

Remarks of Federal Communications Commissioner Robert M. McDowell
Tech Policy Summit
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Introduction. Thank you, Carolyn, for your kind introduction. I am delighted to be here, and I thank you and all of the folks at the Tech Policy Summit for asking me to join you. The depth and breadth of the issues presented today is extremely impressive, and I am pleased to be part of your program.

What your program reflects is the wonderful reality that we are privileged to live in the most exciting time ever in the history of communications. That may sound a bit trite, but it happens to be true. We are in the midst of a tremendous explosion of entrepreneurial brilliance that is producing more disruptive and positive technological change than the world has ever seen before. But maybe I'm wrong.

So, let's look at some fresh facts. In just 26 years since its invention, half of the world's population now has a cellphone. 3.3 billion cellphones inhabit our planet of 6.6 billion people. No technology has ever penetrated this deeply this fast. On top of that, many of those phones possess more computing power than did the entire Apollo program. As processing power climbs ever-higher under Moore's Law, our use of the spectrum has become exponentially more efficient as well. In fact, our spectral efficiency doubles every two-and-half years. Since Marconi's first radio transmission in the 1890s, we are one *trillion* times more efficient in our use of the spectrum. These wonderful trends should continue forever.

Internet usage is also increasing at an astounding rate. In fact, today just one website, YouTube, consumes more bandwidth than the entire Internet did in 2000. And rapid advances in

wireless technology mean that we have the freedom to access the Internet anytime and anywhere. That means we'll be able to watch March Madness virtually anywhere. But apparently we already are. CBS tells me that their NCAA website spewed an astonishing 2.9 million hours of live streaming video of the tournament, viewed by 3.7 million daily unique users, in just the first two days. That's 102% growth over last year. So the real question is: is anyone in America getting any work done Thursdays through Sundays in March? Perhaps we should just be honest about it all and declare a national basketball holiday.

But to get back on topic, as our PC becomes our TV and cell phone, all at the same time, what does this mean for policy makers in Washington who like to squeeze technologies, and their regulations, into neat little silos? I operate from the presumption that no one can keep track of this fabulously constructive chaos in the market place, let alone five unelected bureaucrats in Washington. Only unfettered markets are qualified to make the billions of decisions each hour that determine the success or failure of ideas. Regulation should be reserved only for market failure, especially when all technologies, and consumer habits, are constantly evolving.

For instance, our "new media economy" has grown past its infancy and is now squarely within its adolescence. And just like our own gangly and awkward teenage years, the new media economy is working through growing pains. Case in point: The Writer's Guild of America effectively shuttered Hollywood when it went on strike to garner a greater share of new media revenue. New media is where the world's eyeballs are looking and, as a result, where the ad dollars are flowing. In fact, comScore reported that Americans viewed an eye-popping 10 billion online videos in December 2007 alone, a record number. comScore attributed December's spike in online viewing specifically to the Hollywood writers' strike which caused a dearth of fresh content in the traditional media sector.

What this means is that viewers are increasingly seeking alternatives to traditional media. Nimble entrepreneurs are stepping in to satisfy that demand. Earlier this month, the *New York Times* ran a story about how disruptive this metamorphosis is. According to the *Times*, a study last October revealed that 25 percent of Internet users had streamed full-length television episodes online in the previous three months. And these weren't just the young: 23 percent of 35 to 54 year-olds did this. "Grey's Anatomy" has been streamed more than 26 million times on ABC.com in the last six months, adding the equivalent of two full ratings points to each episode. Such numbers have the potential to put more eyeballs in front of ads, and more money into writers', producers' and actors' pockets. But it is consumers who are becoming the ultimate winners.

The *Times* article closed with the story of Peer Gopfrich, a screenwriter here in L.A. When he realized that the networks were offering his favorite shows in high-definition online, he hooked up his new HDTV to his computer and broadband connection. The *Times* reporter wrote, "Mr. Gopfrich's computer became a free and seemingly endless source of on-demand television. 'All of a sudden, we could watch pretty much every popular show we wanted, when we wanted, in high-definition in our living room,' he said." Mr. Gopfrich typifies the changing viewing habits of millions of Americans.

Furthermore, this new on-demand phenomenon is going wireless and, therefore, mobile. Here in Southern California, The William Morris Agency, Accel Partners, Venrock, AT&T, and others, are investing in technologies that will make it easier to run content on cellphones, as well as to nurture social networking sites like Facebook and MySpace that have migrated to hand-held devices.

