

PRESERVING INTERNET FREEDOM: GUIDING PRINCIPLES FOR THE INDUSTRY

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I.	THE VISION FOR THE BROADBAND INTERNET.....	5
II.	ACHIEVING THE VISION: POWER TO THE PEOPLE	7
III.	MAINTAINING OPENNESS: EMPOWERING CONSUMERS WITHOUT REGULATING THE INTERNET.....	8
IV.	STEERING CLEAR OF POTENTIAL OBSTACLES ON THE HORIZON.....	9
V.	CONSUMERS ARE ENTITLED TO “INTERNET FREEDOM”.....	11
	A. <i>Freedom to Access Content</i>	11
	B. <i>Freedom to Use Applications</i>	11
	C. <i>Freedom to Attach Personal Devices</i>	12
	D. <i>Freedom to Obtain Service Plan Information</i>	12
VI.	KEY BENEFITS OF PRESERVING “INTERNET FREEDOM”	12
VII.	QUESTION AND ANSWER SESSION	13

I. THE VISION FOR THE BROADBAND INTERNET

I want to thank Professor Phil Weiser and the University of Colorado School of Law for letting me speak here today on the “Digital Migration,” a term I introduced here at the Silicon Flatirons Conference four years ago, to describe our movement from a slow, conventional, analog world, to a digital world that promises so many incredible opportunities for faster, more reliable, and higher-quality communications.¹ The move to this digital world is a radical transformation and its benefits will be felt by each and every American.

Those of you who follow the Federal Communications Commission (Commission) closely should be very familiar with the agency’s vision for

* This essay was adapted from a speech and question and answer session delivered by FCC Chairman Michael K. Powell at the Symposium on “The Digital Broadband Migration: Toward a Regulatory Regime for the Internet Age” held at the University of Colorado School of Law on February 8, 2004.

1. A few days after addressing the Silicon Flatirons Conference at the University of Colorado School of Law, then Commissioner Powell gave the speech to a convention at the Progress and Freedom Foundation. FCC Commissioner Michael K. Powell, The Great Digital Broadband Migration, Address before the Progress & Freedom Foundation (Dec. 8, 2000) (transcript available at <http://www.fcc.gov/Speeches/Powell/2000/spmkp003.html>).

the high-speed, broadband Internet. Our national broadband policy seeks to promote investment in diverse, faster, and more sophisticated Internet and related technologies.² This, in turn, will foster economic growth, innovation, and empower American consumers to make more choices in how they live, work, and play.

Indeed, a recent Pew Internet Study suggests that consumers are already beginning to take advantage of the new opportunities provided by high-speed connections in their homes.³ According to the report, those with broadband generally do more online than those with dial-up connections.⁴ This includes peer-to-peer file sharing, enhanced instant messaging, streaming video, and using virtual private networks.

The next generation of broadband will make both new applications possible and established applications more compelling. But we will not get there through wishful thinking. Everyone involved in the broadband Internet – end-users, network providers, content producers, applications developers, and policymakers – must continue to be missionaries in driving infrastructure and applications deployment if our nation hopes to stand among the leaders of the Information Age.

To date, experiments in dial-up access have given Americans a growing number of ways to communicate, gather information, and be entertained. High-speed Internet accelerates that trend. These expanded choices, in turn, result in lower prices and higher value. In addition, the almost infinite flexibility of the Internet Protocol gives users the tools to tailor these valuable innovations to their own individual needs – to make them their own.

All this activity is precisely what Congress had in mind when it directed the Commission to “encourage the deployment [of broadband] on a reasonable and timely basis”⁵ The Act also mandates we take “action to accelerate deployment.”⁶ We have and we will.

That is why the Commission has pushed so hard to create incentives and tools to encourage companies to bring consumers additional high-speed Internet technologies. We have taken steps to promote investment in traditional platforms, like cable modems and

2. For an outline of the FCC’s policies and objectives regarding broadband, see FCC, BROADBAND, at <http://www.fcc.gov/broadband/> (last reviewed/updated March 13, 2003).

3. MARY MADDEN, AMERICA’S ONLINE PURSUITS: THE CHANGING PICTURE OF WHO’S ONLINE AND WHAT THEY DO (Pew Internet & Am. Life Project, Report, Dec. 22, 2003), available at http://www.pewInternet.org/reports/pdfs/PIP_Online_Pursuits_Final.PDF.

4. *Id.* at 5.

