

# Broadband Regulation for Service Delivery

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## Introduction

Changes in technology have resulted in changes in the telecommunications market. These changes have opened opportunities but have also raised concerns about maintaining social goals, such as universal service, while maintaining a competitive market where many services can flourish.

Universal service is the idea that everybody is entitled to phone service at a reasonable cost, even if someone else has to help pay for it. There is growing concern that the Universal Service Fund, the pot of money collected from urban and suburban telephone users to help pay for network infrastructure in rural areas, will be insufficient in the future. Currently, the fund is stretched thin, as more companies seek reimbursements and fewer customers are contributing.

Telecommunications convergence is the increasing overlap and merger among the technologies and services for transmission of video, voice and data communications. Voice, video, and internet services have all become data services. These communications are carried over a variety of copper wire, cable, fiber optic, wireless, and satellite networks.<sup>1</sup>

Barriers that kept firms outside of each other's markets are falling, driven by consumer demand, technological change, and the removal of regulatory prohibitions. For example, telephone firms are no longer legally prohibited from entering the local video market and cable firms have revamped their networks to compete in the voice market. As

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<sup>1</sup> Kurtin, Everything That Communicates Must Converge, National Law Journal v20, April 20, 1998.

a result of these market and technological developments, competition has burgeoned into competition between networks using different technologies (e.g. telecommunications, cable, satellite, wireless, power line firms and WiMAX). One of the critical regulatory questions is how to facilitate the desired competition while assuring the continued viability of social policies that have sought to assure that essential voice, video and data communications services are available, affordable, and accessible.<sup>2</sup>

I propose that decreasing regulatory hurdles will greatly alleviate many difficulties. Decreasing regulation for deployment will increase certainty and decrease deployment time and costs for new technologies. The proliferation of a variety of new broadband technologies, such as broadband over power lines and WiMAX, has the potential of promoting universal access to broadband services. The proliferation of multiple technologies will eliminate the “bottleneck” for access to local customers. This will be felt acutely in areas currently reached by only one or two broadband services. Second, regulations such as cable franchises for video are an outdated concept from an era of more limited technological capability. Decreasing or eliminating regulation of what the broadband can carry will allow greater availability of services because multiple services will provide increased revenue, making infrastructure deployments more economically feasible. The result will be greater availability of any service, any place, any time, limited only by the capability of the medium to carry the necessary data.

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<sup>2</sup> Allan Hammond, Telephone to VoIP, 2006.

## Historical Background

In the past, voice was carried over copper wire, followed by video over co-axial cable. As telephone service grew, AT&T began to acquire other phone companies. Eventually, AT&T agreed to accept regulation in exchange for being able to exist as a monopoly for voice service. AT&T's agreement to accept regulation ended competition in the telephone industry. Like AT&T, the federal government came to view competition as duplicative, destructive and wasteful and telephone service as a "natural monopoly." In 1921 Congress passed the Willis-Graham Act which allowed overlapping phone systems to be consolidated (thereby removing competitors through merger or acquisition). By the mid 1920s most communities had a monopoly phone service provider most of whom were AT&T subsidiaries. Long distance service was provided by AT&T's long distance subsidiary. Thus by the mid 1920s, the first era of phone competition ended.<sup>3</sup> Even after the breakup of AT&T and the introduction of competition into the long distance voice market, local telephone service remained a monopoly.

A similar monopoly justification existed with cable television. The old franchise system was based on the idea that, because of economies of scale, cable had to be a monopoly service. Allowing competition would result in overbuild and potentially prevent the infrastructure deployment from being economically feasible.

