

Preserving an Open Internet

The 2010 Potential Negative National Outcomes of the FCC's 2009 "Notice of Proposed Rule-making"

Throttling and encryption.

A decade ago, these words possessed a different meaning. Today they lie at the heart of a perceived technology controversy that may adversely affect millions.

In the early fall of 2009, the Federal Communications Commission issued a formal Notice of Proposed Rule-making (NPRM). The powerful federal agency's intent?

"With today's Notice," the FCC announced on October 22, "we seek input on draft rules to preserve an open Internet – the next step in an ongoing and long-standing effort at the Commission."

On the face of it, preserving an "open Internet" sounds noble and pure. But what is the real question? Does the Internet even require a concerted regulatory preservation effort to remain "open" at this point?

In its formal notice of its intent to devise and issue new regulations, the FCC proclaimed that its intent was to "codify" an existing 2005 policy that embodied four general – and somewhat undefined – principles that would "preserve and promote the vibrant and open character of the Internet." These earlier four policy principles said that American citizens were entitled to:

- Access the lawful Internet content of their choice
- Run applications and use services of their choice
- Connect to the Internet using their choice of legal devices
- Real competition among network application, service and content providers

Why the Fierce Debate over "Net Neutrality"?

In its broadest sense, "net neutrality" advocates no restrictions on:

- Content
- Sites
- Platforms
- Kinds of equipment attached to the Internet
- Modes of Communications

Proposed New FCC regulations are:

- Described as "a solution in search of a problem"
- Redundant and unnecessary, as competition and consumer choice have already proven more than adequate for policing standards for current technology
- Proven in previous situations to slow down much needed broadband investment and expansion

Among other parts of this process, what has alarmed numerous businesses and people is the fact that the FCC is considering adding two critical and far-reaching fifth and sixth principles. As the NPRM notice stated:

- “We propose draft language to codify a fifth principle that would require a broadband Internet access service provider to treat lawful content, applications and services in a nondiscriminatory manner.”
- “We proposed draft language to codify a sixth principle that would require a broadband Internet access provider to disclose such information concerning network management and other practices as is reasonably required for users and content, application, and service providers to enjoy the protections specified in this rule-making.”

Further, the formal Notice that the FCC now seeks “comment on a category of ‘managed’ or ‘specialized’ services, how to define such services, and what principles or rules, if any, should apply to them.”

These fifth and sixth principles, as well as the proposed definition of “managed services”, could well change numerous current operations of the Internet if codified into formal regulatory practice.

The changes – many unwanted or presently unanticipated – could include or impact:

- The broad availability of Internet services to consumers, businesses, non-profit organizations (including libraries)
- A freezing of new investment in broadband deployment
- How Internet services are offered
- The cost of Internet services to consumers and businesses alike
- Higher costs passed through to consumers to pay for regulatory requirements and oversight documentation
- Other unwanted and unnecessary changes from current Internet availability and operations

Smithville’s Position

- | | | | |
|--|---|--|--|
| <ul style="list-style-type: none"> • The current FCC proposal is unnecessary and even dangerous. • The current FCC proposal threatens to undermine innovation and current advancements in the technology marketplace. • The proposed new principles will have a | <p>chilling effect on much-needed new investments in broadband deployment and technology developments.</p> <ul style="list-style-type: none"> • The proposed principles and potential exercise of new FCC “ancillary jurisdiction” powers directly threaten the growth and positive expansion of all facets of current Internet- | <p>related companies and organizations.</p> <ul style="list-style-type: none"> • More than sufficient competition presently exists, together with a developed business culture, that will reasonably ensure that the rights of lawful access to the Internet by the full spectrum of American | <p>society will continue, and that their rights will be upheld.</p> <ul style="list-style-type: none"> • Congress is prepared and capable of acting if specific legislative and/or regulatory remedies are required for future challenges and problems that presently do not exist. |
|--|---|--|--|

To its credit, the FCC deployed extensive social media Internet technology to invite open public comment after its NPRM call. Thousands of companies, associations, lobbyists and citizens responded have on the FCC's Web site, reflecting the intense interest in the topic of "Net Neutrality."

