

December 13, 2010

ELECTRONIC FILING

Chairman Julius Genachowski
Commissioner Michael J. Copps
Commissioner Robert M. McDowell
Commissioner Mignon Clyburn
Commissioner Meredith Attwell Baker
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: Preserving the Open Internet, GN Docket No. 09-191; Broadband Industry Practices, WC Docket No. 07-52; Framework for Broadband Internet Service, GN Docket No. 10-127

Dear Chairman Genachowski and Commissioners:

Attached please find a copy of my blog posts. They were posted on my blog on Monday, December 13, 2010 and are available online at:

<http://netarchitecture.org/2010/12/start-up-video-company-files-concerns-about-fcc-open-internet-proposal/>

and

<http://netarchitecture.org/2010/12/the-fccs-open-internet-proposal-lessons-from-silicon-valley/>

Sincerely,

/s/ Barbara van Schewick

Barbara van Schewick
Associate Professor of Law and (by courtesy) Electrical Engineering
Faculty Director, Center for Internet and Society
Stanford Law School
650-723-8340
schewick@stanford.edu

Internet Architecture and Innovation

by Barbara van Schewick

[Home](#) [Author](#) [Content](#) [Blog](#) [Coverage](#) [Events](#) [Buy Book](#) [Video](#) [Contact](#)

DEC 10
12

Start-Up Video Company Asks FCC to Improve Open Internet Proposal

[Leave a comment »](#)

On December 1, the chairman of the FCC [proposed a set of rules](#) designed to protect the open Internet. He would like the commission to adopt this proposal at its open meeting on December 21. Since then, many have posted their evaluations of the proposal. Some unequivocally [support](#) the proposal. Some acknowledge they would have preferred a different solution, but think this is an [acceptable compromise](#). A final group of commenters (which includes [academics](#), [public interest organizations](#), [organizations that rely](#) on the open Internet for their work, [investors](#), and companies) can be summarized as follows: "We are glad that the chairman has decided to act. However, the chairman's proposal needs to be improved to adequately protect users and innovators."

Why do innovators and users need protection? If a network provider blocks or discriminates against an application I want to use, I cannot use the Internet in the way that is most valuable to me. If a network provider restricts access to content I am interested in, my ability to educate myself, contribute to discussions of the subject and make informed decisions will be limited. Ideally, open Internet rules would ban this type of discriminatory behavior and provide an easy mechanism for users to ask the FCC to stop it. In the absence of good rules, users just have to live with it.

If an application is blocked, it cannot reach its users and the application developer cannot reap its benefits. In the absence of meaningful protections, there is nothing the application developer can do about this. And concerned about the threat of discrimination, innovators (or potential investors) may decide not to pursue innovative ideas. Thus, without meaningful network neutrality rules, we will get less application innovation. And since applications, services and content are what makes the Internet useful to us, an Internet without meaningful network neutrality rules will be less useful to us in the future.

I'm sure you have heard that a lack of meaningful network neutrality rules harms start ups and reduces application innovation before. But for many, it sounds like an abstract theoretical concern. Yesterday, a start up from Silicon Valley called [Zediva](#) filed a [letter](#) with the FCC that explains what the Chairman's current proposal would mean for them.

The letter does a great job of showing how different proposals for network neutrality rules can provide very different protections for innovative start ups and where the current proposal needs to be improved, so I asked Zediva for permission to post it here.

This is one example of many

Is this just the experience of one company, or does Zediva's story stand for more? Over the past few years, many entrepreneurs have told me that potential investors identified the risk of blocking or discrimination as one of the main risks associated with



[Click here to buy the book via Amazon.com](#)

their company and used this fact to justify their decision not to fund them (I talked about the experience of one start up [here](#)).^[1] Even those who haven't had similar conversations with funders yet are usually concerned about the problems described by Zediva. Thus, Zediva's story is not an outlier. It stands for the problems faced by many start-ups and innovators.

