IN HIS OWN WORDS:
JULIUS GENACHOWSKI'S VISION OF
REAL NET NEUTRALITY

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What Does Real Net Neutrality Look Like?

One year ago, Federal Communications Commission Chairman Julius Genachowski delivered his first major speech on Network Neutrality — the top issue on President Obama's technology policy platform. In the speech at the Brookings Institution, Genachowski warned that without the fundamental protection of Net Neutrality, "We could see the Internet's doors shut to entrepreneurs, the spirit of innovation stifled, a full and free flow of information compromised."[i]

He also noted: "If we wait too long to preserve a free and open Internet, it will be too late."

The FCC followed by launching a detailed rulemaking process on open Internet policy last October, but since then the agency has yet to take any decisive action or indicate when it plans to resolve this issue.

Without clear leadership from the FCC, companies that represent the dominant industries on the Internet are all too happy to step into the void and make their own rules. Witness the recent pact between Verizon and Google, which was met with a fierce public backlash over concerns their scheme would destroy Net Neutrality.

 In its latest move, on Sept. 1, 2010, the FCC issued another public notice asking for input on questions surrounding the application of open Internet rules to wireless networks and the appropriate treatment of "managed services" — two of the most problematic parts of the Google-Verizon proposal.

These are important issues, but they are not new ones. The Net Neutrality debate has been ongoing for many years, and adequate information exists in the various dockets to give the FCC guidance on writing the even-handed rules of the road. The FCC can always find ways to ask new questions — and this latest round will likely push action on Net Neutrality to the end of the year at the earliest — but the basic answers haven't changed.

The eventual outcome of the FCC's open Internet efforts — and Chairman Julius Genachowski's legacy as FCC Chairman — must be judged on whether they result in real, effective Network Neutrality policy. The benefits of getting this policy right are enormous, and the consequences of coming up short in the name of political expediency are dire.

So what does real Net Neutrality look like? Any policy that truly protects the open Internet and its users must embody a few basic concepts:

1. There is only one Internet: Rules must apply to wireless and wired services.

2. ISPs must not block applications, content, services or devices.

3. Strong non-discrimination rules are key to preserving the open Internet.

4. Paid prioritization is harmful because it allows ISPs to pick winners and losers online.

5. "Reasonable Network Management" cannot be a loophole that undermines the open Internet.

6. "Managed services" cannot be allowed to stifle the growth of the open Internet.

7. Users, not ISPs, should determine which applications need Quality of Service treatment.

Few have described these core components of Net Neutrality better than Julius Genachowski. The Chairman himself long ago provided clear answers to all of the supposed lingering questions in this policy debate. As noted and quoted below, the FCC chairman's own writings and speeches offer a clear guide to measure whether the FCC is actually delivering on its promise to enact real Net Neutrality.

There Is Only One Internet:
Rules Must Apply to Wireless and Wired Services

> *"Even though each form of Internet access has unique technical characteristics, they are all are different roads to the same place. It is essential that the Internet itself remain open, however users reach it. The [open Internet principles] apply to the Internet however accessed, and I will ask my fellow Commissioners to join me in confirming this."* **— FCC Chairman Julius Genachowski**

Consumers have a variety of ways to access the Internet, but each Internet service provider is a gateway to the same Internet, and commerce and speech flow seamlessly from one technology to another. Long gone are the days when Internet users were chained to a fixed desktop computer that could only be used with one network connection. Users need the same consumer protections regardless of which technology they happen to be using at a given moment. This means the full open Internet framework, including non-discrimination, should be applied to both wired and wireless Internet connections.

Congress and the FCC have long held that good policy treats similar services alike regardless of technology, and that a principle of "technological neutrality" avoids distorting investment incentives and consumer preferences. This technological neutrality is especially important in the context of open Internet rules given that Congress and the FCC are pinning the future of broadband competition on the ability of wireless connections to act as a substitute and potential competitor for wired services.

