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November 25, 2015

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

Dear Ms. Dortch:

On November 23, 2015, I, on behalf of Level 3 Communications, LLC ("Level 3"), met with Scott Jordan, Chief Technologist; Kristine Fargotstein of the Wireline Competition Bureau; and Jerusha Burnett of the Consumer and Governmental Affairs Bureau regarding the above-captioned matter. The attached presentation served as the basis for the discussion and was provided to the Commission participants in the meeting.

In particular, I observed that the Commission's rules require providers of Broadband Internet Access Service to make useful, relevant disclosures of service performance—and that means data reflecting performance across the interconnections that link the provider's network to other networks. As the Commission has found, consumers seek access to resources available on their own ISP's network as well as resources on other networks, and ISPs, in selling Broadband Internet Access Service, are selling access to both. Performance disclosures must accordingly provide information regarding the performance consumers can expect to access resources on other networks.

Such disclosures are not just required by law, they are also essential to protect consumers and to promote competition. Too few consumers have a real choice for broadband service at their home. But for those who do, disclosures should help them make that choice. Consumers should have access to data that tells them, for each provider, whether the provider offers consistent, high-speed performance to Internet broadly, or whether the provider offers inconsistent performance, with better connectivity to some resources than to others. Broadband

Internet Access Service providers should not be able to hide poor, inconsistent performance behind methodologies that provide a misleading "average" performance statistic.

Finally, I described Level 3's proposals, detailed in the attached presentation, for disclosures that would assist consumers in evaluating Broadband Internet Access Service providers' performance. Level 3's recommendations use the recent Consumer Advisory Committee proposal that consumer ISPs report average download speed, upload speed, latency, and packet loss as a starting point, with two key modifications. For ISPs that have the capability to measure performance across their interconnections to other networks, Level 3 recommends calculating average performance for each destination network, and disclosing the average performance for the destination networks with the best, median, and slowest averages. That will help ensure consumers are not misled by reported "average" performance figures that mask significant variations in actual performance to different parts of the Internet. In addition, ISPs should disclose a Connectivity Rating that would help consumers understand whether there is a significant likelihood that performance to some parts of the Internet could become degraded during peak hours because of lack of adequate interconnection capacity.

Please contact me if you have any questions regarding this matter.

Sincerely,

/s/ Joseph C. Cavender
Joseph C. Cavender

cc: Jerusha Burnett
Kristine Fargotstein
Scott Jordan

Level 3 COMMUNICATIONS

Connecting and Protecting the Networked World℠

Consumer Broadband Performance Measures: A Broadband Nutrition Label

November 2015

Disclosures Must Include Meaningful Performance Information, Including Performance across Interconnections

- Disclosures should provide useful, relevant, real-world information to consumers about the services they are considering purchasing, including expected performance.

- Consumers purchase Internet service to access resources on other networks—that is what makes the Internet the Internet. Accordingly, disclosures must help consumers understand what performance they can expect to resources on other networks.

- Disclosure of real-world performance to destinations across interconnections is critical for consumers to evaluate and compare broadband service options, especially in areas with competitors having similar “theoretical” performance but different actual performance.

FCC Rules Require Disclosure of Meaningful Performance Information, Including Performance across Interconnections

- Providers must "disclose accurate information regarding … performance … sufficient for consumers to make informed choices regarding use of such services." 47 C.F.R. § 8.3.
- The "safe harbor" disclosure must "allow consumers to easily compare the services of different providers." *Open Internet Order* ¶ 179.
- Broadband Internet access service is "the capability to transmit data to and receive data from all or substantially all Internet endpoints." 47 C.F.R. § 8.11. This "involves the exchange of traffic between a last-mile broadband provider and connecting networks." *Open Internet Order* ¶ 204.
- Providers "promise to make the interconnection arrangements necessary to allow that access." *Id*. And "[w]hen Internet traffic exchange breaks down—regardless of the cause—it risks preventing consumers from reaching the services and applications of their choosing." *Id*. ¶ 205.

➢ **For consumers "to easily compare the services of different providers" and to protect themselves against the "risk [of being] prevent[ed] … from reaching the services … of their choosing," disclosures must permit consumers to compare ISPs' ability "to transmit data to and receive data from all or substantially all Internet endpoints" including across interconnections.**

Ignoring Performance Impact of Interconnection Isn't Just Unlawful, It Hurts Consumers and Undermines Competition

- Consumers will waste time and money trying to figure out why they are not getting "FCC-validated" performance when the performance problems are real but have nothing to do with the consumer.

- Consumers will purchase service based on the FCC's false representation of what to expect, buying a service they otherwise would not purchase.

- Relying on misleading FCC-approved data, consumers will choose an ISP with worse performance.

Disclosures should inform consumers, not mislead them.

Consumer-Friendly Disclosures that Measure across Interconnection

- Use the Consumer Advisory Committee recommendation as a starting point. CAC recommends reporting averages measured during the evening peak time period for
  - Download speed
  - Upload speed
  - Latency
  - Packet Loss

- Tailor disclosures based on ISP capabilities.
  - Can the ISP measure performance across interconnections?
  - For the ISPs that do not measure across interconnections, use a proxy.

- Goal is to explain to consumers what kind of performance consumers ought to expect: consistent performance with little variability or inconsistent performance.
  - "Can I trust that this ISP will deliver this performance to most resources on the Internet? Or just some?"

Consumer-Friendly Disclosures that Measure across Interconnection

Some ISPs, such as those that participate in Measuring Broadband America, have access to performance data measured across interconnection points. For these ISPs:

- Measure performance by destination network, with an average calculated for each (need no more than top 20 interconnections).
- Report a range of speeds. Performance to the interconnecting network with the slowest average performance, median average performance, and best average performance.
- Consider whether to provide these ranges for just download speed (likely the easiest to understand), or all performance measures (download, upload, latency, packet loss).

This information would differentiate between two ISPs with similar “average” performance:

- An ISP that ensures good performance across all of its interconnections, giving high quality access to the entire Internet.
- Versus an ISP that has good performance only across some interconnections, but allows poor performance across others, meaning a consumer’s experience would be degraded to many destinations on the Internet.

Consumer-Friendly Disclosures that Measure across Interconnection

If an ISP does not measure across interconnections, consumers still deserve to know whether they will get “FCC-validated” speed to “all or substantially all” of the Internet.

- In addition to CAC data, all ISPs should report a color-coded “Connectivity Rating.”
- Measure “High Utilization Events”: days with interconnection capacity above 80% utilization with a top-20 interconnecting partner for 3 or more hours.
  - A high-utilization event means there is a substantial likelihood that performance to a portion of the Internet was impacted.
- Events will be rare for networks that have adequate capacity. But this data will help consumers know whether they can expect to see “FCC-validated” speed across all of Internet destinations they are paying the ISP to access
  - Green: 0-5 Events/month: Consumers can expect that performance is rarely impacted by Internetwork connectivity problems.
  - Yellow: 6-20 Events/month: Consumers may find performance impacted to some destinations from time to time due to Internetwork connectivity problems.
  - Red: 21+ Events/month: Consumers should expect that there is a significant likelihood that performance to at least some destinations on the Internet will be impacted by Internetwork connectivity problems.