As industry experts know, the words "net neutrality" represent a loaded phrase. Depending on one's point of view, they mean different things. Since the beginning of the commercial Internet in the early 1990s, businesses, individuals and governments alike have possessed real concerns – all with varying degrees of relevance – about the nature of the Internet, the content it transmits and makes available, and the means by which it can be accessible.

Certain advocates of "net neutrality" want unrestricted and unregulated access and transmission rights of nearly anything over the Internet. But the challenge of defining an "open Internet" bears with it the issues of protecting copyrighted information and intellectual property, and protecting citizens from vile practices like child pornography. It is here where both the FCC and the U.S. Congress have generated legal friction in the attempt to define and regulate what can represent the "dark side" of the Internet.

Consider these facts: The commercial Internet represents truly "disruptive technology." It has spawned entirely new industries and businesses, few of which existed in their present form only a few years ago. It has changed the way people seek healthcare. It has changed the way people shop. It has changed how people get and process information. It has changed how critical university and commercial research is conducted.

It has even changed the way we elect a President.

In the United States, content and access to the Internet is presently widespread beyond what few would have imagined in the early 1990s. A generation is growing up that can't remember when the

A Brief History of the Internet

1960s

- 1961 – MIT professor publishes research paper on packet-switching, the technology lodestone of current Internet functionality
- 1965 – The federal Advanced Research Projects Agency (ARPA) sponsors study on a "galactic network"
- 1968 – ARPA issues RFQ for ARPANET
- 1969 – ARPANET commissioned by U.S. Department of Defense; UCLA sets up first node

1970s

- 1970 – Publication of ARPANET host protocol, AT&T installs first U.S. cross-country link; Corning Glass Works produces first commercially viable fiber-optic strands suitable for telecom communication
- 1973 – TCP/IP concept developed, allows computers to network; Ethernet concept introduced, first international connection occurs
- 1975 – First ARPANET mailing list created
- 1979 – BITNET created by City of New York University, primitive, but private e-mail available

world existed without the Internet, and objects vigorously to having to pay for content in almost any form. This same generation, together with businesses and organizations who have become dependent on high-speed data flow and transmission, increasingly demand higher and higher bandwidth speeds. Large files with videos, MP3s, data, photos, movies, documents and real-time games today flash across the U.S.-based sections of the Internet at nearly unimaginable speeds.

Despite rapid advances in transmission capacity with fiber-based broadband, certain applications and data files are still “resource hogs” and require inordinate amounts of bandwidth. To even out and moderate resource demand for bandwidth, Comcast installed controversial software and hardware in 2008 that regulated Internet resource allocation on their network systems. It was the wrong thing to do and the wrong solution. The marketplace answered with a vengeance.

The public outcry over this private commercial regulation resulted in a stiff penalty from the FCC and public condemnation. Comcast removed the restrictions, but the incident left many wondering if new regulations were now required to ensure that this – or events like it – never happened again.

At first blush, the new proposed FCC rules and regulations today might seem reasonable. The issue remains as to whether they’re even necessary or prudent, particularly given the incredibly high speed of innovation and advancement in Internet-related technologies and industries.

Further, the larger issue is whether they’re even legal. The vague wording of the two new principles and the proposed defining of “managed services” genuinely alarms a broad spectrum of providers and Internet users. Eight different pieces of Congressional legislation since 2006 have been introduced, debated, abandoned or outright defeated on “net neutrality” issues with good reason. Like today, many of the expressed concerns are largely speculative in nature and in many respects represent “a solution looking for a problem.”

A Brief History of the Internet

1980s

1980 – Major telecom companies build-out new high-speed communication installations with new generation of commercial fiber-optics; ARPANET temporarily disabled by first known virus, which is accidentally created by bad programming code

1983 – First name server developed for Internet at the University of Wisconsin

1984 – Domain Name Service (DNS) introduced; first Apple Macintosh enters the market

1985 – Symbolic.com is first commercially registered domain name for Internet

1986 – National Internet backbone established (NSFNET) with transmission speed of 56K

1987 – Commercial Internet truly begins

-Federal U.S. Office of Technology receives plan for new national network, network not established until 1991

-25 million personal computers sold in the United States

1989 – MCI Mail and CompuServe begin marketing commercial/consumer e-mail accounts; first anti-virus program for consumers enters market (McAfee)

There are additional troubling issues with this process.