5. Telecommunications Act of 1996, Pub. L. 104-104, 110 Stat. 56, § 706(a) (codified at 47 U.S.C. § 157(a)).

6. *Id.*

DSL.⁷ We are particularly proud, however, that we are leading the charge for new, emerging broadband platforms, such as broadband over power lines, WiFi and WiMax, Ultra-wideband, satellite, and the list goes on.

Of course, a real bright spot has been the hot spot. By making licensed and unlicensed wireless spectrum available for broadband uses, we have seen an explosion of wireless access points and have witnessed blossoming wireless technologies that allow powerful, untethered Internet access around the country. As we look forward, our goal is to continue to champion and facilitate the higher-speed, more capable platforms and applications of tomorrow.

These efforts to promote investment and competition among networks follow from a simple truth: no amount of regulation, or wishful thinking, will bring consumers the benefits of high-speed Internet if the networks are not in place to serve them. We have an historic opportunity to bring multiple pipes to consumers, and, thereby, take a big bite out of the “last mile” problems that have plagued competition for a century and invited, almost necessarily, heavy monopoly regulation.

II. ACHIEVING THE VISION: POWER TO THE PEOPLE

Promoting competition among high-speed Internet platforms, however, is only half of the task. We have to ensure that these technologies’ various capabilities are not used in a way that could stunt the growth of the economy, innovation, and consumer empowerment. Thus, we must expand our focus beyond broadband networks – the so-called “physical layer” of the Internet’s layered architecture.

Again, broadband networks are impressive generators of economic growth, innovation, and empowerment. But generators do not work unless they have *fuel to burn*. Broadband networks are fueled by consumers’ hunger for an ever-expanding array of high-value content, applications, and personal devices that can run over these networks. Easy access to content and technology is bringing more power to people.

Personal computing devices are at the leading edge of this revolution in consumer empowerment. These devices exploit the rapid innovation in silicon, software, and storage, and combine it with speedy Internet connections. This potent combination is putting in the hands

7. See Appropriate Framework for Broadband Access to the Internet over Wireline Facilities, *Notice of Proposed Rulemaking*, 17 FCC Rcd. 3019, 3023, at ¶ 5 (2002) (stating that “broadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market”); Inquiry Concerning High-Speed Access to the Internet Over Cable & Other Facilities, *Declaratory Ruling & Notice of Proposed Rulemaking*, 17 FCC Rcd. 4798, 4802, at ¶ 5 (2002), *aff’d in part, vacated in part by Brand X Internet Servs. v. FCC*, 345 F.3d 1120 (9th Cir. 2003) (same).

of Americans the same computing power that once was reserved for CalTech, the military, or the phone company.

You have no doubt heard the litany of electronic devices that can offer consumers more options and more personalization using the Internet: just open your paper and look at the advertisements on Sunday morning. Music players like the iPod; personal video recorders like TiVo; boxes for Internet voice from service providers like Vonage; online game systems like Xbox and GameCube; smart phones; and WiFi that allows you to surf the Internet from your local coffee shop or your back porch are the common statements of our culture today.

But the possibilities for consumer empowerment extend beyond just your gadgets. Those possibilities arise from the Internet's open architecture, which allows consumers to freely interact with anyone around the globe. Musicians and writers, who never could have landed a contract with a major record label or a publisher, can now find an audience for their work. A small town radio station serving a dwindling audience can suddenly reach a market that has moved to the big city. Take eBay, for example: gone are the days when each of us had only a small group of potential buyers for what we thought was junk in our garages. Somewhere, in the next state or maybe the next continent, there are people who may very well want to buy that "junk" and pay us more than we ever dreamed for it. The open Internet has opened markets beyond the traditional geographic limitations that have always been an impediment.

Companies are eager to feed that consumer hunger for these Internet related goodies. Many are racing to develop the content, applications, and devices they hope will entice more and more consumers to abandon dial-up and slower broadband access in favor of faster broadband. But first, these companies have to be able to reach the broadband consumer.

Thus, usage and deployment of high-speed Internet depends on access to content. Giving broadband consumers the access they want is not a matter of charity; it is a matter of simple good business. Network owners, ISPs, equipment makers, and content and application developers *all* benefit when consumers are empowered to get and do what they wish.

