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Ex Parte

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Preserving the Open Internet, GN Docket No. 09-191

Dear Ms. Dortch:

Level 3 has filed a series of recent letters asking the Commission to intervene in its ongoing negotiations with Comcast over the terms of a peering arrangement.¹ While we are not a party to that dispute and cannot comment on the factual details, all of the information disclosed publicly by the parties suggests this involves a run-of-the-mill commercial negotiation over the terms of a peering arrangement in which one party now seeks to obtain a negotiating advantage by converting the negotiation into a regulatory dispute. In any event, it is not a net neutrality issue, and the Commission should decline to inject itself into a business issue that is properly resolved through commercial negotiations.

Level 3 has endeavored to convert its dispute with Comcast into a net neutrality issue even after the Commission concluded that “content delivery network services, . . . hosting or data storage services, or Internet backbone services,” among other things, are outside of the scope of its new rules.² The public information released by the parties reveals that there are no net neutrality aspects to the dispute. Instead, the dispute appears to involve a routine negotiation over the terms of a peering arrangement. As the Commission is aware, peering arrangements and other arrangements concerning the interconnection of Internet networks and the exchange of Internet traffic have always been the province of voluntary, commercially-negotiated arrangements. This approach has allowed parties to develop efficient business models for the exchange of traffic that have allowed the Internet to thrive.

¹ See, e.g., Letter from John Ryan, Assistant Chief Legal Officer for Level 3, to Marlene H. Dortch, FCC, MB Docket No. 09-191 (Dec. 14, 2010); Letter from John Ryan, Assistant Chief Legal Officer for Level 3, to Marlene H. Dortch, FCC, MB Docket No. 09-191 (Nov. 30, 2010).

² *Preserving the Open Internet; Broadband Industry Practices*, Report and Order, GN Docket No. 09-191, WC Docket No. 07-52, FCC 10-201, ¶ 47 (Dec. 23, 2010); see also *id.* ¶ 67 n. 209 (“We do not intend our rules to affect existing arrangements for network interconnection, including existing paid peering arrangements.”).

The types of voluntary commercial arrangements that have been employed over time range from “settlement-free” peering arrangements, to paid peering or transit arrangements, and include myriad variations in between. The key common feature, however, is that these voluntary arrangements involve a mutual exchange of value of one form or another.

For example, one well-established model involves settlement-free peering arrangements. These arrangements involve the direct interconnection of networks and exchange of Internet traffic without any exchange of money. This model generally has been confined to those situations where the parties recognize that there is an exchange of roughly equal value between parties, thus making “settlement free” peering efficient and mutually beneficial. For example, these arrangements may be used by providers that exchange roughly equivalent volumes of traffic.

A second well-established model involves what are generally referred to as paid peering or paid transit arrangements. In these arrangements, one party typically pays the other for interconnection or to carry its traffic. These arrangements generally apply where there is an unequal exchange of value, such as when one party has a very limited network and wants to rely on the networks of others to carry its traffic or where the exchange of traffic between two networks is out of balance. Most providers rely, at least in part, on these paid arrangements with other network providers, with only a “small handful” relying exclusively on settlement-free peering.³

While a number of factors may be considered in deciding whether to enter into a settlement-free or paid arrangement with another provider’s network, one of the principal factors that has long been central to determining the type of arrangement parties employ is the relative traffic flow between their respective networks.⁴ All else being equal, networks generally enter into settlement-free arrangements – as Level 3 seeks here – only where the traffic flows between the networks are roughly in balance. Where the traffic ratios are significantly asymmetrical, it is common for one provider to pay for the exchange of traffic, either through paid peering or transit, or some other exchange of value. There is good reason for this, and such arrangements have been crucial to the development and continuing expansion of the Internet. By ensuring that providers are compensated in some form for their greater relative costs when they receive disproportionately larger volumes of traffic from other parties, these voluntary arrangements have allowed providers to continue to expand capacity as traffic volumes increase. If, on the other hand, network operators were not permitted to take relative traffic flows and other relevant factors into consideration to determine whether some form of compensation is warranted, then parties would have an incentive to profit by dumping their traffic onto someone else’s network to avoid the bulk of the costs associated with carrying that traffic, rather than investing to expand the reach and capacity of their own networks. Likewise, if receiving networks were not compensated in some form to carry disproportionately larger volumes of traffic for others, it

³ TeleGeography Research, “Global Internet Geography,” Executive Summary at 4 (Dec. 2010) (“TeleGeography Report”).

⁴ See, e.g., Faratin, Clark, et al, “The Growing Complexity of Internet Interconnection,” 72 *Communications & Strategies* 51, 56 (2008).

would undermine continued investment by those networks to enhance their capacity to handle the growing traffic volumes that would result. The result would be less overall investment and lower quality service for all Internet users as networks became more congested and capacity expansion failed to keep pace with demand.