You may wonder why we don't hear more from entrepreneurs, if this is the case. My conversations with entrepreneurs suggest a number of reasons:

First, entrepreneurs focus on getting their product to market and making it the best product they can. They do not have the time to follow the latest twists and turns of the Washington policy debate and write letters to the FCC.

Second, many do not come forward because they fear that network providers may retaliate against them in the future. I used to hear this a lot from application and service providers in the mobile space. But over the past year, this concern has started to come up in many conversations with innovators whose applications and services run over wireline networks.

Third, many start-ups do not want to draw public attention to their vulnerabilities, fearing it may scare potential investors away.

And finally, having been declined funding is not something that entrepreneurs like to brag about.

What you can do

I believe that the concerns described by Zediva are real problems, and that the current proposal needs to be improved along the lines described in the letter to make sure that innovators who develop or provide applications, content and services for the Internet are adequately protected. It is not too late to make these changes.

People often ask me what they can do to help make this happen. If you agree with Zediva and want to do something, you could e-mail the FCC Commissioners, in particular [write to Chairman Genachowski, Commissioner Copps, and Commissioner Clyburn](#). (Commissioner Baker and Commissioner McDowell have publicly rejected any network neutrality rules.) Tell them you share Zediva's concerns, and ask them to improve the order in the way Zediva suggests.

You should also spread the word – this rule will affect all of us, whether we use the Internet for work, school, or in our free time. Share this post and [others](#) about the same topic – post on Facebook, on Twitter, on Tumblr, on WordPress, or on whatever innovative application that's part of your life and the product of an open Internet.

Here is the text of the letter

"Dear Chairman Genachowski:

We write to you as co-founders of an online DVD Rental company called Zediva. Our company is directly affected by the lack of clarity around Open Internet rules. We are concerned that your current proposal does not go far enough to provide young innovative video companies like ours the protections needed to foster innovation and investment in next generation technologies and business models.

Company Background

Zediva enables its users to rent DVDs, and watch their rentals instantly on their computer, without needing to pick up a physical copy of the DVD. Just like with Sony's LocationFree, or Sling Media's Slingbox devices, our technology allows a user to remotely "PlaceShift" their media to their viewing location over the Internet using streaming technologies. Specifically, Zediva users can rent a DVD and a DVD player

located in Zediva's data centers, and watch their "PlaceShifted" rental at a place of their choosing – typically their home PC, TV, or portable wireless device (tablet or phone) over the Internet. They have complete control of the remote DVD player and rental DVD just as if they had a really really long video cable and really long remote control cable connected to the DVD player.

Investor Concerns over potential unfair competition

By enabling users to watch new DVDs online, our service may be perceived to directly compete with the Video-on-Demand service, PayPerView or other PayTV services offered by cable providers and, in some cases, the providers of fiber networks and wireless networks. At the same time, we depend on the broadband Internet access service offered by these providers to reach our users. In the absence of strong non-discrimination rules and meaningful restrictions on what constitutes "reasonable network management", these competitors will be able to exploit their control over the provision of broadband access to put us at a competitive disadvantage. Since we started working on our product over two years ago, this concern has come up repeatedly in conversations with potential investors, who pointed this out as one of the risks associated with investing in our company. The very real potential for unfair competition by incumbents who control the networks (ISPs and Wireless Providers alike) causes great uncertainty about the size of the market and therefore reduces the confidence of investors in their ability to secure a reasonable return on their investment.

We outline below our concerns in four different areas, and respectfully urge you to consider these as you draft new rules for the Internet:

A. Non-Discrimination Rules

We understand that the current proposal only bans discrimination that is "unjust" or "unreasonable." This type of rule does not solve our problem. Whether specific discriminatory conduct meets these criteria, would be left to later case-by-case adjudications by the FCC. We don't know whether we will be protected against discriminatory behavior until **AFTER** a broadband Internet access provider actually discriminates against us – and even then, we will only know whether we are protected after we have complained to the FCC and gone through a lengthy and costly process to determine whether the discrimination against our application was actually "unjust" or "unreasonable," and thereby banned.