III. MAINTAINING OPENNESS: EMPOWERING CONSUMERS WITHOUT REGULATING THE INTERNET

This is why ensuring that consumers can obtain and use the content, applications, and devices they choose is so critical to unlocking the vast potential of the Internet. Today, broadband consumers generally enjoy such freedom. They can access and use the content of their choice. This easy access includes some of the most promising new

uses of broadband. For example, recently the head of the National Cable and Telecommunications Association indicated that cable modem providers would not block traffic from competing Internet voice providers, such as Vonage.⁸ Such commitments are good business, but also essential to nurturing competitive innovation.

These general conditions suggest that many, if not most, in the industry recognize that providing access and information is in their own self-interest, particularly as infrastructure providers and developers struggle to discover valuable uses that will enable them to recoup their substantial investments in high-speed architecture. Nevertheless, we must keep a sharp eye on market practices as they continue to evolve and evolve rapidly. And we must do so while safeguarding Congress' intent that the Internet remain free of unnecessary regulation that might distort or slow its growth.⁹

IV. STEERING CLEAR OF POTENTIAL OBSTACLES ON THE HORIZON

Despite the wide-open seas broadband consumers currently enjoy, we must steer clear of obstacles that could appear on the horizon. The high-speed Internet continues to evolve rapidly, and even somewhat unpredictably. Some argue that new threats could undermine consumers' easy use of content, applications, and devices.

Professors Phil Weiser and Joe Farrell make this point in their 2003 paper published with the *Harvard Journal on Law and Technology*.¹⁰ The two professors acknowledge the strong incentives that network owners have to ensure that broadband platforms remain open.¹¹ Such openness encourages competition among Internet applications and services, which in turn makes platforms more valuable to both consumers and owners.¹² The two note, however, that there may be exceptions to this general rule.¹³ They suggest a network owner might face incentives

8. See Donny Jackson, *NTCA: Cable Won't Get In Vonage's Way*, TELEPHONYONLINE.COM (Dec. 19, 2003), at http://telephonyonline.com/ar/telecom_ncta_cable_wont.

9. Telecommunications Act of 1996 § 706(a) (codified at 47 U.S.C. § 157(a)).

10. Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85 (2003).

11. *Id.* at 100-05. A monopolist broadband provider has strong economic incentives to internalize complementary externalities (ICE) by providing access "to its platform when it is efficient to do so, and to deny such access only when access is insufficient." *Id.* at 89.

12. *Id.* at 103.

13. *Id.* at 105-19 (The authors outline eight exceptions to the ICE theory which are: (1) Baxter's Law; (2) price discrimination; (3) potential competition; (4) bargaining problems; (5) incompetent incumbents; (6) option value; (7) regulatory strategy; and (8) incomplete complementary.).

to begin restricting uses of their platforms in certain cases: if regulators set prices for using the platform too low,¹⁴ if bargaining among network owners and other companies breaks down,¹⁵ or if companies are just unable or unwilling to recognize their own self-interest in maintaining the freedom broadband consumers want and expect.¹⁶

This may not be mere academic speculation. There are some troubling restrictions that have appeared in broadband service plan agreements. Professor Tim Wu of the University of Virginia, catalogued some of those restrictions for a symposium here last year.¹⁷ According to his research, these restrictions have included things such as cable companies' early efforts to impose restrictions on virtual private networks, WiFi, and home networking equipment and operation of servers in the home.¹⁸ Although, to the cable companies' credit, many of these concerns have been redressed, press reports continue to plague us alleging that at least some companies have not provided enough guidance to intensive broadband users regarding the limits of their service plans.¹⁹

The evidence is unclear, however, as to whether and to what degree these restrictions have been aggressively enforced against consumers. Nor is there much evidence that consumers have been denied what they want, even if they are willing to change service plans. Some providers counter that any service plan restrictions have been reasonable attempts to manage their networks to prevent service disruption to customers.²⁰ Some of the restrictions that have popped up have been removed when it became clear they were not necessary to ensure service quality.

Based on what we currently know, the case for government imposed regulations regarding the use and provision of broadband content, applications, and devices is unconvincing and somewhat speculative. Government regulation of the terms and conditions of private contracts is probably the most fundamental intrusion on the free market. This intrusion is particularly destructive where innovation and experimentation are hallmarks of an emerging service. Such interference should be undertaken only where there is weighty and extensive evidence of abuse.

14. *Id.* at 105-07.

15. *Id.* at 112-14.

16. Farrell & Weiser, *supra* note 10, at 114-17.

17. Tim Wu, *Network Neutrality, Broadband Discrimination*, 2 J. ON TELECOMM. & HIGH TECH. L. 141, 156-65 (2003).

18. *Id.* at 159-62.