However, this monopoly structure has drawbacks. Positive change in the area of video service is not happening fast enough. The reason for this lag can be traced directly to the cable franchise regulatory system where local governments set the terms and

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<sup>3</sup> Allan Hammond, Telephone to VoIP, 2006.

conditions for businesses to enter the video market.<sup>4</sup> There are currently more than 30,000 local cable franchise authorities in the United States. With a market controlled by thousands of different municipal, state and federal standards, new video programming entrants must endure a hornet's nest of red tape to even begin providing service to customers.<sup>5</sup>

Regulatory hurdles aren't the only dysfunctional effect of the local government-enforced cable monopoly. Local elected officials take advantage of their power to grant exclusive rights to service a cable area. One city requested that, in addition to other requirements, Verizon turn over a parking lot for use as free parking for a library. Another city requested free television for every "house of worship" and a 10 percent video discount for select customers. Yet another asked for a new recreation center and pool.<sup>6</sup> In Sacramento, California, a cable operator had to plant 20,000 trees to secure his franchise. Another in Miami had to provide \$200,000 in annual funds to the local police department for an anti-drug abuse campaign.<sup>7</sup> These abuses of power have contributed to cable bills shooting up every year. Consumers need relief from an outdated system that promotes high prices and reinforces questionable local government behavior.

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<sup>4</sup> Sonia Arrison and Vince Vasquez, Reforming the Cable Franchise System, Response to the Request for Comments on the Notice of Proposed Rulemaking, February 10, 2006.

<sup>5</sup> Sonia Arrison and Vince Vasquez, Reforming the Cable Franchise System.

<sup>6</sup> Sonia Arrison, Cable Reform Is Almost Here, TechNewsWorld, 03/17/06.  
<http://www.technewsworld.com/story/49410.html>

<sup>7</sup> Dr. Donald L. Alexander, Laying Cable and Competition, Mackinac Center for Public Policy, May 15, 1999. <http://www.mackinac.org/article.aspx?ID=1783>

## Technological Upheaval

Technological change has fundamentally altered the communications market. The business models and regulation of the past can no longer be sustained. Advances in digital technology have resulted in telecommunications convergence, undermining the monopoly rational. Also, new technologies require less infrastructure cost, resulting in greater efficiency, which will be felt throughout the economy.

Telecommunications convergence is the increasing overlap and merger among the technologies and services for transmission of video, voice and data communications.



Figure 1: Voice, video, and internet services have all become data services and can be carried over any communications medium.

Voice, video, and internet services have all become data services that can be carried over the same communications medium (Figure 1). These communications are carried over a variety of copper wire, cable, fiber optic, wireless, and satellite networks.<sup>8</sup>

Barriers that kept firms outside of each other's markets are falling, driven by consumer demand, technological change, and the removal of regulatory prohibitions. Telephone firms are no longer legally prohibited from entering the local video market and cable firms have revamped their networks to compete in the voice market.

As a result of these market and technological developments, competition has burgeoned into competition between networks using different technologies (e.g. telecomm, cable, satellite, wireless, power line firms and WiMAX). Technologies such as BPL and WiMAX have a lower infrastructure cost and can provide the bandwidth to deliver the necessary services where fiber and other more expensive deployments would

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<sup>8</sup> Kurtin, Everything That Communicates Must Converge, National Law Journal v20, April 20, 1998.

be economically infeasible. WiMAX cards for laptops will actually be available by the end of this year and rollouts could begin in the first half of 2007.<sup>9</sup> Pending legislation would open the "white spaces" in the television spectrum for immediate use.<sup>10</sup>

WiMAX has many positive implications for the industry. This could well be a "disruptive technology" that allows new players to quickly build massive urban networks without laying fiber or cable, and it will allow municipalities to offer citywide wireless Internet access without expensive build outs. High bandwidth WiMAX deployments could quickly challenge the traditional monopolies held by cable and telephone companies by rendering the urban physical network obsolete and lowering the bar to entry (for companies like DirecTV, which has been pondering wireless broadband for some time).<sup>11</sup> Some firms have embraced these technological changes, while others have resisted change in an attempt to obtain short term gain at the expense of market growth and lower deployment costs.