The current regime of market-based arrangements for interconnection and exchange of Internet traffic has been a resounding success, creating incentives that thus far have ensured that the capacity and reach of the Internet has generally kept pace with the fast-growing demand. For example, TeleGeography recently noted that “International Internet traffic and network capacity have grown rapidly throughout the deep recession and low economic recovery of the past few years,” with Internet backbone providers “deploying vast amounts of new capacity” to keep pace with growing demand. TeleGeography Report at 1. In fact, even in the relatively mature U.S. and Canadian markets, capacity has increased at a “compound annual rate of 54 percent” between 2006 and 2010. *Id.* at 2. At the same time, the prices for paid IP transit have been dropping at “approximately 25 percent compounded annually over the past three years,” and the transit rates in major U.S. cities are among the lowest in the world. *Id.* at 5-6.

In addition, the huge and varied number of arrangements for interconnection and exchange of Internet traffic further evidences the success of the current regime of voluntary commercial arrangements. Large Internet providers typically interconnect with hundreds, if not thousands, of other networks. For example, one recent report indicated that Level 3 now connects with 2,767 “autonomous systems” around the world, making it the third most connected Internet provider by this measure.⁵ This reflects a significant increase from Level 3’s 1,909 connections in 2005. *Id.* And even the 50th largest Internet provider connected with more than 200 other autonomous systems. *Id.* at 8. Moreover, in order to facilitate these market-based arrangements, providers typically post the terms on which they will entertain settlement-free arrangements with other networks.⁶ These data all demonstrate a functioning, competitive marketplace that is responding well to rapidly increasing demand for Internet capacity. Importantly, the tens of thousands of interconnection arrangements – whether paid, settlement-free, or some variation – that enable the Internet were the result of the process of commercial negotiation to achieve mutually beneficial outcomes – not regulatory intervention.

Level 3 itself has previously recognized the benefits of the current regime relying on market-based negotiations and that takes into account, among other things, relative traffic flows. For example, Level 3 announced that it would discontinue a settlement-free peering arrangement with Cogent where Level 3 found that the relative exchange of value did not justify such an arrangement.⁷ In explaining why the previous settlement-free arrangement was no longer “mutually beneficial,” Level 3 stated:

⁵ TeleGeography Report, Market Structure at 7.

⁶ See, e.g., <http://www.verizonbusiness.com/terms/peering/>.

⁷ See <http://www.prnewswire.com/news-releases/level-3-issues-statement-concerning-internet-peering-and-cogent-communications-55014572.html> (Oct. 7, 2010) (last visited Jan. 10, 2011).

Cogent was sending far more traffic to the Level 3 network than Level 3 was sending to Cogent's network. It is important to keep in mind that traffic received by Level 3 in a peering relationship must be moved across Level 3's network at considerable expense. Simply put, this means that, without paying, Cogent was using far more of Level 3's network, far more of the time, than the reverse. Following our review, we decided that it was unfair for us to be subsidizing Cogent's business.

Similarly, Level 3 understands well the array of interconnection arrangements that make up this dynamic marketplace, given that it is one of the largest players in this area. As noted above, Level 3 operates the third most connected Internet backbone in the world, connecting to nearly 2,800 autonomous systems.⁸ Moreover, an important part of Level 3's business is to *sell* interconnectivity and Internet transport, including to many providers that serve end-user consumers.⁹ Such providers, as purchasers of transit, generally pay Level 3 more as the volume of traffic delivered to them from the Internet, or from them to the Internet, increases. As a result, to the extent that Level 3 increases the traffic that it delivers to those providers, those end-user-serving providers are likely not only to bear additional expense within their networks to handle the additional traffic volumes but also are likely to pay more to Level 3 for the transit expenses associated with that traffic. In fact, Level 3's CEO recently acknowledged, while discussing its dispute with Comcast and the significance of paying for imbalanced traffic loads, that "most, if not all, of the cable companies are deeply intertwined with us. They didn't dig up the cornfields in Iowa; we did. They ride our network. So that 80% or 90% of the business we still get. We would still pass on the costs and we would still maintain an 80% margin."¹⁰

Level 3 now suggests that all the norms that have governed interconnection and transit on the Internet should change because it has chosen to enter into certain commercial deals of its own – namely, operating as a content delivery network (CDN) – that may cause the traffic it delivers to other networks to be significantly asymmetrical. As it enters this new business and significantly increases the amount of traffic it hands off to others (both on an absolute and relative basis), Level 3 seeks to change the way interconnection is handled apparently in an effort to enhance its margins on its new CDN operations and avoid bearing the costs for the added burden on the networks with which it interconnects. This approach has the added benefit, from Level 3's perspective, of creating a competitive advantage over competing CDNs, such as Akamai and Limelight, that have long negotiated paid arrangements where they deliver asymmetric traffic flows to others.

