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May 5, 2014

**Ex Parte**

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

Re: Protecting and Promoting the Open Internet, GN Docket No. 14-28; Preserving  
the Open Internet, GN Docket No. 09-191

Dear Ms. Dortch:

On May 1, 2014, I, on behalf of Level 3 Communications, LLC ("Level 3"), met with Nicholas Degani, Legal Advisor to Commissioner Pai. The attached presentation was provided to Mr. Degani.

The discussion was consistent with Level 3's previous advocacy on these matters.<sup>1</sup> In particular, I emphasized the following points.

Level 3's interconnection points with some, though not all, large consumer ISPs are congested, causing Internet packets to be dropped at the point of interconnection. The result is a poor user experience for millions of American consumers, particularly for streaming video and over the top VoIP applications. Congestion between providers like Level 3 and ISPs affects such services provided by large, commercially successful enterprises as well as startups, non-profits, and even government entities. Yet those large consumer ISPs are refusing to augment their interconnection capacity to improve performance unless Level 3 pays arbitrary access tolls. In other words, they are breaking the Internet, and harming their own customers, in an attempt to extract access tolls for the privilege of reaching those users.

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<sup>1</sup> See Comments of Level 3, GN Docket No. 14-28, et al. (filed Mar. 21, 2014) (Level 3 Comments); Letter from Joseph C. Cavender, Level 3, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-28, et al. (filed Feb. 21, 2014); Letter from Joseph C. Cavender, Level 3, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-28, et al. (filed Apr. 24, 2014).

Level 3's experience in this regard is consistent with the Commission's own analysis in the *Open Internet Order*.<sup>2</sup> There, the Commission observed that large, bottleneck ISPs have the incentive to discriminate in favor of their own video and voice services and against over-the-top competitors, as well as the incentive to extract monopoly rents from all who wish to exchange traffic with their users.<sup>3</sup> And to extract these rents and to effectuate this discrimination, ISPs have the incentive to allow their settlement-free links (that is, their links not subject to tolls) to congest so as to force providers into a paid arrangement.<sup>4</sup>

The *Open Internet Order*, however, failed to address all of the means by which ISPs act on these incentives. That is, ISPs could act on these incentives either, on the one hand, by targeting edge provider traffic directly (through, for example, port-blocking for targeted applications) or, on the other, by targeting providers like Level 3 with whom they exchange traffic, allowing their ports to congest and refusing to augment capacity unless the provider pays the ISP a toll. The *Open Internet Order*, though, arguably prohibited only the first of these: actions by the ISPs that are targeted directly at edge providers. It arguably did not address the case where ISPs target providers like Level 3, even though, because Level 3 operates in a highly competitive market, it would have no choice but to pass on any tolls it might be forced to pay to its customers—the same edge providers the open Internet rules were intended to protect. In other words, while ISPs are acting on the same incentives whether they target edge providers directly or target providers like Level 3, and while the threat to the open Internet is the same no matter which approach the ISPs take, the *Open Internet Order* seemed to address only one of the ways ISPs might act on their incentives. Unsurprisingly, some ISPs have taken that as permission to allow Internet performance to deteriorate in order create leverage over edge providers—acting like would-be robber barons for the Internet era, with control over the only means of access to their millions of residential end users.

The Commission should ensure that it doesn't make the same mistake again. It should protect against abuses by bottleneck ISPs no matter whether those abuses come in the form of explicit discrimination or the kind of anticompetitive, monopoly rent-seeking conduct Level 3 has observed. To that end, the Commission should require ISPs to interconnect on commercially reasonable terms. As explained in Level 3's comments, the heart of such a rule would be that an ISP must offer to interconnect without imposing access charges.<sup>5</sup> That does not mean that ISPs could not, for example, charge for space or power in a facility, or perhaps other reasonable charges, in association with an interconnection agreement. Nor does it mean that ISPs would have no control over where such interconnection occurred—and hence how costs were allocated. For example, a commercially reasonable interconnection agreement might require the interconnecting partner to exchange traffic in the ISP's local markets, rather than in just the ten traditional interconnection points across the country. And neither does a commercial

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<sup>2</sup> *Preserving the Open Internet*, GN Docket No. 09-191, et al., Report and Order, FCC 10-201, 25 FCC Rcd 17905 (2010) (*Open Internet Order*).