While it is true that in some instances that the capacity of wireless networks can be more constrained, the FCC's proposed "reasonable network management" policy can account for these differences. A Net Neutrality rule of general application could include a flexible definition of "reasonable network management" that allows wireless carriers and the FCC to make allowances for capacity limitations in some existing wireless networks. This solution ensures provider flexibility without the threat of fragmenting the Internet into a more open wired system, and a more closed wireless one.

ISPs Must Not Block Applications, Content, Services or Devices

> *"Network operators cannot prevent users from accessing the lawful Internet content, applications, and services of their choice, nor can they prohibit users from attaching non-harmful devices to the network."* **— FCC Chairman Julius Genachowski**

Each of the original four principles outlined in the FCC's 2005 *Internet Policy Statement* should apply to providers of broadband Internet access services. This should be a non-controversial, nonpartisan policy. The four principles were conceived by FCC Chairman Michael Powell, enacted by FCC Chairman Kevin Martin, and served as the basis for the 2006 COPE Act, sponsored by then House Energy and Commerce Committee Chairman Joe Barton, which would have codified the four principles into law. Further, major ISPs have publicly endorsed the concepts in the *Policy Statement*, though some remain adamantly opposed to its application on wireless networks.

A rule banning blocking is a starting point for an open Internet policy. But as we learned from the FCC's efforts to stop Comcast's secret blocking of the BitTorrent application, ISPs will do everything they can -- including lying to the FCC -- to get out from under a no-blocking rule. This is why a strong prohibition against discrimination is essential to preserving the open Internet.

Strong Non-Discrimination Rules Are Key to Preserving the Open Internet

> _"The FCC must be a smart cop on the beat preserving a free and open Internet… [Net Neutrality is] about fair rules of the road for companies that control access to the Internet… This is not about protecting the Internet against imaginary dangers. We're seeing the breaks and cracks emerge, and they threaten to change the Internet's fundamental architecture of openness. This would shrink opportunities for innovators, content creators, and small businesses around the country, and limit the full and free expression the Internet promises. This is about preserving and maintaining something profoundly successful and ensuring that it's not distorted or undermined. If we wait too long to preserve a free and open Internet, it will be too late. … [Failing to enact FCC open Internet policy] would deny the benefits of predictable rules of the road to all players in the Internet ecosystem."_ **— FCC Chairman Julius Genachowski**

Two-way communications networks are so critical to the basic functioning of our society that they <u>must</u> be operated in a non-discriminatory fashion. Non-discrimination is the defining characteristic of the Internet. It is the principle that transformed the Internet from an obscure technology into essential infrastructure. Unlike other mass media, the Internet is free from traditional gatekeepers determined to stifle the forces of innovation and competition. This openness — enabled through non-discrimination —must be protected through clear and enforceable public policies.

Discrimination poses a significant threat to the long-term health and investment in the Internet ecosystem, because it would carriers to decide which content and applications are important. Allowing discrimination online would prevent new innovations from ever making it to market.

A provider of broadband Internet access service should not discriminate against or degrade lawful content, applications or services. The FCC should enforce this norm through a clear and unambiguous bright line rule, accompanied by a flexible network management standard. An ambiguous non-discrimination standard that places insurmountable hurdles on consumers to bring and win complaints before the FCC will unleash a wave of harmful practices that cross the line but may not be able to be reversed due to agency rigidity and the political influence of the largest service providers. Thus, if the FCC wishes to provide market certainty and preserve the status quo of openness online, it must send a clear signal that harmful discrimination will not be tolerated.

**Paid-Prioritization Is Harmful
Because It Allows ISPs to Pick Winners and Losers Online**

"Broadband providers cannot discriminate against particular Internet content or applications. This means they cannot block or degrade lawful traffic over their networks, or pick winners by favoring some content or applications over others in the connection to subscribers' homes. Nor can they disfavor an Internet service just because it competes with a similar service offered by that broadband provider… The great majority of companies that operate our nation's broadband pipes rely upon revenue from selling phone service, cable TV subscriptions, or both. These services increasingly compete with voice and video products provided over the Internet. The net result is that broadband providers' rational bottom-line interests may diverge from the broad interests of consumers in competition and choice. - FCC Chairman Julius Genachowski