Significant Delays and Difficulty in Detecting Discrimination: In the event that our traffic is discriminated against, we would have no easy way to determine that discrimination has actually taken place, and which provider engaged in the discrimination. So it would be hard for us to even show that discrimination was taking place without undertaking a very expensive engineering effort, let alone file a protest with the FCC. Further, there are many providers and each may engage in different forms of discrimination making it a Herculean task for us, as a small company, to separate out systematic discrimination from normal internet packet losses or delays.

In the meantime, the damage to our customers and reputation will have been done. Unless there is some temporary relief, we will not be able to provide satisfactory service to our users, which may hurt our reputation in ways that will be felt even after the complaint is resolved. After-the-fact resolution is not the type of protection that would allow us to remove potential investors' concerns about discrimination. Customers once lost are unlikely to come back to our service.

Instead, we need a rule that clearly maps out what type of discriminatory behavior is, and is not, allowed under the rules. We suggest that the right approach would be to ban all application-specific discrimination (i.e. discrimination based on application or class of application), but allow, to the extent necessary, application-agnostic

discrimination. This would make it impossible for a competitor to single us (or video applications in general) out for discriminatory treatment.

B. Reasonable Network Management

Streaming video is an increasing source of traffic on the Internet, particularly during peak times. As a result, we are concerned that more broadband access providers will start restricting (or otherwise interfering with) streaming video applications during times of congestion. British Telecom's (BT) throttling of streaming video to 986 kilobytes/sec in BT's "Up to 8 Mbps Option 1" broadband plan between 5 pm and midnight in 2009 is an early example of the kinds of possible measures an ISP may take.^[L1] The experience with network management practices in Canada, the UK, and the US shows that network providers often use approaches that single out specific applications or classes of applications in order to deal with congestion.

We are concerned that your current proposal may not do enough to protect us against the type of discriminatory network management described above. Given the available information about the order, it seems possible that restricting access to video applications (but not to other classes of applications) during times of congestion could be framed as a tailored approach to congestion, as long as the measure is restricted to times of congestion.

Discriminatory network management of this type would put the affected applications at a severe disadvantage. Companies that offer these applications and services will be less able to reach their users during times of congestion, which in turn may affect their success in the market (who wants to use an application or service that is less usable during peak time, when most people actually want to use the Internet?) and their ability to get funding – thus squashing innovation before it has had a chance to prove itself in the marketplace.

We understand that network providers need to manage their networks, and may need to take measures during times of congestion to ensure that one user's traffic does not overwhelm the network, or drive out the traffic of other users. As Comcast's new application-agnostic network management practices demonstrate, this can be done without needing to single out specific applications or classes of applications and putting them at a disadvantage. There is nothing inherently special about streaming video that would suggest that streaming video should be less able to use the network during times of congestion than other potentially bandwidth-intensive applications (e.g. downloading large files or emails with big PowerPoint attachments, or high resolution pictures/videos of "Stupid Pet Tricks").

Congestion means that a user's ability to get all the bandwidth he or she may want may be limited. Even during times of congestion, applications and services should have an equal chance to reach their users and the decision of how to use the available bandwidth should remain with the user.

Thus, we strongly urge you to make sure that the "Exception for Reasonable Network Management" is defined in a way that – to the extent possible – preserves an equal playing field for applications and classes of applications during times of congestion and respects the principle of user choice. A definition that would require network management to be as application-agnostic as possible would reach that goal. To the extent that some applications may suffer more from congestion than others, this proposal would allow users to determine the relative priority among their own applications. Technology that realizes this approach is available today.

C. Access fees

The current proposal does not clearly ban broadband access providers from charging us, as service providers, access fees – fees for the right to reach their broadband access customers, or for prioritized or otherwise enhanced access to these.