### **Regulatory Resistance**

These changes in technology and shifts in the market have resulted in regulatory resistance by various groups. This resistance has been primarily in areas where entrenched interests exist, such as telephone and cable video.

A number of states, including California, Missouri and Utah have taken steps to address VOIP conundrum. The California Public Utilities Commission (CPUC) has taken a lead role in the debate over VOIP regulation. The CPUC has tentatively

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<sup>9</sup> Nate Anderson, Intel: WiMAX cards by the end of this year, 3/8/2006.  
<http://arstechnica.com/news.ars/post/20060308-6340.html>

<sup>10</sup> Nate Anderson, Wireless broadband tunes in to TV spectrum, 2/21/2006.  
<http://arstechnica.com/news.ars/post/20060221-6232.html>

<sup>11</sup> Nate Anderson, Intel: WiMAX cards by the end of this year.

concluded that providers of VOIP services that interconnect with the public switched telephone network (PSTN), shall be deemed to be “public utilities offering a telephone service” and subject to its regulatory authority. Although its approach appears to be contrary to the developments at the FCC level, the CPUC's decision tentatively asserts state jurisdiction over any Internet phone call that connects with the PSTN.<sup>12</sup> The CPUC unanimously voted to investigate a regulatory framework for Internet telephony services,<sup>13</sup> including whether VOIP service providers should be required to contribute to universal service; whether VOIP providers should be required to pay access charges associated with interconnecting to the PSTN; whether VOIP providers should be subject to basic consumer protection rules; and whether exempting VOIP service providers from requirements applicable to traditional voice providers would create an unfair competitive advantage for VOIP.

VoIP providers in California haven't been covered by the regulations affecting traditional telecommunications companies. VoIP providers haven't had to make the same contributions to state funds, pay interconnection charges, or provide access to the emergency number 911. The CPUC predicts that VoIP could account for as much as 40% of intrastate telecommunications revenue in California by 2008. If the rules on these contributions don't change, certain state programs will lose \$183 million to \$407 million in revenue.<sup>14</sup>

The vote in California was intended to send a message to the FCC that the states continue to believe that they have a role in regulating Internet telephony. However, VOIP services are marketed nationally and not tied down to a local network and should

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<sup>12</sup> Morrison & Foerster LLP, Communications Law Bulletin, February 2004.

<sup>13</sup> Joris Evers, California Signals Intent to Regulate VoIP, IDG News Service, February 16, 2004.

<sup>14</sup> Joris Evers, California Signals Intent to Regulate VoIP.

therefore be regulated nationally. The CPUC is concerned that Universal Service programs will lose much of their funding if Internet telephone companies aren't required to collect Universal Service fees. If the funding does not further the social goals, then the funding should decrease.

Separately, the Federal Communications Commission has begun proceedings seeking comments on the appropriate regulatory treatment of VoIP. Executives of VoIP service providers such as Vonage have warned that regulation could stifle growth of such services and increase costs. The FCC has suggested that VoIP services should continue to be subject to minimal regulation.<sup>15</sup>

The old cable video franchise system was based on the idea that, because of economies of scale, cable had to be a monopoly service. Now that competition is available from a variety of technologies, such as satellite and the Internet, it's time to revise the regulatory system. Economists from the AEI-Brookings Joint Center for Regulatory Studies are concerned about the rollout of broadband in America. The economists said, "Certain regulations are slowing investment and deterring entry into the broadband market."<sup>16</sup> Cable franchise regulations are one of the big culprits, and the economists noted, "There is no economic rationale for allowing cities to control who can provide broadband or related services." They then recommended that Congress "eliminate local franchising regulations, which serve as a barrier to new entry." These findings make a lot of sense and perhaps help to explain why some states have already worked to reform their systems instead of waiting for Congress.<sup>17</sup>

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<sup>15</sup> Joris Evers, California Signals Intent to Regulate VoIP.

<sup>16</sup> Sonia Arrison , Cable Reform Is Almost Here.

<sup>17</sup> Sonia Arrison , Cable Reform Is Almost Here.