19. *See, e.g.*, Associated Press, *Comcast Targets Internet 'Abusers,' But Won't Reveal Limits*, (Jan. 29, 2004), available at <http://www.securityfocus.com/news/7940>.

20. *See* Wu, *supra* note 17, at 153 (citing Justin Pearse, *UK Shrugs Off American Broadband Troubles*, ZDNET NEWS.COM (Mar. 20, 2000), at <http://news.zdnet.co.uk/story/0,,t269-s2077792,00.html>).

Nonetheless, the industry should take heed of how critical unfettered access to the Net has been, and will continue to be, to the success of broadband. Consumers have a high expectation that such access will continue, and the benefits to them and the nation are significant.

Consequently, it is time to give the private sector a clearer roadmap by which it can avoid future regulation on this issue by embracing unparalleled openness and consumer choice.

V. CONSUMERS ARE ENTITLED TO “INTERNET FREEDOM”

As we continue to promote competition, we must preserve the freedom of use that broadband consumers expect. Thus, I want to issue a challenge to the broadband network industry to preserve the following “Internet Freedoms.”

A. Freedom to Access Content

First, I believe consumers should have their choice of legal content. Consumers expect to be able to go where they want on high-speed connections, and those who have migrated from dial-up would presumably object to paying the premium asked for broadband if certain content were restricted. Thus, I challenge all facets of the industry to commit to allowing consumers to reach the content of their choice. I do recognize that operators have legitimate needs to manage their networks and ensure quality experiences, and reasonable limits sometimes must be placed in service contracts. But such restraints should be clearly spelled out and should be as minimal as necessary.

B. Freedom to Use Applications

Second, consumers should be able to run applications of their choice. As with access to content, consumers have come to expect that they can generally run whatever applications they choose or perhaps even develop. Again, these applications are crucial to continuing the Digital Broadband Migration because they can drive the demand that fuels infrastructure and content deployment. Applications developers must remain confident that their products will continue to work without interference from other companies. No one can know for sure what “killer applications” will emerge to drive deployment of next generation technologies. Again, it is important to challenge all facets of the industry to let the market work and allow consumers to run their applications provided they fall within service plans and will not disrupt the network.

C. *Freedom to Attach Personal Devices*

Third, consumers should be permitted to attach personal devices they choose to the connections that they pay for in their homes. Devices give consumers more choice, value, and personalization with respect to how they use their high-speed connections, and they are critical to the future of broadband. I challenge all facets of the industry to permit consumers to attach those devices they choose to their broadband connection, so long as the devices operate within their plans, and are not designed and used to enable theft of service.

D. *Freedom to Obtain Service Plan Information*

Finally, and most importantly, consumers must receive clear and meaningful information regarding their service plans and what the limits of those plans are. Simply put, information is absolutely necessary to ensure that the market is working. Consumers need to know whether and how their service plans protect them against spam, spyware, and other potential invasions of privacy. I challenge all facets of the industry to ensure that consumers can easily obtain this information.

VI. KEY BENEFITS OF PRESERVING “INTERNET FREEDOM”

Numerous benefits follow if industry continues to preserve “Internet Freedom.” Internet Freedom will preserve consumers’ freedom to access and use content, applications, and devices they choose based on the service plan they choose. It will promote comparison shopping among the growing number of providers by making it easier for consumers to obtain access to meaningful information about the services and technical capabilities they rely on to access and use the Internet.

Internet Freedom promotes innovation by giving developers and service providers confidence to develop applications that will reach consumers and run as designed. Internet voice applications – a notable example that has grabbed the headlines – are all the rage. Internet Freedom ensures that consumers will continue to be able to choose whatever Internet voice service that will function over their high-speed connections.

Preserving Internet Freedom also serves as an insurance policy against the potential rise of abusive market power by vertically integrated providers. If we secure a reasonable balance between the needs of network providers and Internet Freedom, consumers will reap the benefits of broadband *without intrusive regulation*, while preserving industry’s incentives to deploy more high-speed platforms.

In closing, I would emphasize that consumers also have a role in this challenge to preserve Internet Freedom. I encourage consumers to

challenge broadband providers to live up to these standards and to let the Commission know how the industry is doing. Internet Freedom is intended to give broadband consumers the choices, value, and personalization they are coming to expect and demand. Thus, consumers are the ultimate judges of whether the industry is successful.