We are concerned that allowing broadband service providers to charge access fees would put start-ups like us at a severe competitive disadvantage compared to incumbent companies in the video space. In the absence of significant outside funding, many start-ups will not be able to pay access fees. But if streaming video over YouTube would not count towards your usage cap because YouTube (Google) paid for that arrangement, who would be interested in using an alternative streaming video application like Miro or justin.tv? Or if Netflix bought guaranteed bandwidth during times of congestion, while Zediva's service was stuttering due to the broadband provider's network management, who would want to rent a DVD from Zediva?

Thus, the final rule should clearly ban access fees – both for the right to reach users at all, and for prioritized or otherwise enhanced access to the users.

D. Wireless

One of the biggest requests from our users is for portability of their service with Zediva. They would like to watch their rentals on any device of their choosing – i.e. on the TV, PC, or Wireless phone or Tablet. We currently offer our service on many wireless devices. We are very concerned that the current rules would significantly reduce our ability to continue to do so. We would not be protected from blocking or discrimination, and would be subject to whatever discriminatory network management a mobile provider comes up with. Our concern is that a wireless provider could easily use discriminatory network management to unfairly discriminate against our service in favor of either their own services or a competitor of ours with whom they have a beneficial financial relationship. It seems to us that the rules would also allow wireless providers to restrict their basic Internet service to access to the Internet that excludes the right to use video applications, and restrict the right to use video to those users who buy a separate "video option."^[L2] The proposed wireless rules cause our investors and us to seriously evaluate whether, as a small company, we can afford to meaningfully compete in the wireless space.

We strongly urge you to extend the same protections to wireless networks that you intend to apply to wireline networks. It shouldn't matter through which technology users access the Internet. In fact, our concerns about discrimination are even stronger in the wireless space. Wireless networks have a long history of control. The problems that Slingbox ran into with AT&T Wireless gave us pause, and we understand that the current rules would not protect us if a wireless broadband access provider decided to ban our service (specifically, or together with other online video applications in general). We understand that some mobile networking technologies may face specific constraints due to bandwidth scarcity, or that mobility may pose specific problems, but these problems could be dealt with when applying the reasonable network management exception. They do not justify leaving innovators and users without meaningful protections.

We have dedicated significant time and resources to finding new innovative ways to allow users to watch video on the Internet. Open access to the Internet has offered a level playing field enabling small companies to compete with incumbents in offering consumers a better service, product or technology (e.g. Amazon, Google, Facebook and Netflix). Future innovative applications, services and business models are likely to come from small companies with innovative ideas backed by risk taking investors. We strongly urge you to improve the protections for users and innovators alike, in order to allow us to continue to innovate in the future.

Respectfully,

Venky Srinivasan, Founder and CEO, Zediva

Vivek Gupta, Co-Founder and VP Engineering, Zediva

December 10, 2010"

The letter as filed with the FCC is available in pdf [here](#).

Footnote 1:

I understand that an investor’s decision not to invest in a company has many facets, and cannot be reduced to one consideration alone. But the fact that these issues come up during entrepreneurs’ discussions with investors and are used to justify the decision against funding suggests that the threat of discrimination is something potential investors think and care about.

Footnote L1:

http://www.bbc.co.uk/blogs/technology/2009/06/iplayerbbc_v_bt.html.

Footnote L2:

This is not a moot concern. Mobile providers in Europe routinely prohibit the use of many classes of applications (e.g., Internet telephony, Instant messaging, peer-to-peer file-sharing, and e-mail clients). Users who want to use a prohibited type of application need to buy a separately priced option that allows them to use applications in this class.

This entry was posted on December 12, 2010 at 9:47 pm. You can follow any responses to this entry through the [RSS 2.0](#) feed. You can [leave a response](#), or [trackback](#) from your own site.