The unspoken premise behind the cable franchise system is that cities are regulating a monopoly service for local residents. In exchange for charging high franchise fees and receiving significant financial and service concessions from cable companies, cities tacitly agree to insulate franchisees from market competition.<sup>18</sup> Attempts to foster competition and provide consumer protection in the video programming market have been stymied by local governments that hold a vested interest in maintaining the current near-monopolistic system. The Village of Roselle passed a 180 day moratorium on phone network upgrades, preventing AT&T from delivering video service.<sup>19</sup> All too often, alternative cable franchise bids are ignored, costly entry barriers are raised, and lawsuits are filed to block service choice for consumers. Municipalities have broad authority to establish their own provisions, fees, and franchise requirements. Some municipalities have perversely used the franchise bidding process to strong-arm unfair agreements from cable providers, such as requiring corporate funds to help cover local budget shortfalls, or the procurement of unrelated goods and services for public use by cable operators. The legal regime of cable franchise agreements is broken, abused, and must come to an end.

AT&T has been negotiating with several cities over the past year to install its fledgling TV service, Project Lightspeed. Progress has been hampered by decades-old laws that require TV providers to strike franchise agreements with each community where the service will be offered. AT&T is pushing for a new law that would require

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<sup>18</sup> Sonia Arrison and Vince Vasquez, Reforming the Cable Franchise System.

<sup>19</sup> Jon Van, Roselle puts moratorium on AT&T network upgrade, Chicago Tribune, April 1, 2006. <http://www.chicagotribune.com/>

only statewide franchises.<sup>20</sup> Comcast has opposed such changes in regulation in order to maintain its entrenched position. Comcast has argued that AT&T is trying to get around perfectly good laws, and that the company's Lightspeed service won't provide high-quality TV service to poor communities.

The conflict is emblematic of the rapidly changing world of telecommunications, where phone, cable and even Web companies like Google and Yahoo are scrambling to offer consumers phone, Internet and video services. Federal, state and local lawmakers, meanwhile, are scrambling to figure out the best way to regulate these services. A statewide franchise would speed the outlay of Project Lightspeed to consumers, yet would still grant local communities a 5 percent cut of revenues, as well as community-based channels.<sup>21</sup> Increased competition for television would bring down prices for consumers.

Dennis Mangers, president of the California Cable and Telecommunications Association, which represents the state's cable providers, denied AT&T's claim that cable has enjoyed a virtual monopoly on TV services. "We've lost 25 percent of subscribers to satellite," he said. "We already know competition." This is precisely why cable companies do not want any more competition. Comcast futhers with the monopolistic argument that "AT&T is spending years and \$1 billion to imitate a network Comcast has already built. We've seen nothing in their product roadmap that we can't exceed." However, based on history, Cable will not try to exceed without competition.

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<sup>20</sup> Jessie Seyfer, AT&T going after Comcast's cable market, Mercury News, March 31, 2006. <http://www.mercurynews.com/mld/mercurynews/business/technology/14230847.htm>

<sup>21</sup> Jessie Seyfer, AT&T going after Comcast's cable market.

Even Comcast has had difficulty dealing with the unwieldy local franchise process. San Jose's efforts to strike a long-term agreement with Comcast have dragged on for more than six years. Discussions between San Jose and AT&T are continuing. State lawmakers continue to develop a bill in Sacramento, and on a national level, the U.S. Congress is weighing several bills that propose major changes to telecommunications regulation.<sup>22</sup>

Additionally, millions of dollars are usually necessary to fund advertising, lobbying costs, political access, and other forms of "franchise campaigning" that greases municipal wheels towards obtaining a local franchise agreement (LFA). One of the biggest regulatory hurdles for competitors to clear are LFA "build out" provisions, which require franchisees to universally install cable hardware throughout a city. This capital-intensive demand serves to seal monopolistic conditions, as only a single provider market would likely facilitate cost recovery for such investments. Though city officials and cable companies argue that build out laws are about "fairness," the reality is that buildout is inefficient with some technologies and everyone does not need to have every broadband technology delivering services.