I look forward to working with consumers, the industry, and all of you in taking this important step forward in the Digital Broadband Migration. Our voyage continues, but we have begun to see the signs of land. Continuing to keep a sharp watch for dangerous shoals will ensure that someday soon we will dock safely on the shore and begin the bright new day in communications we all hope and dream for.

VII. QUESTION AND ANSWER SESSION

Following Chairman Michael K. Powell's "Preserving Internet Freedom" speech at the Silicon Flatirons Conference, the Chairman answered questions from students, professors, industry leaders, and journalists. The following is an abridged excerpt of the Chairman's thoughts on recent developments in the telecommunications industry.

A. Was It the Chairman's Intention in Promulgating the Four "Internet Freedoms" to Encourage Service Providers to Post Their Policies and Possibly Make Them Legally Enforceable?

In the last ten years, we have seen the Internet – a phenomenal invention – grow at an unprecedented historical rate which makes it hard to measure its value to consumers and citizens. We bumped into problems along the way. But they are the same kinds of traditional problems that you would expect any new innovation to bump into, whether it be a railroad or a car production line. Either because the government has not really understood it, or, by visionary forethought, the Internet has been left virtually untouched and now thrives. Absent regulation, we have seen some really creative experimentation in various types of self-governance models. Some have failed, but others have succeeded.

As a regulator, it is important to be humble and open minded enough not to assume that just because we have the pen and the authority, we can script out with precision the right way to do this. This is particularly true when there is an information deficit. The Commission does not entirely understand the technical aspects of the services, or how fast they are transforming. The Commission has, however, started to experiment much more with being a catalyst for voluntary initiatives that can avoid regulation, which should be attractive to the industry.

With these four freedoms, providers should become competitive. If I were running a cable company right now, I would love to stand up and say, "Here is what you can expect from Mike's Cable Company, and ask my competitors if they will do the same, and if they do not, then come see Mike's Cable Company." This strategy has worked for wireless local number portability, and it has worked for the do-not-call registry.

There would have to be a demonstrable record of anti-competitive action resulting in consumer harm before regulators should enter into the sacrosanct, private, contractual world between consumer and producer. These types of regulations have a way of getting on the books and never leaving again. Look at the administrative state that we built in the 1930's. The Commission was built on the model of the alphabet agencies of the New Deal. A one-year rulemaking is *moving* in regulatory space, and we are *really* grooving if it is six to seven months. Yet, that is dangerously inadequate for some of these issues. Instead, we would hope that the industry can narrow the number of issues that demand a government response, as opposed to dumping the whole banana under a regulatory sign.

B. How Does the Brand X²¹ Case Affect the Digital Broadband Migration, and How Might the Federal Communications Commission's Strategy Change Depending On the Outcome of the Case?

I think the case is tremendously significant for the development of broadband policy, not because of the particular result you might ultimately prefer, but because the court will have stolen from the Commission the breadth of discretion that I think it needs to figure out rules of the road in a fast-changing, dynamic capability.

The decision rests on a precedent that is now four years old.²² At the time the decision was originally reached, just what form and way broadband would flourish was far from clear. Thus, taking discretion to adapt away from the technical expert is dangerous. The substance of the decision would almost say that the Internet has to be a big, fat telephone. In numerous panels and conferences you may debate the minutia of which rules are the right rules and which things are the right things. Most people, however, are beginning to recognize that the Internet and

21. *Brand X Internet Servs. v. FCC*, 345 F.3d 1120 (9th Cir. 2003), *en banc rehearing denied*, 2004 U.S. App. LEXIS 8023 (9th Cir. March 31, 2004). The Commission along with the Solicitor General are appealing the 9th Circuit's decision to the Supreme Court. See Press Release, Federal Communications Commission, Statement of the FCC Chairman on the Government's Appeal of the 9th Circuit's Cable Modem Ruling (Aug. 30, 2004), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-251527A1.doc.

22. See *AT&T Corp. v. City of Portland*, 216 F.3d 871 (9th Cir. 2000).

its potential is something farther reaching and greater than the facile mind that wants to embrace it, call it a big, fat telephone, and then pile on 100 years of telecommunication regulation. Much of that regulation, by the way, has never been thought through, or filtered for its relevance or applicability to a new, emerging service.

