KEEPING THE INTERNET
OPEN • INNOVATIVE • FREE

www.cdt.org

CENTER FOR DEMOCRACY
& TECHNOLOGY

1634 Eye Street, NW
Suite 1100
Washington, DC 20006

September 8, 2010

Marlene Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: *Preserving the Open Internet*, GN Docket No. 09-191; *Framework for Broadband Internet Service*, GN Docket No. 10-127

Dear Ms. Dortch:

A number of recent ex parte submissions, press reports, and blog posts have created confusion about the notion of "paid prioritization" and the role of Internet Engineering Task Force (IETF) standards in relation to paid prioritization.[1] As an organization with nearly a decade's worth of active participation in the IETF, CDT would like to clarify the relationship between paid prioritization and IETF standards.

I. Paid Prioritization

In CDT's view, "paid prioritization" has been widely understood throughout the course of the Internet openness debate as the practice of a last-mile broadband ISP charging a fee to Internet content, applications, or service providers to deliver their content, applications, or services in an enhanced or prioritized fashion to the ISP's subscribers over those subscribers' last-mile facilities. This is precisely the practice that the Commission sought to address in proposing its nondiscrimination rule in the Open Internet NPRM.[2] Under this understanding of paid prioritization, the ISP used by the content, application, or service provider to connect to the Internet and the terms under which that provider obtains its Internet connection are not relevant. The priority treatment that the provider pays for occurs on the last mile facilities of other Internet users.

---

[1] Letter from Robert W. Quinn, Jr., AT&T, to Marlene Dortch, FCC, GN Docket 09-191, GN Docket No. 10-127 (August 30, 2010) ("AT&T Letter"); Declan McCullagh, "AT&T: Net rules must allow 'paid prioritization'," *CNET,* http://m.news.com/2166-1002_3-20015231-38.html (August 31, 2010); Hank Hultquist, "The Danger of Dogma," AT&T Public Policy Blog, http://attpublicpolicy.com/government-policy/the-danger-of-dogma/ (August 31, 2010); Hank Hultquist, "Narrowing the Debate on Paid Prioritization," AT&T Public Policy Blog, http://attpublicpolicy.com/government-policy/narrowing-the-debate-on-paid-prioritization/ (September 2, 2010) ("AT&T Blog Post").

[2] *In the Matter of Preserving the Open Internet Broadband Industry Practices*, GN Docket No. 09-191, 47 C.F.R. pt. 8 (Oct. 22, 2009) at 42.

CDT and others have repeatedly made a clear distinction between paid prioritization and user-driven prioritization – the selection of particular traffic for priority treatment on last-mile facilities *directed and paid for by end users*.[3] In CDT's view, user-driven prioritization is unobjectionable and should be a capability that is preserved in the course of enacting any new Internet openness rules. In our comments about the Open Internet NPRM, CDT noted that the Differentiated Services (DiffServ) architecture standardized by the IETF[4] provides one tool that could be used to facilitate such user-driven priority. But because this would be a capability offered to users and would occur on the user's last-mile facilities at the user's request, it is distinct from paid prioritization, which prioritizes traffic on an end user's last-mile connection according to payments and contracts to which that end user is not a party.

An ex parte letter filed by AT&T on August 30, 2010 purports to be about "paid prioritization," but throughout the letter AT&T appears to be conflating paid prioritization and user-driven prioritization.[5] A follow-up post on AT&T's blog suggests that AT&T's conception of "paid prioritization" is "simply a question of whether an ISP receives compensation for prioritizing traffic."[6] This more expansive definition extends the meaning of "paid prioritization" to also include user-driven prioritization, confusing two distinct practices, only one of which raises concerns in relation to Internet openness. Confusing the two practices makes reasoned, precise debate about the core issues before the Commission much more difficult. In our discussion of AT&T's ex parte letter below, we assume the common meaning of "paid prioritization," as it is that practice which should be of concern for the FCC.

II. DiffServ and Paid Prioritization

In its ex parte letter, AT&T claims that the IETF "fully contemplated" paid prioritization and designed its Differentiated Services architecture to facilitate paid prioritization. In so doing, AT&T has fundamentally mischaracterized both the

---

[3] *Comments of the Center for Democracy & Technology In the Matter of Preserving the Open Internet,* GN Docket No. 09-191, http://www.cdt.org/files/pdfs/2010_CDT_openness_comments.pdf (January 14, 2010) at 26-27; *Comments of the Center for Democracy & Technology In the Matter of Broadband Industry Practices*, WC Docket No. 07-52, http://www.cdt.org/files/pdfs/20080213_FCC_comments_1.pdf (February 13, 2007) at 8; *Reply Comments of the Center for Democracy & Technology In the Matter of Broadband Industry Practices*, WC Docket No. 07-52 http://www.cdt.org/files/pdfs/20070716fcc-comments.pdf (July 16, 2007) at 2.

[4] K. Nichols, S. Blake, F. Baker, and D. Black, Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers, RFC 2474, http://www.rfc-editor.org/rfc/rfc2474.txt (December 1998) ("RFC 2474"); S. Blake, D. Black, M. Carlson, E. Davies, Z. Wang, and W. Weiss. *An Architecture for Differentiated Services*, RFC 2475, http://www.rfc-editor.org/rfc/rfc2475.txt (December 1998) ("RFC 2475").

[5] AT&T Letter.

[6] AT&T Blog Post.

intent of the IETF in standardizing DiffServ and its broader role as a technical standards body.

