entering the market, who compete against dominant 100-year-old telephone service providers, will have little or no ability to engage in the abuses that full common carrier regulation is designed to prevent.

Building upon the principles of the FCC’s Competitive Carrier decision, Congress in the 1996 Act created a mechanism of regulatory restraint that extends not only to FCC-made rules but also to statutory provisions. Under Section 10 of the 1996 Act, the FCC is empowered and required to eliminate any statutory or regulatory requirement that applies to any telecommunications service or telecommunications service provider if: (1) the requirement is unnecessary to prevent unfair and unjust charges and practices, (2) enforcement of that requirement is not needed to protect consumers, and (3) forbearance would otherwise serve the public interest.\(^63\) VoIP services offered by new entrants, especially in their initial phases, are ripe for Section 10 forbearance.


Such regulatory restraint is essential to promote investment, innovation, and widespread deployment.

The FCC followed this line of reasoning in its cable modem Declaratory Ruling and NPRM. There it said that “to the extent cable modem service is classified as a telecommunications service [in the 9th circuit] … forbearance would be in the public interest because cable modem service is still in its early stages; supply and demand are still evolving; and several rival[s] … are still developing. For these same reasons [the Commission] tentatively conclude[s] that enforcement of Title II provisions and common carrier regulation is not necessary for the protection of consumers or to ensure that rates are just and reasonable and not unjustly or unreasonably discriminatory. As such, [the Commission] believe[s] that forbearance from the requirements of Title II and common carrier regulation is appropriate in this circumstance.”64

There are several observations about “forbearance” worth noting. First, this approach ordinarily presumes that Title II requirements and rules apply in the first instance, and then eliminates them one (or a few) at a time. A more flexible and deregulatory approach might couple the notion of forbearance with the “nascent services doctrine” so as to identify only the Title II requirements appropriate to VoIP and forbear from the rest in accordance with the standards of Section 10. Such an approach would ensure that VoIP services are never subject to the full panoply of Title II-type regulations, but rather are subject, from the outset, only to those regulatory obligations that have been affirmatively determined to be necessary.

Second, forbearance can be slow; at the federal level, telecommunications service providers must apply for forbearance, either individually or as a class, and the FCC may take up to 15 months (during which time regulation continues) before a final

64 See Inquiry Concerning High Speed Access to the Internet over Cable and Other Facilities, Appropriate Regulatory Treatment for Broadband Access to the Internet over Cable Facilities, FCC GN Dkt, Nos. 00-185, 02-52 Declaratory Ruling and Notice of Proposed Rulemaking, at ¶ 95 (rel. Mar. 15, 2002)
decision is rendered. This problem can be solved if the FCC takes action promptly, through its contemplated NPRM and through other appropriate steps to provide a measure of regulatory certainty for VoIP services.

Third, FCC forbearance standing alone operates only to curtail interstate regulation but does nothing to address excessive and inconsistent intrastate phone regulations. Two solutions to this problem are apparent. One is for PUCs to embrace a light-handed regulatory approach and ensure that any state regulation of VoIP services is consistent with FCC regulatory treatment. Failing that, the other solution is for the FCC to use its preemption powers to constrain state action. Indeed, a determination under Title I that VoIP is an interstate information service would preempt states by definition. If VoIP is classified as a telecommunications service under Title II, then Section 253 requires the FCC to preempt state laws, regulations, and rules that prohibit or have the effect of prohibiting any entity from providing such services. More broadly, the FCC has preexisting preemption powers, resident in Sections 1, 2, and 4(i) of the 1996 Act, to preempt state regulations that impede the provision of interstate communications services.

* * *

Given the range of possible paths to a suitably deregulatory regime, there appears to be every reason for federal and state policymakers to embrace a minimally regulatory regime for VoIP services, so that vast numbers of residential consumers will enjoy the benefits of competition, new and exciting services will be introduced, and new

66 See XChange, FCC to Open Proceedings on VoIP Regulation, Nov. 7, 2003 (citing a letter from FCC Chairman Michael Powell to U.S. Senator Ron Wyden, in which Powell stated that: “Over the course of the next year, after full public comment and thoughtful consideration of the record, the FCC plans to follow up . . . [an] NPRM with a report and order on the VoIP issues raised in the proceeding.”).
67 But note that a number of state public utility commissions also operate under laws that allow for the exercise of regulatory forbearance.
investment and jobs will be stimulated. Only a regulatory framework that is minimally burdensome can create the right incentives and a favorable climate in which service providers can invest, innovate, and deploy VoIP services.
Conclusion

Cable's massive investment since the 1996 Act has enabled the industry to offer a host of new services. These services include high-speed Internet access, digital cable, HDTV and video-on-demand. Several cable companies also have substantial circuit-switched telephony operations. VoIP, however, is more than just the next new application. The cable industry believes that VoIP technology will permit cable companies to provide innovative, high-value facilities-based residential local phone services at competitive prices across the U.S. Such services, especially offered by facilities-based providers like cable competitors, hold the promise of breaking the logjam that has long denied consumers the benefits of real and sustainable competition and choices for local telephone service. While cable companies are excited about the potential benefits that can result from the widespread availability of VoIP services, a broad rollout cannot be assured unless a (de)regulatory framework applies to these services.

If policymakers affirmatively embrace and promote VoIP services, and keep them free of unnecessary and inconsistent regulation, the result will be to attract additional investment and propel rapid and ubiquitous deployment. This is the lesson to be drawn from the broadband explosion since the 1996 Act: pro-competitive, deregulatory policies work as nearly 18 million cable modem customers bear witness. Conversely, public benefits will inevitably be reduced and delayed if unnecessarily restrictive regulations from the monopoly telephone era are applied. The choice is clear.