Alternatively, if the federal government or state governments want to plow through the technical realities of the Internet, its potential, and its benefit to consumers, and slowly come to the same conclusion over the next hundred years that it ought to be regulated that way, then fine. But that is not what you would be doing here. You would, in almost a lazy move, be extrapolating rules that have built up around an entirely different network, an entirely different economic model, and an entirely different role for regulation that would not reflect any of the more enlightened and far-reaching thinking. Shame on us if we do. We will be wondering why we are 30th in world in broadband deployment, leading to more outsourcing of jobs outside the country, and more productivity losses in the United States.

C. How Does Regulating Broadcasters' Content Competitively Impact the Cable Companies Vis-à-Vis the Network Companies?

There is no area of passionate public discourse understood less than this one. The indecency statutes that are on the books have only been applied to the broadcast, free, over-the-air medium. There are a number of legal, intellectual, and constitutional reasons why that is the case. First, there is an assumption that broadcasting uses the public's property for free. In exchange, the broadcasters have a higher public trust obligation. That has been the government's broadcasting model for seventy years. That rationale is becoming more tenuous because 88% of Americans subscribe to cable or DBS,²³ and increasingly the Internet, and increasingly Xbox, and increasingly Blockbuster Video, and increasingly XM satellite radio. Our society is being bombarded from multiple avenues with media, information, and entertainment. I think you start to have wobbliness in the outlook of the government if it is always myopically focused on one segment – here by the way, the more declining media sphere – and that is the way the statutes are currently applied.

The Supreme Court has said that with respect to free, over-the-air broadcasting, the government can go further than it normally can regulating other media outlets. It has a lesser First Amendment standard

23. Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, *Tenth Annual Report*, 19 FCC Rcd. 1606, 1609-10, at ¶ 7 (2004).

than newspapers, for example. The Court has also said that cable has a First Amendment interest somewhat akin to that of newspapers, as opposed to broadcasting.²⁴ One reason is that there is a subscription relationship. You can have it or not, and the consumer has expressed a voluntary accession to the medium. Secondly, much of the programming that you talk about has another level of filter in the sense that you have to subscribe to HBO.

These are not my parameters, but these are the ones that the courts have employed that limit the restrictions. The bottom line is the same. At some point, if the country is serious about wanting to debate what the public interest is in the media, then it is going to have to broaden its mind and its perspective enormously. I am going to use my children as an example: ask them if they know what a broadcast channel is. They do not. They have a clicker in their hand and it goes 7, 9, 10, 12, 159, 222, and they do not know the difference between 214 and 7. I find it phenomenal that the First Amendment changes channels too.

The Commission is aggressively enforcing the law as written. I think that if you want to talk about the effect of these mediums in our society, you are really kidding yourself if you think you can wall off one small part so your children never hear the "F-word" again through other mediums. Regulating what our children watch is an important issue, as is how to balance the role of parental control versus government control. That is always a healthy thing to talk about, but if you notice, boys do not watch TV. The recent Nielsen studies are shocking in displaying the degree to which little boys have left the television space in big numbers.²⁵ Why? They live on their video machines. Have you seen Grand Theft Auto?²⁶

D. Would It Be an Abuse of Market Power for Cable Modem Providers to Offer Limited Internet Access for a Lower Price to Individuals Not Desiring Complete Access?

No one is talking about not allowing network providers to enter the applications development business. We are not asking network providers to be dumb wholesalers with no other ability to provide access to high value services. I think that we would kill them if we did that. The economics would make it very difficult to do that unless we started doing what we did in 1913, and start re-embracing monopolies in order to

24. United States v. Playboy Entm't Group, Inc., 529 U.S. 803, 815 (2000).

25. See, e.g., Joe Mandese, *Video Games Emerge As "No. 4" Medium, Displace Print Among Young Guys*, MEDIA DAILY NEWS (Apr. 5, 2004), available at http://www.mediapost.com/dtls_dsp_news.cfm?newsID=245176.

26. Grand Theft Auto is a product of Rockstar Games. ROCKSTAR GAMES, INC. at <http://www.rockstargames.com> (last visited Aug. 14, 2004).

guarantee their rates of return for the developments that we want. I think that we do want them to go in that space, and, by the way, some of them are good at it. I have this running fight with my mother-in-law, and I will not disparage any product, but she pays a lot for a particular e-mail provider, and I cannot get her to switch to save my life. Given the way she uses it, she would actually be better off somewhere else. But she is very comforted by it, and she is willing to pay for it. To deny her that is also to deny her choice.