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<sup>22</sup> Jessie Seyfer, AT&T going after Comcast's cable market.

## The New World

In the modern technological era, the most fundamental change that has occurred is the ability to decouple the service from the underlying medium that provides the service. Every aspect of the service delivery can be decoupled to provide a more efficient delivery of multiple services through a variety of mediums (Figure 2).

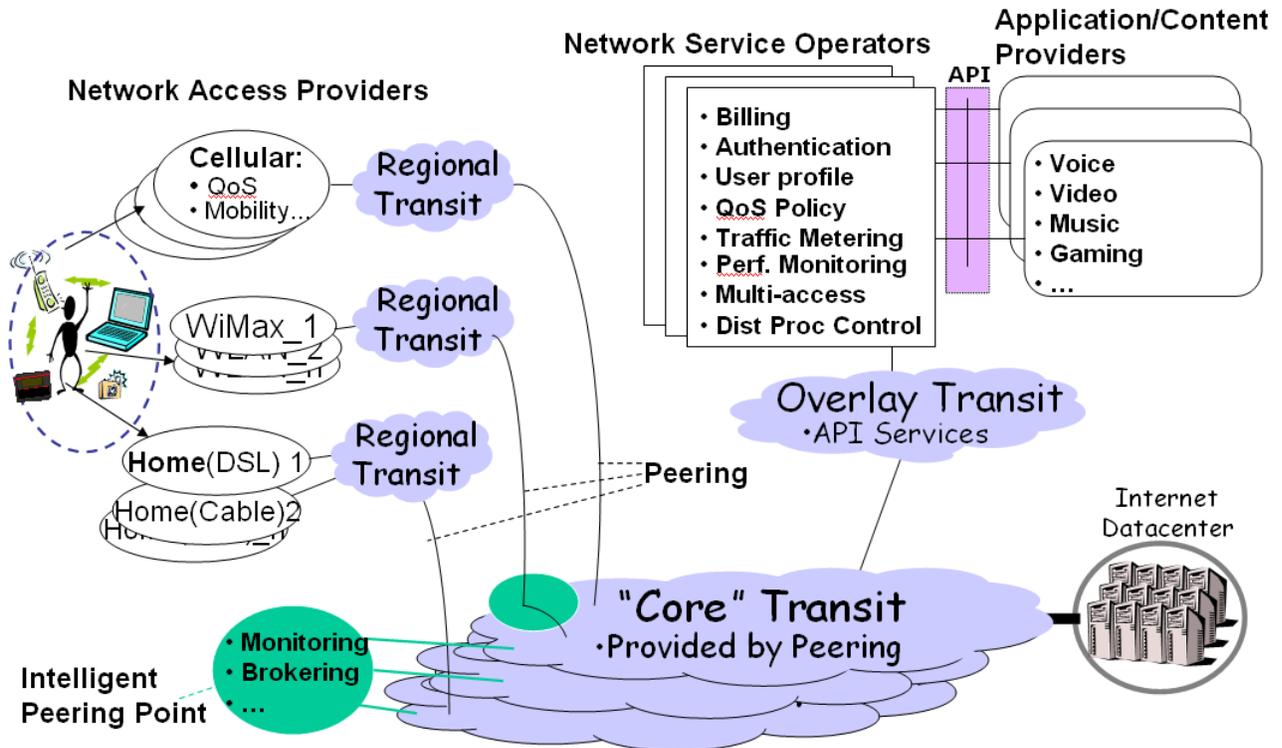


Figure 2: Network/Business Architecture Proposal<sup>23</sup>

Network providers must carry a heavy financial burden due to the high cost of building the infrastructure (Fiber investment, 3G Licenses, 3G Equipment).<sup>24</sup> Value added services allow the network provider to recoup investment. The delay in opening regulation is preventing substantial investment because the investment would not otherwise be feasible.