Posted in [Uncategorized](#) by [schewick](#) [No Comments Yet](#)

Leave a Comment

Name (required)

Email (will not be published) (required)

Website URL

Submit Comment

Navigate

- [Home](#)
- [Author](#)
- [Content](#)
 - [Overview](#)
 - [Excerpts](#)
 - [Writing](#)
- [Blog](#)
- [Coverage](#)
- [Events](#)
- [Buy Book](#)
- [Video](#)

Meta

- [Register](#)
- [Log in](#)
- [Entries RSS](#)
- [Comments RSS](#)
- [WordPress.org](#)

Internet Architecture and Innovation

by Barbara van Schewick

[Home](#) [Author](#) [Content](#) [Blog](#) [Coverage](#) [Events](#) [Buy Book](#) [Video](#) [Contact](#)

DEC 10
13

The FCC's Open Internet Proposal – Lessons from Silicon Valley

[Leave a comment »](#)

Since I [posted the letter](#) by Zediva, an online video company, that describes what the current Open Internet proposal would mean for them and how the proposal should be improved to protect them and other innovators, many have asked me about the broader lessons from Zediva's story. Others have asked for a bit more detail about the proposed improvements to the rules.

What Zediva's story teaches us about network neutrality

1. Concerns about discrimination impede application innovation today. Thus, the FCC needs to act now. As the Chairman's current proposal shows, he understands this with respect to wireline networks, but thinks we can wait and see how the wireless ecosystem evolves. After all, he says, it is "evolving rapidly." But the idea that waiting has no costs is wrong. Waiting to extend meaningful protections to wireless will allow networking technologies to evolve in discriminatory ways that may be difficult to change later on. As the story of Zediva shows, the lack of protections will immediately have a dampening effect on innovators' inclination to dedicate the next few years of their life to a wireless application (and on potential investors' willingness to fund these efforts). The ongoing network neutrality debate motivated network providers' to stay away from discrimination in order not to fuel the debate. An order that explicitly determines that only the blocking of a restricted set of applications, content and services should be prohibited at this time may fundamentally change this calculus. After all, if the FCC thinks this type of behavior is o.k., why not engage in it? [Skype's experience](#) (pdf, p. 7) in Sweden underscores this point: Until last year, mobile operators in Sweden generally allowed the use of Skype over the mobile Internet. But since the Swedish regulator decided at the beginning of this year that rules that require network providers to disclose any blocking or discrimination are all that's needed to protect innovators and users, both leading mobile operators have introduced restrictions on users' ability to use Skype.

2. Banning only anticompetitive discrimination is not enough. If Zediva cannot get to its users it is harmed, regardless of whether the network provider interfered with its service in order to harm a competitor or to manage congestion. Thus, the fact that a discriminatory measure is designed to manage congestion does not mean it should be allowed. Instead, we need to make sure that the Internet remains a level playing field even during times of congestion by imposing strong constraints on the types of network management for which network providers would be allowed to violate the general ban on blocking and discrimination. Otherwise, users and innovators will not be sufficiently protected against what I believe will become one of the most common motivations for discrimination as the increased use of bandwidth-intensive applications puts pressure on networks.

3. As Zediva's examples illustrate, **access fees would seriously stymie the ability of start-ups or other innovators with little or no outside funding to compete against established players.** As if this were no bad enough (throughout the history of the Internet, innovators with little or no outside funding have developed many important applications, and there is no reason to believe that this would change in the future), **access fees may impose serious collateral damage on values like free speech or a more participatory culture** by making it more difficult for individuals or non-profit groups to be heard or to find an audience for their creative works.



[Click here to buy the book via Amazon.com](#)

Consider the case of [Miro](#), an open source, not-for-profit Internet video application that was developed by a non-profit group in Boston called the Participatory Culture Foundation (PCF). As I argued (together with other academics) [here](#) (pdf, pp. 31-38, citation from pp. 34-35), “[u]sing peer-to-peer protocols, Miro allows anyone—from amateur high school teachers to professional television networks—to create and distribute to anyone online their own “television” channel at low cost to PCF and free to users. Unsurprisingly, the collective set of video channels currently available on Miro exhibit an enormous diversity of subject matter—diversity that far exceeds what is available on today’s cable networks”, making it “a powerful avenue for free speech, both for speakers and listeners.” But if YouTube always loaded faster than Miro or if watching YouTube didn’t count towards users’ monthly bandwidth caps since YouTube paid for all this, but Miro couldn’t, people would be much less interested in watching the content available on Miro.