There is a problem that we have that I call techno-ecstasy. We think that because we can do cool things – everyone should, but not everybody wants to do that. There is a reason we have editors, aggregators, and simplifiers. A lot of people want someone to bring order to a chaotic world, and I think there is going to be room for that. I think that everybody that wants to offer that should be able to do so. You just have to be careful that in your zest to offer it, you are also willing to knock the gates over for everyone else.

E. Have New Technologies Such as Voice Over IP, and Wireless Broadband Made Universal Access a Thing of the Past?

I have said before that Universal Service is an objective, and the objective is ubiquity and affordability. It is our commitment to give every American access to tomorrow's technology at affordable rates. There is nothing about that noble goal that is any less compelling today with advanced technologies, than it was yesterday. My only argument is that you ought to be very creative and thoughtful about how you use different technologies to solve the problems, rather than just lightly assuming that you have to approach the problems the exact same way you approached them for the last one hundred years.

In 1913 MaBell sold us this bunch of goods – let us be a monopoly and we will do it for you. It was not a game – it worked – and that is because every single hamlet and town and mountaintop was going to be reached the same way, and that way was prohibitively expensive in large parts of the country. I suggest that we start to get technologically savvy about solving rural universal service.

Universal service is so hard in rural America because it is hard to string a twisted copper cable 600 miles up the side of a mountain. Instead, contrary to many of the pundits, what we see is an explosion of wireless innovation in rural America. This year I have been to several very rural areas where they are employing wireless Internet services, usually by guys who buy the equipment at Circuit City and put it in the barn, put an antenna on, and come up with a community solution for subscription. All of a sudden, they have better broadband than we do in Washington. It is amazing what a little room will do for an innovator.

The economics are fundamentally different, and that gives me a lot of hope and optimism that we can solve problems in parts of the country using a different approach than what we might have used before. None of this suggests the final outcome, only that I challenge those in Washington, and policymakers among states, to be a little more aggressive in thinking about how to take care of our rural citizens in the future with technology in our approaches, instead of assuming that everything is a really huge pot of money that must be used in exactly the same way, in exactly the same form, when you are in different places.

We should take the lessons learned in the unlicensed spectrum. We need to get it out of the hands of legal thinkers and into those of technical innovators and say here is your driver's license, do not speed, and do not break the law. I do not care whatever else you do, I do not care what color car it is, what size it is, or what shape it is. Just follow certain rules that prevent interference meltdown, and feel free to figure out what to do with the spectrum for your community, rather than us at our command and control computers deciding what will be used for what purpose on this hour of this day. I think the challenge is to make better use of the spectrum that we have currently licensed, allocate more unlicensed spectrum, and allow greater flexibility so that rural constituents can take advantage of opportunities in their area without having to deal with a heavy regulatory council constantly arguing about the right way to do it.

F. Would It Be Necessary to Regulate to Prevent Americans From Getting Illegal Content?

You should not regulate, you should *prosecute*. As deregulators, we have not gotten so absurd to think that free markets should allow murder. There is always an important distinction between permitting legal conduct, and facilitating illegal content. The kinds of free market values that are important are ones that are faithful to a rule of law. It is not about doing whatever you want. The market is fundamentally a dialogue between the producer and the consumer. They have a dialogue about what they want, at what price, and about what they will be willing to accept and what they will not. They did not invite the regulators to the dinner table, and regulators should not accept an invitation to the dinner table unless there are clear, demonstrable reasons to be there. Regulators cannot interfere with a relationship that produces ultimate welfare, at least as shown by the history of economics as we have come to know it. Many systems in the history of the world have attempted to do it better, but I have not seen the one that actually does it. It is shocking to me that every other decade you have to re-win the argument that five smart people sitting in Washington cannot micro-plan the economy.

There are other kinds of law. There is a big difference between regulation, property rights, and contractual protections. There is no such thing as a free market without a rule of law that is fully enforced, and carefully protected. To return to the question, that is why copyright law is so important. The current debate is about what will be the legitimate property interests of holders in exchange for allowing your viewing or listening. That is a fundamental property right notion that the government sanctions, but it is about private property, not public confiscation. I love the music stuff, legally.

G. What Happens When the Legal Regimes Fail? We Have Laws That Prevent Downloading Free Music, But That Does Not Seem to Have Stopped It?

