

MASSACHUSETTS
40 main st, suite 301
florence, ma 01062
tel 413.585.1533
fax 413.585.8904

WASHINGTON
501 third street nw, suite 875
washington, dc 20001
tel 202.265.1490
fax 202.265.1489



August 3, 2010

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

Re: *Notice of Ex Parte Presentation*: GN Docket No. 09-191 (Preserving the Open Internet); WC Docket No. 07-52 (Broadband Industry Practices)

Dear Chairman Genachowski and Commissioners:

On August 2, 2010, David Honig, Counsel for the National Organizations filed a letter that clarified an earlier letter which incorrectly implied that Free Press was urging the Commission to enact open Internet rules that would prohibit Content Delivery Networks (CDNs).¹ The clarification letter states that the QoS practice meant in the original letter was actually IETF RFC 2474 (“DiffServ”).²

We appreciate this clarification. However, the citation of DiffServ as a form of paid prioritization that is both currently occurring, and one that would be prevented by the FCC’s proposed open Internet framework is very confusing and inaccurate. We offer this letter to revisit the basic facts about DiffServ as established in the record of this proceeding.

The National Organizations’ Clarification Letter Incorrectly Characterizes What DiffServ Is, How It Is Currently Used and How It Could Be Used

In the clarification letter the National Organizations state that the QoS practices that supposedly would be banned by the Open Internet NPRM “include router-based prioritization of packets based on the standard developed under the Internet Engineering Task Force for Differentiated Services. RFC 2474 (Dec. 1998)...” This IETF standard, known as DiffServ, is a class-based flagging mechanism for traffic management. But like the reservations-based IntServ flagging mechanism, DiffServ as proposed by the

¹ See Letter from David Honig, President and Executive Director Minority Media and Telecommunications Council, Counsel for the National Organizations, to Marlene Dortch, Secretary, Federal Communications Commission, GN Docket No. 09-191; WC Docket No. 07-52, August 2, 2010 (“clarification letter”).

² Though the earlier letter does seem to clearly imply that the FCC’s Open Internet framework would ban CDNs: “Currently, MWBEs and SDBs are teaming up with their broadband providers for route optimization services, CDNs, and other enhanced offerings... By preventing these voluntary agreements, the Commission would effectively insulate established Internet-based companies from competition and allow for the proliferation of two Internets... This would not be pro-consumer and it would certainly have a very un-neutral impact on MWBEs and SDBs.”

MASSACHUSETTS
40 main st, suite 301
florence, ma 01062
tel 413.585.1533
fax 413.585.8904

WASHINGTON
501 third street nw, suite 875
washington, dc 20001
tel 202.265.1490
fax 202.265.1489



IETF relies on end-users setting the flags, and ISPs (through the reading of IPv4 or IPv6 headers) respecting those flags.

In other words, the QoS mechanism referred to in the National Organizations' clarification letter is a user-designated QoS routing mechanism that ISPs are supposed to be agnostic as to source, and which cannot legitimately be used to facilitate paid prioritization. DiffServ is a traffic management technique that would not be prohibited under the FCC's proposed open Internet framework.

The National Organization's clarification letter seems to imply that DiffServ is currently being used by ISPs to offer paid-prioritization services that would otherwise be banned by a principle of non-discrimination. This is incorrect, both in terms of what is taking place in the market currently, and how DiffServ could be appropriately used.

First, DiffServ, despite being formally proposed over a dozen years ago, is not currently used by last mile Internet service providers to manage interconnecting traffic.³ This is due to a multitude of factors, but perhaps most relevant is because congestion has yet to surface as a major problem in last-mile ISP networks where DiffServ would make an impact. Unless a network is congested, there is no need to prioritize, as the queues are empty and remain empty. To the extent that DiffServ is used today, it is in managing large enterprise traffic flows within private networks, not to prioritize select third-party content in last mile networks on the public Internet.⁴

Second, it is nonsensical to portray DiffServ as something that a third-party content provider could pay an ISP to use for paid-prioritization. Either an ISP respects DiffServ flags as outlined by IETF and chosen by the application or they do not -- and if they do not, then it isn't DiffServ. By way of analogy, an individual customer cannot pay a restaurant to obey the health code -- they either do or they don't. If an ISP is using DiffServ, but not respecting application flags, then that is not the standard as outlined by the IETF. Similar to how Comcast was improperly using RST packets to block BitTorrent, such a non-standard use of DiffServ would be entirely new, improper, and not at all in line with that outlined by the IETF.