But the story here is: it appears that the market is delivering its own a la carte video offerings, without the “help” of the government. The video market place is more competitive than ever, and it is evolving. Hundreds of millions of viewers are flocking to sites like: Hulu, Joost, Veoh, MeeVee, Dailymotion, Gofish, and Imeem. Additionally, as a result of these wonderful new developments, parents also have more powerful technologies at their fingertips than ever before to help protect their children from indecent content.

Would these developments exist today if the government had tried to engineer them through mandates? Probably not. So shouldn't the government be wary of artificially disrupting this natural evolution? If the government starts imposing mandates regarding à la carte, credible studies from both the public and private sectors tell us that consumers will pay more and get less. Channels that rely on the eyeballs of browsers for ad revenue will likely disappear, leaving consumers with fewer choices, not more. The subscription rates of surviving channels may very well go up, and their programming quality may go down, as they lose ad dollars and are forced to divert dollars away from production in favor of marketing. In fact, one Wall Street analyst has suggested that ESPN alone could cost over \$25 a month. So why would the government want to impose this mandate when the market is already delivering it, business plans are adjusting accordingly and the unintended consequences would be higher prices and less choice during this market transition?

We must also not forget about the First Amendment. First Amendment rights preclude the government from dictating to operators and programmers how their programming must be packaged and sold. A prescriptive à la carte mandate would probably be shot down in court on First Amendment grounds alone.

But consumers must have at their disposal reliable and affordable broadband pipes if market-driven on-demand video is to achieve ubiquity. Our thirst for online video content is posing an engineering challenge to network providers. Several analyses estimate that only 5 percent of broadband users consume as much as 90 percent of network capacity. Most of that traffic involves peer-to-peer applications. Contrary to conventional wisdom, this challenge is not unique to the United States. Japan, which offers fatter and faster pipes on average, is also experiencing vexing congestion problems when it comes to P2P applications. According to its Embassy, one percent of Japanese users consume more than half of the broadband capacity in that nation. And, while I'm here in Hollywood, I would be remiss if I did not observe that pirated content is a significant part of all P2P traffic.

Last night's announcement regarding the BitTorrent/Comcast agreement underscores the point that everyone has a responsibility when it comes to network congestion. I am optimistic that the parties recognize this fact. Just like it did with the creation and governance of the Internet itself, the private sector has already formed a working group, called P4P, comprised of cable and telephone companies, application providers and other technology companies, to work these wrinkles out on their own. I'm not convinced that the BitTorrent/Comcast matter warrants any further government action at this point.

But going forward, I would warn those urging government regulation in this space to be careful what they wish for. America's Internet economy is the strongest in the world. It got that way not by government fiat, but by all interested parties working together toward a common goal. By definition, the Internet, a network of networks, is a "Wiki" environment which we all share and ultimately pay for. Is now the time to discard that model which has served us so well for so many years of tremendous success?

Also, keep in mind that it was not a regulation that pushed broadband adoption to the 50 percent level in ten years (as measured by the Pew Internet Project). That success was achieved through market forces. And to put that figure in perspective, keep in mind that it took 18 years for color TVs and personal computers to reach similar penetration levels. Perhaps if the government had mandated specific standards and technologies for broadband in the 1990s, today we would still be using ISDN, which quickly became known to stand for “it still does nothing.”

Would those who favor even seemingly innocuous consumer disclosure requirements on network owners regarding how they manage P2P traffic mind if a similar requirement were imposed on applications providers to reveal to consumers that their computers must be “seeded” and work 24 hours a day to allow the P2P system to work? Such disclosure might be beneficial to the public interest, but isn’t the private sector the best forum to resolve these conflicts? Government should be the forum of last resort in the event of market failure, not a first line of defense for conflicts among businesses.

Of course, the best way to obviate the need for regulation is to help create the opportunity for new competition. Our country could be especially helped by increased competition among new platforms for the delivery of broadband services. Our recently concluded 700 MHz spectrum auction was all about trying to bring “new blood” into the broadband game. This slice of the spectrum is extremely attractive because signals there can travel long distances and penetrate buildings. Last July, I cast my first partial dissent against part of the requirements imposed upon the plan for this spectrum precisely because I didn’t think that the plan, as adopted, would achieve the goal of bringing in new broadband competition. And it appears that many of my fears proved to be correct. But I wish I had been wrong.