<sup>23</sup> Pete Perlegos, Matthew Caesar, Jim Chou, Sridhar Machiraju, Per Johannson. Application Architecture, CS294-3: Distributed Service Architectures, UC Berkeley, 2002.

<sup>24</sup> Pete Perlegos, MVNO: Mobile Virtual Network Operator, CS294-3: Distributed Service Architectures, UC Berkeley, 2002.

Incentives are increasing for both network and content providers to increase revenue. People are downloading media/services and sideloading them onto their devices (LG, Motorola). The network providers get nothing. After spending billions to build their networks, getting nothing is not an option. Also, content providers are starting to look for new methods (iTunes, ...) of content delivery instead of clinging to traditional methods (CD, DVD, ...). This may be the stimulus for allowing many more services to deploy on the network. Even former telephone monopolies understand these changes and seek to upgrade their networks to offer video and other services over broadband. The network operators will be very keen on filling the network with traffic, and providing additional services as a way of selling network capacity in order to recoup their investments. Pending changes in regulation may even convince cable companies to embrace the advantages provided by telecommunications convergence.

Multiple services are crucial and network providers will not be able to resist the increased revenue stream to amortize the costs of 3G investments or optical fiber. Providing additional services is the only way to drive revenue growth with the saturating market and shrinking margins of voice or bare broadband. The only way to generate the revenue to support the building of next generation networks is to create an environment where a plethora of services can flourish.

Specifically, a streamlined deployment of new video technologies may provide a solution to the competitive debacle of the cable franchising system. Internet Protocol Television (IPTV), which competes with regular cable by delivering video over the Internet, is set to grow tenfold by 2010. If America can clean up its franchising system to allow for the quick growth of IPTV, it would not only foster better, faster, and cheaper

video services, it would also stimulate economic growth as hardware and software companies will need to provide products and the content industry will have more outlets.<sup>25</sup>

Cable franchise reform is making progress on a national level. A bi-partisan group of senators (John Ensign, John Kerry, Jim DeMint, John Rockefeller, John McCain and Gordon Smith) released a statement supporting cable franchise reform. Now key members of the House of Representatives appear to agree. The House Commerce Committee voted 42-12 to grant national franchising rights to phone companies such as AT&T and Verizon Communications to make it easier for them to deliver Internet Protocol based television services (IPTV). Both companies are spending billions to build superfast fiber networks over which they aim to offer souped-up Internet connections and cable-like TV services.<sup>26</sup> The bill would create a national franchising system, instead of requiring that new television providers seek local franchises across the U.S.<sup>27</sup> Consumers might actually see national reform that will slash cable bills and make video service more innovative and interesting.

Some states have already worked to reform their systems instead of waiting for Congress. Texas, Indiana, and Virginia have all passed statewide franchise reform bills, with noticeable effects. In Texas, the first state to move on reform, consumers are seeing positive results. Just weeks following passage of a statewide franchise, Verizon introduced its FiOS TV service in Keller, Texas, offering 180 video and music channels for \$43.95 a month, or a 35-channel plan for \$12.95 a month. In response, the local cable

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<sup>25</sup> Sonia Arrison and Vince Vasquez, Reforming the Cable Franchise System.

<sup>26</sup> Jeffry Bartash, Panel backs phone-TV rules, but not Net neutrality. MarketWatch, Apr 27, 2006. <http://www.marketwatch.com/>

<sup>27</sup> Grant Gross, Net Neutrality Provision Rejected, Grant Gross, IDG News Service, April 27, 2006. <http://www.pcworld.com/>

company, Charter Communications, dropped its prices, offering a package of 240 channels and fast Internet service for \$50 a month. Charter previously charged \$68.99 for a TV package alone. Verizon's FiOS service rollout in select markets has elicited thinly advertised, yet highly competitive pricing responses by incumbent cable providers.<sup>28</sup> Now that video competition is available from a variety of technologies, it's time to revise the regulatory system and open up the market.