As Corynne McSherry of the Electronic Frontier Foundation points out, “Congress has never given the FCC any authority to regulate the Internet for the purpose of ensuring net neutrality. In place of explicit congressional authority, we expect the FCC will rely on its ‘ancillary jurisdiction,’ a position that amounts to ‘we can regulate the Internet however we like without waiting for Congress to act.’”

Further, many of the commercial and social issues that may confront future Internet usage in the United States are as yet unknown. Here’s a critical question: How can these future unknown issues be anticipated correctly at this juncture? For example, how could the progenitors of the commercial Internet have had any idea that within a few years of enabling this nascent technology a primitive file-sharing program called “Napster” would ignite a national raging legal battle over copyright protection? How would they have considered legal remedies or who was going to enforce copyright protections for an unknown problem back in 1992? Further, one could argue that the Napster file-sharing controversy and its remedy directly gave birth to an entirely new industry where music files could be inexpensively purchased, distributed and played over free programs like iTunes. The marketplace decided that it liked having direct control over specific songs and how those songs were accessed. A new – and highly profitable – market that provided services of real consumer value was created.

What would have happened to today’s utterly transformed music industry if the FCC had issued a forward-looking regulation in 1992 that no copyrighted music or data files could be transmitted over the Internet in any form or function? The iPod didn’t exist then nor did its many competitors. Would well-meaning – but off-target – federal regulations have killed profound innovation that many today take for granted?

As the FCC itself states in its Notice, “We recognize that Internet and computer technologies, as well as associated market structures, are in constant flux. Accordingly, we seek comment on a case-by-case

A Brief History of the Internet

1990s

1990 – ARPANET disbanded; T-1 lines grow in demand as consumers and businesses want higher transmission speed; commercial restrictions on Internet lifted

1991 – World Wide Web (non-graphic) technology released by CERN in Europe; one billion bytes of traffic milestone hit and sustained by NSFNET

1992 – “Surfing the Internet” phrase appears; fourth generation of fiber-optic communication capacity appears, lays foundation for high-speed, large data transmission, including expanded cell phones, video over the Internet and other now-common 21st century Internet applications

1993 – True “worldwide web revolution” begins

-MOSAIC graphics-based Internet browser developed and released at University of Illinois

-White House and United Nations go online

-600 Web sites active

1994 – Internet celebrates 25th anniversary of development (ARPANET origins)

-First banner ads appear (Zima beverage and AT&T)

-Microsoft creates its first browser

approach to adjudicating violations of the principles. Under such an approach, we would evaluate the facts of particular cases against the principles codified in a general form, rather than crafting detailed rules.”

Should the FCC be even considering the opportunity to exercise “ancillary jurisdiction” to create new policy defining the future of the Internet without Congressional authority? Back in 2008, New York Law School professor Susan Crawford, (now on the White House’s National Economic Council) called the idea simply “nuts.”

Does a resource allocation challenge on the Internet still exist? Absolutely. Experts estimate that nearly 20% of all U.S. Internet bandwidth is absorbed at any given time by giant file-distributing applications like BitTorrent and similar programs. When people watch bandwidth-hogging movies live from operations like NetFlix, capacity measurably drops. When peer-to-peer gamers fight titanic digital battles across hundreds of miles of cable or fiber-optic lines, resources challenges emerge.

As the FCC itself recognizes in its Notice, Internet technology changes nearly every day. Commercial service providers can make and publish user policies and agreements that reasonably limit such bandwidth-draining practices. There’s little question that the Internet industry has – and will at least in the short-term – enjoyed a remarkably successful track record in self-policing and self-correcting. Why? Because numerous competitive alternatives exist. If consumers are dissatisfied with one particular service provider, in the vast majority of cases another provider exists that can serve up the bandwidth or services that the consumer wants – all within a reasonable and market-driven price range.

The net outcome from these proposed new rules? The FCC will likely become the very danger to the “open Internet” that it professes to preserve.