Third, it would be a stunning new revelation if it were true that ISPs are currently offering third-party paid-prioritization services, based on an improper use of DiffServ or any other method. No such evidence that paid-prioritization is currently occurring in the marketplace has been offered in the lengthy record of this proceeding. Academic engineering experts and ISPs themselves have discussed the limited use of

³ See e.g. "Internet Traffic Prioritisation: An Overview," Organisation for Economic Co-operation and Development, Working Party on Telecommunication and Information Services Policies, March (2007). ("DIFFSERV has also not been widely used since its development in 1998."). See also Benjamin Lennett, "Dis-empowering Users vs. Maintaining Internet Freedom: Network Management and Quality of Service (QoS)," *CommLaw Conspectus*, v.18, p.99 (2009).

⁴ See Comments of David Clark, William Lehr, and Steve Bauer, Massachusetts Institute of Technology, In the Matter of Preserving the Open Internet, Broadband Industry Practices, GN Docket No. 09-191, WC Docket No. 07-52, p. 10 (Jan. 14, 2010). ("Today, the Internet protocols include standardized mechanisms (e.g., RSVP, DiffServe) to provide quality of service (QoS). Many applications would seem to benefit from these enhancements to the customary platform. In private networks based on the Internet protocols (corporate intranets and the like) these tools are used, seemingly to good effect. But they are not offered as part of the customary service platform of the public Internet.").

MASSACHUSETTS
40 main st, suite 301
florence, ma 01062
tel 413.585.1533
fax 413.585.8904

WASHINGTON
501 third street nw, suite 875
washington, dc 20001
tel 202.265.1490
fax 202.265.1489



DiffServ in this proceeding, and they indicate that it is not being used to facilitate paid-prioritization, or used in any multi-party manner.

However, according to the record in this proceeding the capabilities that comprise DiffServ are being used in a non-standard manner by some ISPs to prioritize their *own* vertical voice and video content over their own shared last mile networks. For example, AT&T uses it to flag its own bundled video content on their U-Verse VDSL offerings.⁵ However, this is a non-standard use of DiffServ (AT&T is flagging its own content, but ignoring other application's flags), and would be considered a Title VI MVPD managed service offering that would be permitted under the FCC's proposed Open Internet framework.

But again, there is no evidence to support the notion that DiffServ is being used to offer priority treatment to third-party content providers who pay ISPs to respect the DiffServ flags in last-mile network routing. In fact, there is no evidence that any multi-party use of DiffServ is happening -- its only legitimate use appears to be within enterprise networks to manage internal traffic flows.

The National Organizations' Clarification Letter Incorrectly Implies that Open Internet Rules Would Bar the Use of DiffServ

DiffServ, if properly used, is a user-driven method for dealing with congestion, one that by definition cannot be coupled with pay-for-play, and thus one that does not distort innovation or investment. Because of this, Free Press and others have gone on record supporting the use of DiffServ and IntServ.⁶ As the Commission is well aware, legitimate use of DiffServ would not be a violation of the proposed fifth principle of non-discrimination as outlined in the October 2009 NPRM.

⁵ See Comment of AT&T, Inc, In the Matter of Preserving the Open Internet, Broadband Industry Practices, GN Docket No. 09-191, WC Docket No. 07-52, p. 51-53 (Jan. 14, 2010). ("AT&T and many other network providers widely use DiffServ today, together with analogous mechanisms at other protocol layers, to offer enterprise and residential customers alike differential classes of service for different types of IP traffic... AT&T and other providers have long used DiffServ in conjunction with analogous mechanisms at other layers, including Ethernet and ATM at Layer 2 and MPLS at Layer 2.5, to ensure differentiated service handling across diverse network facilities. For example, AT&T offers an enterprise-grade Internet access service, known as Managed Internet Service ("MIS"),⁸⁴ that combines DiffServ and MPLS-based class-of-service mechanisms to ensure enhanced performance for traffic that MIS customers designate for special handling. AT&T and other network providers sell such services to a range of enterprise customers, including content providers that wish to purchase prioritized handling for performance-sensitive content throughout core network facilities. AT&T likewise combines Layer 3 DiffServ functionality with Layer 2 mechanisms to separate its U-verse "triple play" platform into logically discrete voice, video, and Internet access streams.").