The change in technology is allowing firms to reap efficiency and increased avenues for revenue. The time has arrived for the regulation to fit the new technological landscape.

### **Regulating Toward Social Goals**

There is great debate about how to regulate these new services. Regulation should facilitate the desired competition while assuring the viability of social policies that have sought to assure that essential voice, video and data communications services are available, affordable, and accessible. Regulation that achieved social policies under an old technology will not necessarily fit a new technology. New technology should be able to reap technological benefits and not burdened by regulation that does not serve the purpose it did under the previous technology/market.

Change in technology has resulted, and will continue to result, in change in the market. In the past, telephone infrastructure could only be supported by telephone service, cable infrastructure could only be supported by cable video service, etc. Today, all services are data/info that can be carried over data capable infrastructure resulting in increased revenue to amortize the large capital investment required for the deployment of

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<sup>28</sup> Sonia Arrison , Cable Reform Is Almost Here.

new networks. The new technology is resulting in a multi-competitor market instead of the monopoly market that the old regulation is premised upon. This market transformation, does not allow the achievement of social goals through the use of the present regulations.

While movement is finally being made on truly freeing video regulation, states are attempting to retain control over VoIP regulation. Carl Wood, a PUC commissioner, said he is concerned that Universal Service programs will lose much of their funding if Internet telephone companies aren't required to collect Universal Service fees.<sup>29</sup> Bryan Martin, chief executive for 8x8, an Internet telephone company in Santa Clara, said he doesn't oppose regulation. But he added that regulation would make sense only if it includes rules specifically tailored to the Internet telephone industry. "I try to convey how different and new this technology is and that it's impossible to shoehorn it into the existing telecom legislation, which is literary decades old," Martin said.<sup>30</sup> Finally, Internet telephone service has drawn the attention of the major telecommunications firms. SBC, Quest and AT&T are planning to offer Internet telephone calling plans to consumers this year. Many telecommunications firms have realized that technological change has reached a tipping point and that they must change or die.

The debate in regulation stems from the attempt to regulate a new service that provides an existing/regulated service. The first problem is how to statutorily define and classify IP services and what factors should be considered in reviewing IP services. In terms of VOIP, some factors to consider are whether the service is a viable substitute for traditional telephone services, or connected to the public switched telephone network.

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<sup>29</sup> Verne Kopytoff, PUC to probe Net phone industry, The San Francisco Chronicle. February 12, 2004.

<sup>30</sup> Verne Kopytoff, PUC to probe Net phone industry.

The FCC agreed that Pulver.com's Free World Dialup (FWD) is not a telecommunications service: both because FWD provides no telecommunications, and also because the FWD service is free and therefore not provided to the public for a fee, as the Communications Act's definition of "telecommunications service" requires. Pulver had argued that its FWD service, which works like a peer-to-peer community riding on the end user's broadband Internet access. Pulver primarily provides a directory service, by means of which registered users can determine which other members are online and the Internet Protocol addresses at which those members can be reached. Pulver also provides the means for those users to connect with each other, and the software by which those users can exchange voice, video and text over the service; but all transmission is provided by the users' Internet service providers (ISPs). (No North American Numbering Plan numbers are used to establish FWD connections.) Accordingly, although Pulver is an indirect user of its members' ISP services, which include transmission, Pulver does not provide that transmission capability. Also, in this case, it is difficult to regulate a distributed service. A parallel service is text messaging and there is no serious suggestion to regulate text messaging.