The majority of the Commission imposed an open access requirement on the large, 22-megahertz portion we call the “C Block,” and public safety requirements in the neighboring 10 megahertz “D Block.” “Open access” sounds good if you say it fast, but when it comes in the form of a government mandate, what does it really mean? It was sold to mean that a carrier had to allow any device and application on its network, also known as “device and application portability.” But did the open access mandate actually undercut the chances of small and mid-sized players to emerge as winners from the auction? By encumbering the larger spectrum blocks that better fit larger companies, did the Commission drive these bigger players into the smaller spectrum blocks that were better designed for smaller players? In other words, it is apparent from the auction results that larger companies outbid smaller companies in the smaller blocks in order to avoid the open access mandate. In the name of openness, did the auction design push rural players and smaller entrepreneurs out of the wireless marketplace?

Well, here is what we know so far: the price per pop for the “open access” C Block was only 77 cents. On the other hand, the price per pop of the unencumbered B Block was an astronomical \$2.67 per pop. There was no way smaller companies could afford to bid those prices. And, let me quickly explain the term “price per pop.” In calculating spectrum prices, whether at auction or in the secondary market, we multiply “megahertz” (the spectrum bandwidth) by “population” (the number of people located in the market area). Formally, spectrum price is described as “megahertz per pop.” But the bottom line is that larger and deeper pocketed carriers outbid smaller players by bidding almost three times more for the smaller unencumbered blocks than the larger more regulated blocks.

Early on, I noted my concern that the proposed open access requirements traded the benefits of rural deployment by small and regional licensees, and the entry of new players, for – at best – speculative gains of an open access network.

Make no mistake, I am not, and never have been, opposed to a winning bidder rolling out an open network if it wants to. Nothing under our previous auction rules has prevented this development. In fact, the biggest unwritten story is that device and application portability were already coming to market long before the FCC got involved. Take for example the efforts of two carriers who, in 2006, launched dual-mode cellular-Wi-Fi handsets designed to make voice calls on cellular GSM networks and at Wi-Fi hot spots - both at home and in public - using voice-over-Wi-Fi technology, with seamless handoff between the two types of networks. This offering enabled consumers to break through walled gardens into the free and open Internet. Or what about the November 2007 introduction of Android, a Linux-based software stack that consists of an operating system, middleware, a user interface and applications, which had been in development since 2006? Or most recently, and after almost a year in the making, even the two largest wireless carriers each announced initiatives to allow customers to use any wireless device and to employ elective applications on their respective networks.

In short, the market was heading toward the open waters of open access long before the government mandated it. So for the government to take credit for sparking a drive toward open access is a bit like a rooster taking credit for the sunrise. But what did prevail was the law of unintended consequences. The open access mandate was advertised as the only avenue to attract a new player into the broadband market – the coveted Holy Grail of broadband: the “third pipe.” But that third pipe player never materialized, and smaller players paid the price.

However, with our spectral efficiency doubling every two and a half years, I remain optimistic a future FCC will have another opportunity to give entrepreneurs a chance to enter this market. Technological innovation always seems to offer a surprising new solution every few years. In this spirit, I am confident that innovation will resolve the conflicts over use of the TV “white spaces.” These are the unused spaces in between TV channels. Starting in late 2006, the Commission kicked off an equipment testing program to see if either fixed or portable devices could be used in these frequencies without causing harmful interference to broadcasters, wireless microphone users and others who already use slices of this valuable spectrum. While the first round of tests did not go well for the prototypes, we are undergoing a new round of testing with new devices. If we let science, and science alone work to resolve this issue, I am confident we will witness a positive outcome for all. It may not be this week, this year or next year, but eventually increased use of white spaces will spark even more positive and constructive disruption which will change the lives of every American.

Conclusion. At the end of the day, we must keep in mind that we are living in an exciting, market-driven, on-demand world. As technologies evolve and consumer tastes and habits change, it is better to proceed with a healthy skepticism of regulation. Given that overly-engineered mandates often turn out to be counterproductive, we should resist the temptation to think that government can outsmart an unfettered and competitive market. Instead, we should remain mindful of the law of unintended consequences. Although sometimes politically difficult, the wiser choice is to equip the private sector with the freedom and flexibility necessary to resolve challenges and satisfy consumer demand on its own, while remaining vigilant - and ready - to jump in to resolve genuine harms that cannot be addressed any other way.

Thank you again for hosting me this morning. I’m pleased to take a few questions.