4. Details matter. Many people have given up on the debate because it has become so detailed. But as the story of Zediva shows, details matter. Different versions of network neutrality rules offer very different protection for users and innovators. Thus, it is not enough to strengthen the non-discrimination rule by clearly banning application-specific discrimination. If the reasonable network management exception still allows the network providers to engage in discriminatory network management as long as it is “tailored,” Zediva and many other start-ups are still not sufficiently protected. Similarly, it is not enough to protect some wireless applications, content and services against blocking – applications that are not part of this group are still not sufficiently protected. And so on. Thus, attention to details is important, and I hope you (and the Commissioners) will take the time to understand these issues.

What the FCC should do

As Zediva explains in its letter, the FCC’s current proposal does not adequately account for these insights. It does not do enough to protect users and innovators against the risk of discrimination. But it is not too late. The proposal can still be improved. Here is what should be done:

1. Adopt a non-discrimination standard that clearly bans application-specific discrimination, but allows application-agnostic discrimination

The FCC’s current proposal bans discrimination that is “unjust” and “unreasonable” and leaves it to later case-by-case determinations by the FCC whether specific discrimination meets these criteria. As Zediva’s letter explains, this rule does not provide the type of certainty that application developers [for brevity, I use “applications” as a shorthand for “application, content and services”] and their investors need, and tilts the playing field against those – end users, application developers and start-ups – who do not have the resources necessary to engage in extended fights over the legality of specific discriminations in the future.

Instead, the FCC should adopt a non-discrimination standard that clearly bans application-specific discrimination (i.e. discrimination based on application or class of application), [for brevity, I use “applications” as a shorthand for “application, content and services”] but allows application-agnostic discrimination.

Thus, a network provider would not be allowed to treat Vonage differently from Skype, or Comcast’s Fancast differently from Hulu. That would be discrimination based on application. Nor would it be allowed to treat online video differently from e-mail. That would be discrimination based on class of application. But it would be allowed to treat data packets differently based on criteria that have nothing to do with the application or class of application. For example, during times of congestion, a network provider could give one person a larger share of the available bandwidth than another, for example because this person pays more for Internet access or has used the Internet less over a certain period of time. But it could not throttle the bandwidth available to Zediva in particular, or online video in general. That would be application-specific discrimination.

This proposal would prevent network providers from distorting the playing field between applications or classes of applications. It would provide certainty to all market participants. Network providers would know how they can manage their networks, and

application developers (and their investors) could be sure that they won't be discriminated against. The proposal allows networks to evolve. In particular, it allows certain (but not all) forms of Quality of Service.

2. Clarify that "reasonable network management must be as application-agnostic as possible"

As Zediva has shown, the current proposal does not sufficiently constrain what counts as "reasonable network management," leaving users and innovators vulnerable to network management practices that single out specific applications or classes of applications. This could seriously constrain users' ability to see the Internet as they see fit during peak times, when people want to use the Internet most, and impede the ability of those applications that were singled out for network management purposes to compete.

Instead, the rules should make clear that reasonable network management must be as application-agnostic as possible. This proposal gives network providers the tools they need to manage their networks, while preserving application innovation and user choice as much as possible. Since network providers can allocate bandwidth among users using application-agnostic criteria, they can prevent aggressive users from overwhelming the network. But how users use the bandwidth available to them, and whether they would like to give some of their applications priority over others, would be choices left to the users. At the same time, the exception provides a safety valve that allows network providers to react in more application-specific ways if a problem cannot be solved in an application-agnostic way.

3. Clearly ban pay-to-play access fees

The current proposal does not clearly ban access fees. This is not only the wrong policy choice. The failure to specifically ban such schemes creates uncertainty, and investors may hesitate to invest in innovative new applications if such applications must compete with established players who can pay for special treatment. It also places the risk associated with such uncertainty on the party least able to bear it — the emerging entrepreneur rather than the established Internet service provider, who has the resources to fight over the legality of access fees under the proposed "unjust or unreasonable" standard.