A Brief History of the Internet

1990s

1995 – Very High Speed Backbone Network Service (vBNS) created

- CompuServe, America Online (AOL) and Prodigy provide direct Internet commercial access for consumers (dial-up)
- NETSCAPE (based on MOSAIC browser) goes public, 3rd largest NASDAQ IPO in history
- Internet domain name registration no longer “free”
- More than 100,000 Web sites live

1996 – VoIP Internet telephone technology gains in interest by commercial companies, Congress

- U.S. Communications Decency Act passed, U.S. Supreme Court quickly strikes major provisions of Act down as unconstitutional

-FCC Telecommunications reform act goes into effect; cable companies seize major advantage

-Browser war heats up between NETSCAPE and Microsoft

1998 – NETSCAPE offers browser free of charge

- U.S. Department of Commerce privatizes domain registration
- U.S. statute banning net taxes signed into law
- WI-FI (802.11b technology) wireless technology commercially introduced

1999 – MCI/WORLDCOM upgrades Internet backbone to 2.5 G

-First Internet Bank of Indiana started as first-ever Internet-only bank

If new federal regulatory power is granted without proper limits, the level of risk for new investment in costly fiber-optic installation – including fiber-to-the-home and fiber-to-the-business – will likely rise, curtailing advancements and expanded deployment, particularly in outlying urban regions and rural areas. Technology companies will likely pass on the costs of new applications that may run the risk of being regulated under new definitions of “managed services.” Current operations of service providers may well be compromised with the loss of critical intellectual property as proprietary network management practices are inadvertently forced into the public domain.

Comcast was censured formally by the FCC and informally by public opinion for practicing what many perceived as unfair practices in “throttling and encryption” of commercial bandwidth services to consumers. Now Comcast will have its day in court, and the industry has already adapted to professed market forces.

Thus, Smithville’s position on the proposed new FCC rule-making is:

- The current FCC proposal is unnecessary and even dangerous.
- The current FCC proposal threatens to undermine innovation and current advancements in the technology marketplace.
- The proposed new principles will have a chilling effect on much-needed new investments in broadband deployment and technology developments.
- The proposed principles and potential exercise of new FCC “ancillary jurisdiction” powers directly threaten the growth and positive expansion of all facets of current Internet-related companies and organizations.
- More than sufficient competition presently exists, together with a developed business culture, that will reasonably ensure that the rights of lawful access to the Internet by the full spectrum of American society will continue, and that their rights will be upheld.
- Congress is prepared and capable of acting if specific legislative and/or regulatory remedies are required for future challenges and problems that presently do not exist.

A Brief History of the Internet

2000s

2000 – \$1 trillion Dot-Com bubble bursts

-20 million Web sites populate Internet globally

2001 – America attacked by al-Qaeda radical Islamic terrorists, three World Trade Buildings in New York destroyed, Pentagon attacked; cell phone networks overloaded

-Taliban in Afghanistan bans public access to Internet

2003 – Abilene Internet Backbone upgraded to 3 G

2004 – Abilene Internet Backbone upgraded to 10 G

2005 – Federal Communications Commission (FCC) issues four-point “Internet Policy Statement”; “net neutrality” debate heats up

2006 – Web sites grow to more than 92 million worldwide

2007 – Apple iTunes music Web site passes one billion downloads milestone

2008 – Smithville in Indiana begins \$20 million rural broadband project

-Comcast cited for restricting Web traffic to consumer cable users

2009 – ARRA “Stimulus” funding created by Obama Administration and Congress; \$7.2 billion included for broadband deployment

-FCC releases “Notice of Proposed Rule-Making” to potentially expand 2005 Internet Policy Statement, adds major online discussion capacity about potential new regulations for Internet Service Providers

Accordingly, Smithville's position is that the current process of considering new rules and regulations beyond what presently exists should be abandoned. Public review, discussion and debate regarding these important issues are welcome and already are in place. A potentially dangerous federal process that could result in an entirely new body of restrictive regulations and innovation-sapping rules is both counter-productive and unnecessary.

An "open Internet" within the borders of the United States can and will be preserved within the already-proven safeguards of service providers responding to the lawful needs of the market and the expressed desires of Internet users and consumers. Appropriate legal remedies, guidelines and oversight capacity already exist with regard to copyright protection, the prevention of unfair monopolies, fair access to services, and other critical elements. Given the dynamic nature of the Internet realm, future challenges are difficult to anticipate with accuracy. Until reasonable concerns can be documented, current FCC policies and powers are better left where they now exist.