<sup>3</sup> *See id.* ¶¶ 21, 24.

<sup>4</sup> *See id.* ¶ 29.

<sup>5</sup> *See* Level 3 Comments at 11-13.

Marlene H. Dortch

May 5, 2014

Page 3

reasonableness requirement mean that ISPs could not offer their own CDN or other services. The key, simply, would be that ISPs could not impose access charges for the privilege of reaching the ISP's end users.

The Commission was right in the *Open Internet Order* to be concerned about the threats that bottleneck ISPs pose to the free and open Internet. That threat is real, and the damage to the Internet is already occurring. Millions of consumers have already been harmed and are being harmed today. And the harms will only grow over time. Yet addressing this problem would require little more than a straightforward rule that prohibited ISPs from imposing access tolls. It is time for the Commission to act.

Please do not hesitate to contact me if you should have any questions.

Sincerely,

/s/ Joseph C. Cavender  
Joseph C. Cavender

cc: Nicholas Degani



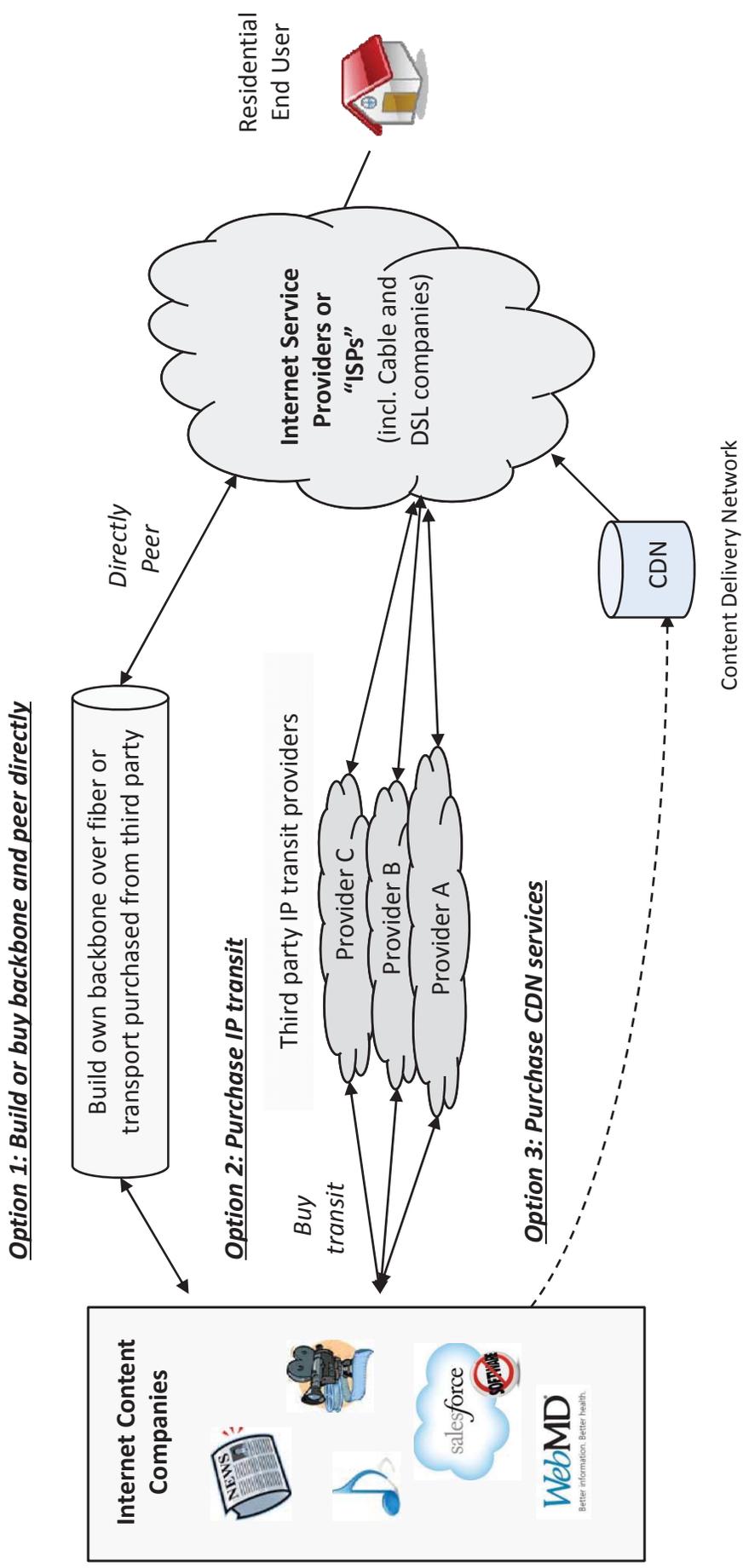
## Protecting the Free and Open Internet