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"We don't want to create a bunch of gateways that prevent somebody who doesn't have a lot of money but has a good idea from starting their next YouTube or their next Google on the Internet. So this is something we're committed to, we're getting push back obviously from some of the bigger carriers who would like to be able to charge more fees and extract more money from wealthier customers. But we think that runs counter to the whole spirit of openness that has made the Internet such a powerful engine for not only economic growth but also the generation of ideas and creativity." - President Barack Obama, 2/1/2010

As Chairman Genachowski and President Obama have both recognized, paid prioritization is the antithesis to openness on the Internet.[ii] When ISPs promote certain content over others, they are picking winners and losers online and tilting the open free market to those with deep enough pockets to pay for favorable treatment. Those who cannot pay are by definition harmed, because speeding up of any content results in the slowing down of all other content. Further, allowing ISPs to charge for priority treatment creates economic incentives against network investment, as prioritization only has value during times of congestion.

A world of paid-prioritization is a world where ISPs favor their own content and that of a few select partners, effectively crushing innovation and competition at the network edge. Any open Internet framework that considers paid prioritization to be legitimate is not one that embodies the principles outlined by Chairman Genachowski and President Obama.

'Reasonable Network Management' Cannot Be a Loophole That Allows ISPs to Undermine the Open Internet

> *"This [non-discrimination] principle will not prevent broadband providers from reasonably managing their networks. During periods of network congestion, for example, it may be appropriate for providers to ensure that very heavy users do not crowd out everyone else." — **FCC Chairman Julius Genachowski***

One of the more important lessons from the FCC's intervention to halt Comcast's blocking of BitTorrent is that without basic guiding principles, ISPs are inclined to use heavy hand in the name of "network management." Comcast expressed concerns about congestion on its network, and their solution to this alleged congestion was to block all BitTorrent P2P transmissions across their entire network, day or night, regardless of whether local networks were actually experiencing congestion. With the spotlight of the media and an FCC investigation upon them, Comcast moved to an application-agnostic network management system, which focused on throttling heavy users in local neighborhoods during times of congestion.

As the Comcast case shows, and as Chairman Genachowski has recognized, network management techniques must be narrowly tailored in purpose, scope and means to ensure the reasonable network management exception does not undermine the open Internet. ISPs should be encouraged to use a scalpel, not an ax, to deal with their networks, helping protect innovation at the edge while maintaining appropriate network investment incentives. Thus, it is critical that policymakers placed firm boundaries on the concept of reasonable network management, to ensure it does not become a loophole that allows ISPs to discriminate and undermine the open Internet.

'Managed Services' Cannot Be Allowed to Stifle the Growth of the Open Internet

> *"I also recognize that there may be benefits to innovation and investment of broadband providers offering managed services in limited circumstances. These services are different than traditional broadband Internet access, and some have argued they should be analyzed under a different framework. I believe such services can supplement -- but must not supplant -- free and open Internet access, and that we must ensure that ample bandwidth exists for all Internet users and innovators. — **FCC Chairman Julius Genachowski***

Some have suggested that ISPs be allowed to devote future additional capacity to a segmented "pipe" specifically for prioritized content. In theory, these "managed services" would not harm content on the open Internet, because they would essentially be traveling down separate roads and deliver services much different from those available on the open Internet. In this way, companies that invest in robust capacity can explore non-Internet uses of that excess capacity, and companies that offer traditional telephone and video services over IP can offer those services subject to current regulations.

However, for the managed service business model to work, the quality differential between the open Internet and the closed managed services would have to be so great that content companies would be willing to pay for this specialized treatment. This could stall investment in the open Internet -- freezing the public Internet in 2010 while the new high-speed lanes take a few big players into the future.