Instead, the FCC should clearly ban access fees. That is, it should prohibit a network provider from charging application, content or service providers who are not the network provider's Internet service customer a fee for access to users or for prioritized or otherwise enhanced access to users (this second type of access fees is often called "paid prioritization").

4. Extend meaningful protections to wireless

The current proposal prohibits the blocking of only some applications – of websites and of applications that compete with video telephony or voice applications offered by the network provider. They do not prohibit discrimination. The limited rule against blocking leaves many applications, content and services unprotected. Moreover, banning blocking, but allowing discrimination effectively makes the rule against blocking meaningless by providing an alternative to blocking that is equally effective and less costly.

Ideally, the same protections should apply to wireline and wireless networks. It should not matter over which network technology users access the Internet. The threat of discrimination and the rationale for protection are the same. There may be some technical characteristics of specific wireless technologies or special problems associated with mobility that make it impossible to solve certain network management problems in an application-agnostic way. In these cases, the reasonable network management exception described above would allow network providers to solve these problems in more application-specific ways. Thus, these problems, to the extent they exist, can be accounted for when applying the reasonable network management exception. But they will be problems associated with specific wireless technologies (for example, people in the industry usually agree that LTE does not pose any issues that are fundamentally different from the issues faced by, let's say, the provider of a DSL network). They do

not justify applying fundamentally different levels of protection to wireline and wireless networks in general.

What you can do

If you agree with me and want to do something, you could e-mail the FCC Commissioners, in particular write to [Chairman Genachowski](#), [Commissioner Copps](#), and [Commissioner Clyburn](#). (Commissioner Baker and Commissioner McDowell have publicly rejected any network neutrality rules.) Tell them that you share the concerns outlined in my post and ask them to improve the proposal along the lines explained here. The sunshine period which is designed to shield the FCC's final deliberations from outside influence starts on Tuesday, December 14, around 5 pm EST, so if you want to write, you need to do it before then if you want your e-mail to make a difference.

You should also spread the word (even after the sunshine period starts). This rule will affect all of us, whether we use the Internet for work, school, or in our free time, and the more people understand the issues, the more likely that public opinion will make a difference now or in the future. Share this post and others about the same topic – post on Facebook, on Twitter, on Tumblr, on WordPress, or on whatever innovative application that's part of your life and the product of an open Internet."

If you want to learn more

This is a complicated debate. Although this is a long post, it doesn't come close to doing justice to what are complex, multi-faceted issues. If you want to learn more, here is what you can do:

Watch

You could watch my [recent talk](#) at Stanford (it is 45 minutes long, followed by Q&A). It provides a good overview over the network neutrality debate (including a discussion of access fees). It also discusses alternative proposals for non-discrimination rules and makes the case for the non-discrimination rule described above.

Read

You could read more of my writing and testimony.

On network neutrality in general

[This testimony](#) describes the factors have fostered application innovation in the past and that should guide any evaluation of network neutrality rules.

On non alternative proposals for discrimination rules, problems associated with case-by-case adjudications, and my proposal for a non-discrimination rule

[Read abstract and download PDF here.](#)

Reasonable network management

This [testimony](#) explains why we need non-discriminatory network management. A more detailed description about what exactly should be done with respect to reasonable network management and why is [here](#) (pp. 4-8).

Access fees

[This testimony](#) explains the problems with access fees and paid prioritization – i.e. with allowing network providers to charge application and content providers who are not the network providers' Internet service customer for access to the network providers' customers or for prioritized access to these customers. An additional aspect of the problem is described [here](#) (pp. 4-6).

This entry was posted on December 13, 2010 at 7:20 pm. You can follow any responses to this entry through the [RSS 2.0](#) feed. You can [leave a response](#), or [trackback](#) from your own site.

Posted in [Uncategorized](#) by [schewick](#) [No Comments Yet](#)