⁶ See M. Chris Riley and Ben Scott, "Deep Packet Inspection - The End of the Internet As We Know It?," Free Press, March 2009. ("If some traffic needs or deserves prioritized treatment, the technical standards underlying the Internet provide a way to do this, and to allow the user (rather than the network operator) to specify which traffic is important and which is not, through the use of DiffServ or IntServ."). See also Scott Jordan and Arijit Ghosh, "A network architecture basis for determination of reasonableness of traffic management," July (2009). ("Finally, consider cases in which the practice is applied on the basis of the application. In these cases, if the practice is applied entirely at or below the network layer, then we propose that the practice be classified as reasonable. Enhancement or degradation of QoS is thus applied to specific packets identified by the user, for instance if an ISP chose to give enhanced QoS to all packets identified using diffServ codepoints by the user as VoIP.").

MASSACHUSETTS
40 main st, suite 301
florence, ma 01062
tel 413.585.1533
fax 413.585.8904

WASHINGTON
501 third street nw, suite 875
washington, dc 20001
tel 202.265.1490
fax 202.265.1489



Paid-Prioritization Would Not Help Close the Digital Divide or Benefit Small Businesses

As stated above and established in the record, DiffServ is not currently being used to offer priority treatment to third-party content providers who pay ISPs to respect the DiffServ flags in last-mile network routing. Not only would such a system violate the IETF standard itself, but it is impractical.

In order for such a scheme to work, an ISP would have to only respect the flags of paying content providers. In order for this service to have value, congestion would have to be the norm -- *which it is not today* -- or ISPs would have to proactively *slow down* all other traffic in order to "speed up" the paid content. Creating congestion where there is currently none is a very risky proposition, as the ISP would likely incur the wrath of consumers.

In a network where congestion is a somewhat rare occurrence, paid-priority treatment holds little value for third parties. Allowing ISPs to abuse their terminating access monopoly power by charging for paid-prioritization directly produces the incentive to create scarcity. Policies that reward and encourage a steady state of scarcity are of course not a recipe for closing the digital divide through buildout and network expansion.

It is possible that some third parties would place value on hedging against the chance of congestion. However, this value is directly proportional to the likelihood a network is congested -- it increases when congestion is probable, and decreases when it is improbable. But an individual content owner's willingness to pay for priority treatment decreases as more third-parties opt for the treatment, as each additional paid partner diminishes the impact of the prioritization service to all other paid-parties. Thus, an ISP cannot by definition offer such treatment to any and all takers.

And therefore, the indisputable engineering and economic reality of paid prioritization is that the number of paid-priority relationships will reach an equilibrium of a small number of third-parties receiving preferential treatment along side the vertical content of the ISPs themselves. Contrary to the National Organizations' letter, paid-prioritization in such a form would be terrible for small businesses and would not close, but exacerbate the digital divide. The history of the traditional broadcasting and cable media show that when there is scarcity and only a limited number of spots on the dial or lineup, only the biggest, deep-pocketed businesses benefit. Cable television operators have a horrible track record when it comes to carriage of unaffiliated content and content owned by minority and women business enterprises and socially and economically disadvantaged businesses.

Yes, it is conceivable that if allowed to engage in paid-prioritization, ISPs might choose a few select small business to receive favorable treatment along side the deep pocketed Internet giants with the largest willingness to pay for such treatment. But this is not an outcome that would benefit most MWBEs or SDBs; it is an outcome that would destroy the level playing field that has enabled the tearing down of some of the (but certainly not all) traditional barriers to entry into the content market.

We strongly agree with the National Organizations that the Commission should embrace tools that close the digital divide. However, discriminatory paid-prioritization of the kind disfavored by the proposed open Internet NPRM framework is not one of these tools. Such discrimination would only serve to lock-in today's Internet giant's market position, to the detriment of all other small businesses, entrepreneurs, and non-profit content generators. It would produce incentives for ISPs to create and then profit from

MASSACHUSETTS
40 main st, suite 301
florence, ma 01062
tel 413.585.1533
fax 413.585.8904

WASHINGTON
501 third street nw, suite 875
washington, dc 20001
tel 202.265.1490
fax 202.265.1489



artificial scarcity, halting expansion of broadband networks in underserved areas. In short, allowing paid prioritization will expand, not narrow the digital divide.

This is a sentiment shared by President Obama, reiterated earlier this year:

“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, February 1, 2010.*⁷

We strongly endorse this view because it is the correct one. We urge the Commission to preserve the Internet as an opportunity platform for all by rejecting paid prioritization.

Respectfully,

A handwritten signature in black ink, appearing to read "S. Derek Turner". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

S. Derek Turner
Research Director
Free Press

⁷ In his Technology and Innovation platform, Candidate Obama also 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 web sites 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.