First of all here is a warning to all who will be producing products in the Internet space: you better watch these kids, because you are beginning to see in their hands the tools to solve problems if you will not solve them first. I watch my children think differently than I would have thought to do in the same situation. They look for something first for only a little while. If it is not there, they start figuring out how to make it.

Sean Fanning wanted something the music industry was unwilling to give him, so he made it. There is going to be a premium on those who wish to take your money to be faster and more responsive to the digital generation's needs. They do not have much patience before they start solving problems themselves. Producers can provide compelling value as well as legal deterrents, so that most people, the ones that matter, conduct themselves legally. When Apple iTunes figured out how to do what it did, and it is up to nearly 100 million downloads,²⁷ there was a noticeable decrease in illegal downloading. While it has not been extinguished, it is also still in the very early innings of trying.

You have to worry about losing a generation that has become very acclimated to something. I am puzzled by the behaviors of my fourteen year old's generation. They will not hesitate to spend a fortune on a video game, which as constructed is not that much more expensive to make than the music they seek to download for free. And the same kids that are downloading music for free are paying a \$1.59 to listen to crappier music on their phones. Ringtone downloading was a \$3.5 billion industry.²⁸ This is all about winning the hearts and minds, and

27. Laurie J. Flynn, *iPod Demand Leads Big Increase in Earnings for Apple*, NY TIMES, July 15, 2004, at 4.

28. Reuters, *Ring Tones Bringing in Big Bucks*, WIRED NEWS (Jan. 13, 2004), available at <http://www.wired.com/news/business/0,1367,61903,00.html>.

acclimating people to a direction. Producers will have to be swifter and more in tune at an earlier stage with consumers.

H. Do You Think it's Time for a New Telecom Act and If So, What Should Be In It?

What I will give you is food for thought: the world of communications is very different now, after the 1996 Act, than it was before. The administrative philosophy behind the 1934 Act is one of enormous delegation of authority with very flexible standards, and little determinacy. The flexibility in the Act was based on trust in the agency as being an enlightened group of individuals. There is this great book by professor James Landis on the theory of administrative law,²⁹ which states that we will staff these commissions with wise people of special intellect. The notion was that we would invest in these special people, these obligations, and then we would give great deference to them and that is the way it would work.

The 1996 Act is very different. It attempts to be a comprehensive blueprint about every intricate question and it tries to put very serious restraints on the Commission. It is 750,000 words long; every Senator I have met swears they personally wrote it. It is fraught with ambiguity and inconsistency. It is a very, very different kind of model, and the interesting question is which – '34 Act, or '96 Act – would be better for the Internet world?

The difference between the two is similar to the question of whether you believe the Constitution is about original intent, or if you believe it has to be a living constitution. I do not know what I think about constitutions, but in this space it has to be living regulatory policy. We have to go back to thinking about what the sheer structural and intellectual limitations of regulatory authority are, as well as the sheer immensity of what is unknown as opposed to what is known, and finally, build an institution and a law that is capable of being dynamic and adaptive, as opposed to oppressive and proscriptive. You have to go back to principles and standards – a really smart institution that has technological expertise to learn, change, adapt, and not be so parochial. When an agency becomes proscriptive, it invites an enormous amount of litigation.

I am convinced that there is a formula such that for every one word of law, you have multiplied by ten the number of lawsuits possible. The Telecom Act of '96 will never settle – every company can find the words they are looking for to fight decisions. There is also a lot of political mischief within the Commission. Somebody can come in and say: "I've

29. JAMES M. LANDIS, THE ADMINISTRATIVE PROCESS (1938).

got a way that you can do this – there’s this one word in footnote nine that I’ve stuck in there.”

I tried to figure out how I should manage the Commission knowing that we do not know all the answers. I remembered watching a basketball game with Duke having just successfully beaten another team. I was shocked by the degree to which each player, in an unbelievably disciplined way, could mimic the basic philosophy of the coach. When they step on the court, they do not know what is going to happen. The players are an organism and they are built to read, adjust, and adapt. The discipline of their organization and the proficiency in skills allows them to do that.

The same is true for soldiers. I was a soldier, and we cannot train soldiers. We cannot tell them what will happen on a battlefield. You condition them to be skillful, disciplined, creative, innovative, and adaptive and you trust them. You trust them to make adjustments and adapt and persevere through change because no two battles are the same.

The Commission and developing policy must be thought of in the same way. It has to be a dynamic living organism. And that is why I am a fervent advocate of free markets, not only because I think they are superior but because it is the model that says restrain yourself, be humble about what you do not know.