## The Internet Is Changing: Consumer Video Demand Driving Internet Traffic Growth



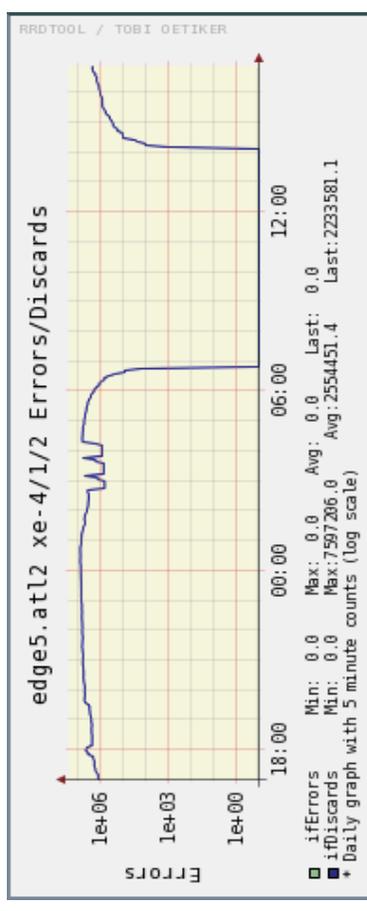
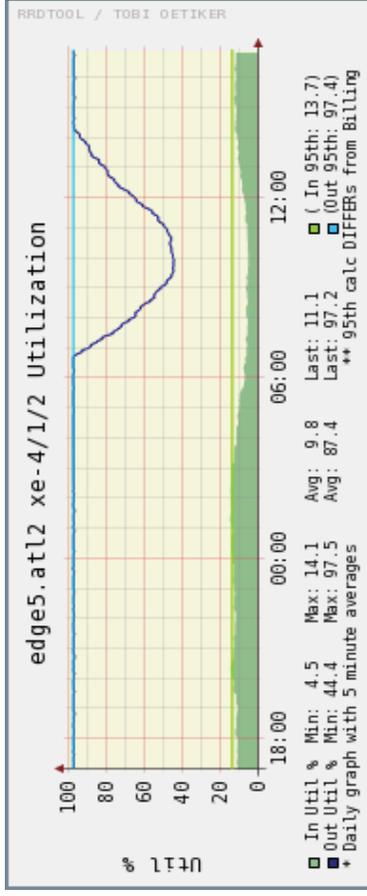
- By 2017, global traffic will reach 1.4 zettabytes annually, up from 523 exabytes in 2012 (equivalent to 350 billion HD movies in 2017).
- Busy-hour traffic is growing faster than average traffic; will increase 3.5x 2012-2017 compared to 2.9x for average traffic.
- By 2017, average global broadband speed will grow 3.5-fold, from 11.3 Mbps (2012) to 39 Mbps (2017).
- Consumer Internet video will be 69% of all consumer traffic in 2017, up from 57% in 2012.
- **Consumers want to stream video to multiple devices simultaneously.**
- **So they are paying their ISPs for faster broadband and driving Internet traffic growth.**