If regulation is appropriate, there is debate about what obligations should apply to VOIP and other IP-enabled services. For example, should VOIP providers be required to: (1) contribute to the universal service fund, (2) pay access charges, (3) provide E911 services, (4) provide access to VOIP services to those with disabilities, (5) comply with Communications Assistance for Law Enforcement Act (CALEA)?<sup>31</sup> The debate is complex because the technology and market are still developing. Regulation can be defined incrementally as the technology and market develops and clarifies. Regulation

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<sup>31</sup> Morrison & Foerster LLP, Communications Law Bulletin, February 2004.

would make sense only if it includes rules specifically tailored to the Internet telephone industry and new technology should reap technological benefits. FCC has suggested that VOIP services should continue to be subject to minimal regulation. The FCC has taken the incremental regulation approach for VOIP. VOIP providers are already coming up with solutions to meet 911 requirements. Additionally, premature regulation could stifle growth of such services and increase costs and kill VOIP in its infancy.

The FCC has announced it will be initiating a separate rulemaking in the very near future specifically to consider the ability of law enforcement to access Internet-enabled services under CALEA. The Federal Bureau of Investigation, the Department of Justice and the Drug Enforcement Agency asked the Commission to delay any action on broadband items until it addressed the application of CALEA to broadband services, including VOIP. This is a clear case where the industry has worked with the government to develop a practical solution that fits the new technology.

Regulation must take into account the goals of the regulation in the market. We must leverage the technology to provide new services, competition, and universal service. Universal service can be promoted by targeted regulation and subsidies. Voice service can be charged fees such as E911 and voice universal service fee (VUSF) to provide a subsidy for low income households, and is totally disconnected from the underlying broadband connection. PSTN access charges would not make sense because to be technologically neutral, PSTN networks would also have to pay such fees to VOIP providers. No rational social goal is furthered by such a scheme. New technology should reap technological benefits and if PSTN is more costly to provide, perhaps nobody should be in the business of providing it.

Universal service fee can still be applied to any broadband service (BUSF). The BUSF will be more efficient than the USF because it would only be provided (if necessary at all) to the broadband with the lowest deployment cost (new technologies such as WiMAX can reduce the cost of the last mile to the customer endpoint). Not as in the present case with all technologies where universal service fees support a monopoly infrastructure that only provides only one service. Telephone has the traditional universal service fee and cable has the buildout requirements typical of local franchise agreements. Buildout is inefficient with some infrastructure technologies, especially sparsely populated areas, and certainly should not be required with all technologies.

A regulatory scheme that does not rush to regulate for the sake of regulation and fits the regulation with the technology and market that develops will be able to effectively achieve competition, efficiency, and other social goals. However, reckless regulation that attempts to shoehorn new technology into existing telecom legislation risks stifling innovation and allowing America to fall behind other rapidly developing nations.

## **Conclusions**

Present regulations stifle service availability. Regulations such as cable franchises for video are an outdated concept from an era of more limited technological capability. Decreasing regulatory hurdles will alleviate obstacles to deployment of new services.

Decreasing or eliminating regulation of what broadband can carry will allow availability of any service, any place, any time, limited only by the capability of the medium to carry the necessary data. Network operators will be able to provide additional

services, allowing them to recoup their investments, which will make any broadband deployment more economically feasible.

Decreasing regulation for deployment will increase certainty and decrease deployment time and costs for new technologies. Proliferation of a variety of new broadband technologies, such as DSL, broadband over power lines, and WiMax, has the potential of promoting universal access to broadband services. Proliferation of multiple technologies will eliminate the “bottleneck” for access to local customers. This will be felt acutely in areas currently reached by only one or two broadband services.

Innovations in technology are improving the communications landscape, and policy makers must ensure all consumers realize the full benefits. A healthy communications sector affects how well America can compete with the rest of the world, yet the United States risks falling behind. It’s time for true reform: for governments to cease the politics of cable franchise, for build-out requirements to disappear, and for a stable, technology neutral, and light touch regulatory framework.<sup>32</sup>

America needs to dump the old monopoly system and replace it with a vibrant competitive marketplace that will benefit consumers and adaptive business that can take advantage of the changes.

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<sup>32</sup> Sonia Arrison and Vince Vasquez, Reforming the Cable Franchise System.