In order to lower its own costs, Level 3 now suggests that the Commission should intervene and blow up this efficiently operating system by replacing the tens of thousands of commercially

⁸ TeleGeography Report, Market Structure at 7.

⁹ TeleGeography Report, Provider Profiles: Level 3 at 1 ("Level 3 operates primarily as a wholesaler, providing communications services to bandwidth corporate clients, which include cable providers, content providers, media and entertainment companies, and consumer ISPs.")

¹⁰ Thompson StreetEvents, Level 3 Communications at Citi Entertainment, Media, & Telecommunications Conference, at 6 (Jan. 5. 2011) ("Citi Transcript").

negotiated interconnection arrangements with a regulatory requirement for settlement free peering. But that approach is contrary to the way the Internet has long worked. It also is contrary to the arrangements, discussed above, that prevail today and that preserve appropriate incentives for providers to continue to invest in their networks and expand capacity. If Level 3 were successful in its attempt to obtain artificial advantages for itself, it would severely undermine the current regime that has ensured that the Internet continues to operate efficiently and respond to the continuing growth in demand.

Moreover, Level 3 has provided no basis to intrude into this dynamic marketplace, and turn on its head a well-functioning system of commercial negotiation for mutually-beneficial interconnection arrangements. As Level 3's CEO recently informed analysts: "[W]e've got a lot of leverage to what's going on with the consumer and with IP and CDN. We're going to get our share regardless of what happens up at the CDN layer; we want to get more than our fair share up there too." *Id.* at 4. Even in the case of its instant dispute with Comcast, it acknowledges that the "charges are not what concerns us" and these charges don't "even impact the economics of the Netflix transaction."¹¹

To be sure, the continued, rapid growth of bandwidth-intensive traffic, such as video content, or latency-sensitive traffic, such as gaming, does create challenges for all network operators who are forced to continually upgrade capacity to keep pace, but it is precisely the types of arrangements described above that have allowed them to do so and have also resulted in the development of further alternatives. As noted above, Internet network providers typically are connected to hundreds, and sometimes thousands, of other networks, thus providing a large variety of ways for any particular content provider to reach that provider's end-users. And just as network providers typically "multihomed" to increase redundancy and reliability,¹² so do content providers. As a result, content providers have many ways to get their content and services to their customers, regardless of whether any two particular providers are able to agree on terms to directly interconnect and exchange traffic.

The number of options available to content providers for delivering their content to consumers has continued to grow as the Internet has evolved. Content providers have long taken advantage of the services of CDNs such as Akamai and Limelight to distribute and store content on geographically diverse servers in order to increase the quality of the consumer experience by reducing the distance and number of "hops" over which the content must travel before reaching the consumer's computer. The recent shift by Level 3 and others into this already competitive marketplace increases the number of choices available to content providers.

Verizon and other network providers have also provided additional options. As TeleGeography noted, "a carrier that operates a consumer broadband network may offer unusually attractive transit pricing to a content provider because the carrier benefits not only from the transit transaction, but also from securing direct access to the content for its consumer

¹¹ *Id.* at 5.

¹² TeleGeography Report, Market Structure at 2.

Ms. Marlene Dortch

January 13, 2011

Page 6

broadband subscribers.”¹³ Verizon’s Partner Port Program, allowing content and other providers to directly interconnect at various locations with Verizon’s networks at attractive prices, provides an example of this type of mutually beneficial arrangement. By directly connecting at locations closer to end-users, these providers may improve the consumer experience while lowering their own CDN or transit costs. For the network provider, such an arrangement can reduce the demands on its networks, lower transit fees that it otherwise pays, and improve the customer experience.

Still another alternative for some content providers is foregoing third-party CDNs and transit providers by building their own networks. In fact, many significant providers, “such as Google, Microsoft, and Yahoo, are building their own global networks, which basically operate as internal CDNs.”¹⁴ In all of these various ways, the Internet ecosystem continues to evolve and increase the options available to content providers, network operators, and consumers. Continued reliance on commercial negotiations will ensure that all providers have appropriate incentives to invest in Internet infrastructure and to develop a variety of approaches to ensure high quality service to consumers.

The Commission should reject Level 3’s efforts to upset the well-functioning and pro-consumer marketplace that exists today by interjecting regulatory involvement in place of true, market-based negotiations for interconnection of networks.

Sincerely,

A handwritten signature in black ink that reads "Ian Dillman". The signature is written in a cursive, slightly slanted style.

¹³ TeleGeography Report, Pricing, at 20.

¹⁴ TeleGeography Report, Traffic at 21.