# Content Can Follow Several Paths to Reach a Consumer's ISP – But Only One Path from the ISP to the Consumer

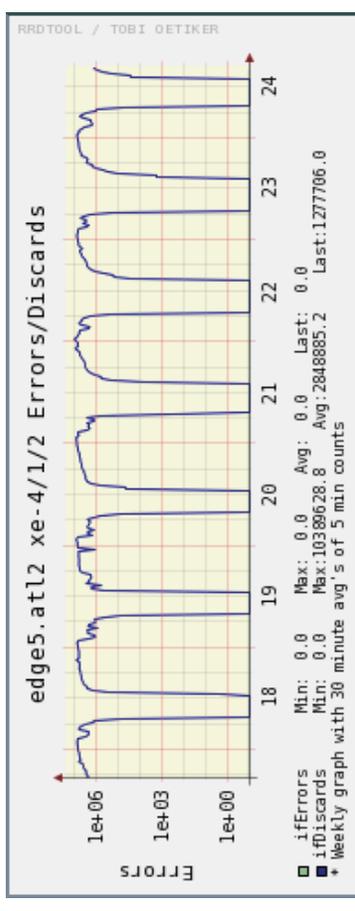
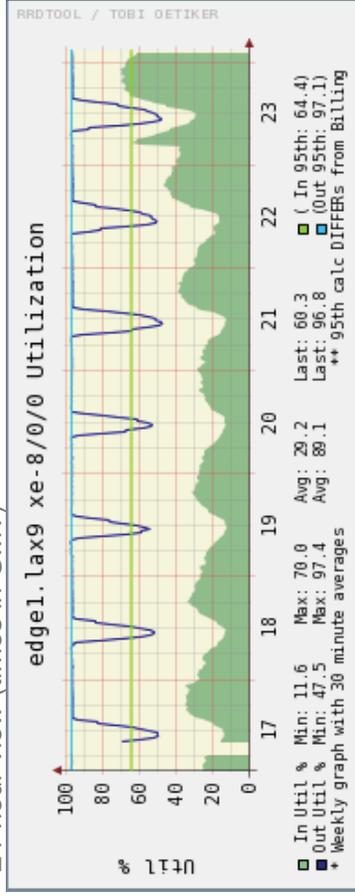


# Some big ISPs have decided to leverage that bottleneck

*A typical Level 3 port with one ISP that has its own video and voice services*



24-hour view (times in GMT)



7-day view

- Ports congest, packets are delayed or dropped, and the user experience suffers
- Consumers are trying to access content, and Level 3 is ready and willing to augment interconnection capacity to deliver it, but the ISP refuses to deploy the infrastructure necessary to meet its own users' demand unless Level 3 pays a toll

## The FCC's Open Internet Order Addressed Only Part of the Threat

- The Open Internet Order addressed blocking and discrimination targeted directly at “edge providers” but not interconnection. Yet they are two sides of the same coin.
- The FCC found that ISPs have the incentive and ability to extract tolls for access to their customers.
  - An ISP can either charge individual edge providers, or, more conveniently, just charge the transit provider – who passes the toll on to edge providers.
- The FCC found that ISPs have the incentive and ability to discriminate against competing services (e.g., video, voice).
  - An ISP can discriminate by targeting competing services directly or by demanding tolls from transit providers. The effect of a toll, whether paid or not, is discriminatory.
- ***ISPs are acting on the same incentives, and their actions have the same effects, whether they target edge providers directly or transit providers.***

## It's Time to Act

- Access tolls are a tax on the Internet. Tolls on transit providers will get passed on to transit customers.
  - Startups; small, medium, and large businesses; non-profits; government entities.
- ISPs should be required to interconnect on commercially reasonable terms.
  - They should be able to offer services (CDN, etc.) but should not be allowed to charge access tolls.
- ***This a problem today. Failing to address it will mean less innovation, less competition, and less consumer benefit from the Internet.***