To support its claim that the IETF expressly contemplated paid prioritization in standardizing DiffServ, AT&T points to two IETF documents: RFC 2474, the standard that defines the DiffServ field of the IP header, and RFC 2475, the informational description of the DiffServ architecture.[7] AT&T notes that RFC 2474's goal is "to allow different levels of service to be provided for traffic streams on a common network infrastructure" and that this somehow shows that the IETF envisioned the use of DiffServ for paid prioritization. However, given that RFC 2474 is the technical specification of a mechanism that allows packets belonging to different subsets of an ISP customer's traffic to be treated differently by network nodes,[8] it is hard to see how the phrase quoted by AT&T relates in any way to payment for differential treatment, rather than technical differentiation conducted on the network. Moreover, RFC 2474 explicitly refuses to address issues of payment and contracting between ISPs and their customers. In explaining that there are a number of ways that ISPs could compose the building blocks provided by DiffServ into service offerings, RFC 2474 states that, "much of the details of service construction are covered by legal agreements between different business entities and we avoid this as it is very much outside the scope of the IETF." Not only does RFC 2474 lack support for AT&T's claim, it explicitly denies IETF involvement in matters of payment.

AT&T goes on to cite RFC 2475 language explaining that service differentiation is desired "to permit differentiated pricing of Internet service," and that therefore DiffServ was created to facilitate paid prioritization. Again, AT&T's projection of the RFC authors' intent is misguided. While differential pricing may certainly be used in conjunction with DiffServ, other than the single phrase selected by AT&T, the entirety of RFC 2475 is dedicated to describing the technical architecture needed to deploy differential services – not the payment schemes that may be associated with it. RFC 2475 reiterates the claim made in RFC 2474 about the IETF abstaining from discussions of business models, saying that "standardizing service offerings . . . is outside the scope of the IETF."[9] In short, it is simply misleading to seize on a stray reference to "pricing" or "levels of service" in the context of a document that expressly fences off those issues from consideration.

Furthermore, the term "differential pricing" cited by AT&T could easily describe any number of pricing schemes for Internet service, including ones that AT&T and others currently employ (unobjectionably, in CDT's view) to charge business customers for the ability to prioritize certain services of their own choosing on their own networks. DiffServ is already in wide use for the purpose of prioritizing traffic of a company's choosing within its own enterprise network (RFC 2475 even gives the example of a CEO's packets having higher priority than other

[7] RFC 2474; RFC 2475.
[8] See RFC 2474's definition of "service:" "a description of the overall treatment of (a subset of) a customer's traffic across a particular domain, across a set of interconnected DS domains, or end-to-end." RFC 2474 at 6.
[9] RFC 2475 at 10.

packets on the network).[10] Charging for such a service could easily qualify as "differential pricing."

The way in which the IETF went about crafting the DiffServ documents provides further evidence of its lack of intent to make any sort of statement about paid prioritization. IETF documents belong to different "tracks" depending on whether they define protocol specifications that implementers can follow ("standards-track") or whether they are more informational, experimental, or historical in nature ("non-standards-track").[11] The IETF also assigns special meaning to normative directives in its specifications (for example, use of the word "MUST" in capital letters implies an absolute requirement to be followed by the implementer).[12] If DiffServ had been created to make paid prioritization a reality, its designers would have said as much using normative language in a standards-track RFC (just as normative language is used to define the meaning of the DiffServ field in the IP header, for example). Instead, where payment is alluded to at all in DiffServ-related RFCs, it is mentioned in a non-normative way in an informational document (RFC 2475). This can hardly be said to reflect IETF endorsement of any type of business arrangement.

A close reading of the DiffServ RFCs and related documentation[13] shows that DiffServ was designed as a set of technical building blocks that could be incrementally deployed and composed to classify subsets of Internet traffic for particular treatment. It was neither the first nor only IETF effort aimed at differentiation of services – IntServ, RSVP, and MPLS are other IETF standards that were all developed with some of the same goals in mind. But what all of these standards have in common – indeed, what they share with the entirety of the IETF's work – is that they are technical tools designed to solve technical problems, not to support particular operators' business models. The IETF's own mission statement makes this abundantly clear:

> The IETF's mission is "to make the Internet work better," but it is the Internet *Engineering* Task Force, so this means: make the Internet work better from a engineering point of view. We try to avoid policy and business questions, as much as possible.[14]

* * *

Ensuring that operators do not engage in paid prioritization is fundamental to ensuring that the Internet continues to operate as an open, interconnected platform for commerce, speech, and innovation. The IETF and other technical

---

[10] RFC 2475 at 17.
[11] S. Bradner, *The Internet Standards Process -- Revision 3*, RFC 2026, http://tools.ietf.org/html/rfc2026 (October 1996).
[12] S. Bradner, *Key words for use in RFCs to Indicate Requirement Levels,* RFC 2119, http://www.ietf.org/rfc/rfc2119.txt (March 1997).
[13] *See, e.g.,* B.E. Carpenter and K. Nichols, Differentiated Services in the Internet, Proc. IEEE, 90 (9) (2002) 1479-1494.
[14] *Getting Started in the IETF*, http://www.ietf.org/newcomers.html.

standards bodies play a crucial role in designing the protocols that allow networks and devices to interoperate seamlessly, but it is a mistake to project business and policy positions, about paid prioritization or any other matter, onto technical standards that make no such claims. The Commission should reject any suggestions to the contrary.

Sincerely,

/s/

Alissa Cooper, Chief Computer Scientist
John Morris, Director, Internet Standards, Technology and Policy Project
David Sohn, Senior Policy Counsel
Center for Democracy & Technology