Smithville's position, like those of many of its customers, suppliers and worthy competitors, is that the current FCC 09-93 Notice of Proposed Rule-making should be responsibly withdrawn and shelved.

Want to help preserve an Open Internet?

In barely two decades, the Internet has rapidly grown from a classified defense and academic data transfer tool into one of the most powerful forces in the history of human existence. Today, it touches all of our lives.

Access to the Internet needs to remain on a level field, free of well-meaning but restrictive federal regulations that will likely curb investment, expansion and new developments.

Access to online data and information is already restricted in some parts of the globe. Access to lawful content must remain open in the United States.

Your voice is important. The FCC has made possible numerous means for you to communicate your thoughts and concerns about possible new rules. As the discussion proceeds, make your voice heard.

- FCC information about the proposed rules and process: <http://www.openinternet.gov/>
- Information about the proposed rules: <http://www.openinternet.gov/about-the-nprm.html>
- Submit your ideas to the process: <http://openinternet.ideascale.com/>
- Official FCC blog on the process: <http://blog.openinternet.gov/>

We invite you to check back on www.smithvilledigital.net for updates on how Smithville is making critical points in this process. You can also follow us on Facebook at [SmithvilleFCC](https://www.facebook.com/SmithvilleFCC) or on Twitter at www.twitter.com/cullenMC. Both the Web site and Facebook offer opportunities to forward this white paper to your friends and colleagues, and we encourage you to do so.

If you'd like to comment or add ideas about what've you've read here, please email me at fcc@smithvilledigital.net

This is a critical issue. Thank you for taking the time to review our position.

Kind regards,

Cullen McCarty
President
Smithville Digital, LLC

About Smithville and Smithville Digital

Indiana's largest privately owned telecommunications company, Smithville's corporate history spans the entire spectrum of modern communications development. Initially a rural telephone service in the early 20th century, Smithville established a reputation for state-of-the-art innovation and outstanding customer service. It today provides fiber-based telephone and communications technology services to thousands of customers across southern Indiana. The Smithville Digital division provides high-end fiber-optic connectivity and managed services to universities, large corporations, cities and counties, and small to medium-sized companies across Indiana.

Well before the Obama Administration instituted the American Recovery and Reinvestment Act (ARRA), Smithville launched a comprehensive and high-technology rebuild of its entire service line. This \$20 million rebuild focused on providing direct fiber-to-the-home (FTTH) and fiber-to-the-premise (FTTP), which dramatically improves access speed and quality. The Smithville project was publicly lauded by top Indiana and federal officials, as Smithville included rural customers in its rebuild, which is typically the last demographic segment to receive upgrades in technology services.

Smithville and Smithville Digital have established a leadership position in numerous areas, including:

- Telemedicine and telehealth initiatives
- Direct fiber connectivity to businesses, cities and consumers
- Managed services for municipal operations and hospital electronic health records (EHR)
- Innovations in security and video services
- Outstanding service packages
- Rural connectivity
- Numerous other innovations and customer investments at corporate expense

Smithville Digital was formed in 2003 by Smithville to offer fiber-optic-based services for businesses and networking throughout the state of Indiana. Smithville Digital provides a high-end fiber-optic platform of digital data transmission to its customers. Fiber-optic technology allows for "last mile" connectivity as well as network management solutions to help customers meet their data transmission needs.

Smithville Digital was formed as an affiliate of Smithville Telephone Company, Inc. Founded in 1922, Smithville Telephone Company has grown to be Indiana's largest independent telecom company. Known today under the brand name of Smithville, the company is presently working on bringing direct Fiber-to-the-Home (FTTH) and Fiber-to-the-Premise (FTTP) services to residential homes and businesses in southern Indiana, and has expanded its technology services to include Smithville Digital and other telecom-related services. The company's headquarters are located in Ellettsville, Indiana near Bloomington, Indiana, home of Indiana University.

For more information please visit www.smithville.net. For more information about Smithville Digital visit www.smithvilledigital.net <<http://www.smithvilledigital.net>> .