As Chairman Genachowski rightly recognized, before the FCC even contemplates managed services it must ensure it can put in place safeguards to ensure robust development of the open Internet. The most efficient safeguard is allowing users to be in control, by making managed services what they currently are in the business market -- service level agreements (SLAs) where customers choose what applications and content to prioritize over others. Another safeguard may be found in the successful history of the development of the Internet itself: wholesale bandwidth requirements. If the bandwidth devoted to managed services is made available on a wholesale basis, alternative ISPs and content providers can ensure they can reach their customers without ISPs playing gatekeeper. In this way, wholesaling can ensure ISPs have the continued incentive to invest in the open Internet, and that content providers focus on innovation to lure customers.

Users, not ISPs, Should Determine Which Applications Need Quality of Service Treatment

"How do you design a network that is "future proof" -- that can support the applications that today's inventors have not yet dreamed of? The solution… a network of networks that [is not] biased in favor of any particular application… The Internet must continue to allow users to decide what content and applications succeed… The core principle of openness -- the freedom to innovate without permission… has been a hallmark of the Internet since its inception, and has made it so stunningly successful as a platform for innovation, opportunity, and prosperity. **— FCC Chairman Julius Genachowski**

While paid prioritization is a particularly harmful form of discrimination, some have suggested that ISPs be permitted to prioritize classes of latency and jitter-sensitive traffic like VoIP, over classes of latency and jitter-insensitive traffic like text. This practice, called application bias, places control over speech, competition, and even commerce in the hands of the network operators -- the same dangers the open Internet proceeding seeks to avoid. While less of an apparent danger than paid-prioritization, the FCC must ensure that it adopts policies that promote the continued development of the Internet as a general purpose network, not one where ISPs make decisions on behalf of consumers to categorize applications and decide which categories should be given priority. The decision on which applications should receive priority treatment – and thus better opportunity for marketplace success – must remain with the end-user. .

Even if applied only when networks are congested (the only context in which the technique can have any benefit), and even if applied without accepting anti-competitive payments for priority, application bias is not a wise response to congestion because it harms many uses of the Internet and the overall network performance. It also locks the Internet into typical, static use patterns. Allowing ISPs, rather than consumers to choose which applications get priority, could lock the Internet into typical, static use patterns and frustrate innovative uses of the network. Although network operators may attempt to place latency-sensitive applications into a "high priority" class, this categorization is inherently imperfect because not all users use protocols or applications in the same way.

Network operators should not be empowered to choose for Internet users which types of services require priority treatment. ISPs will have business incentives to prioritize the kinds of content and applications they own to the exclusion of new and innovative applications. Further, ISPs may unwittingly harm innovation by failing to anticipate the needs of new users, applications and services.

Alternative methods of addressing congestion produce less harm to competition, consumer choice, and innovation. For example, user throttling allows network operators to slow down heavy users and reduce congestion in a nondiscriminatory manner. Similarly, user-controlled, application-agnostic prioritization allows for any hypothetical benefits of specific priority without closing the door on innovative and diverse uses of the Internet.

Endnotes

[i] Unless otherwise noted, all quotes from Chairman Genachowski come from his September 21, 2009 remarks, "Preserving a Free and Open Internet: A Platform for Innovation, Opportunity, and Prosperity," delivered at the Brookings Institution, Washington, D.C.

[ii] The above quoted statement was made in response to a question delivered on a YouTube forum with the President on February 1, 2010. In his Technology and Innovation platform, candidate Obama expressed strong opposition to paid-prioritization: "Because most Americans only have a choice of only one or two broadband carriers, carriers are tempted to impose a toll charge on content and services, discriminating against websites that are unwilling to pay for equal treatment. This could create a two- tier Internet in which websites with the best relationships with network providers can get the fastest access to consumers, while all competing websites remain in a slower lane. Such a result would threaten innovation, the open tradition and architecture of the Internet, and competition among content and backbone providers. It would also threaten the equality of speech through which the Internet has begun to transform American political and cultural discourse. Barack Obama supports the basic principle that network providers should not be allowed to charge fees to privilege the content or applications of some websites and Internet applications over others. This principle will ensure that the new competitors, especially small or non-profit speakers, have the same opportunity as incumbents to innovate on the Internet and to reach large audiences." *See* "Barack Obama: Connecting and Empowering All Americans Through Technology and Innovation," Obama for America, November 2007.