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June 12, 2014

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TWB-204
Washington, DC 20554

Re: Notice of Ex Parte Presentation
Mediacom Communications Corporation
MB Docket No. 10-71, GN Docket No. 14-28

Dear Ms. Dortch:

On June 10, 2014, Rocco Commisso, Chairman and CEO of Mediacom Communications Corporation ("Mediacom"), John Pascarelli, Mediacom's Executive Vice President for Operations, Mark Stephan, Mediacom's Executive Vice President and Chief Financial Officer, Joseph Young, Mediacom's Senior Vice President and General Counsel, Thomas Larsen, Mediacom's Group Vice President, Legal and Public Affairs, and the undersigned spoke via telephone with Chairman Wheeler and his Legal Advisor Maria Kirby. The purpose of the meeting was to discuss Mediacom's past experience and longstanding concerns regarding increasing programming costs in the video marketplace. In addition, Mr. Commisso discussed Mediacom's perspective on the issue of network neutrality regulation of its broadband services.

On the programming cost issue, Mr. Commisso described how small/midsize MVPDs and consumers are being harmed because of increased wholesale video programming costs, including both runaway retransmission consent and cable programming costs. Mr. Commisso expressed his appreciation at Chairman Wheeler's commitment to take a fresh look at retransmission consent issues.

Mr. Commisso explained that regulatory action was absolutely necessary to ensure that consumers are not further harmed by industry retransmission consent disputes. In this vein, Mr. Commisso advocated that the Commission's rules be modified to allow for video provider importation of distant broadcast signals during retransmission consent disputes, thereby ensuring that consumers may enjoy their favorite programming uninterrupted. Mr. Commisso explained that the Commission must be careful to ensure that major pending industry transactions do not exacerbate the programming cost pressures on small/medium sized MVPDs and their customers. Finally, Mr. Commisso explained that reforms should give MVPDs the right to buy at wholesale and sell to consumers at retail expensive cable network programming on a stand-alone, unbundled basis.

Regarding network neutrality, Mr. Commisso noted that the proponents of such regulation seek to prevent Mediacom from asking large edge providers to share a fair portion of Mediacom's burden in operating and upgrading its facilities to handle the enormous volume of traffic generated by those large edge providers. While Mediacom has no interest in a system that prioritizes some Internet traffic over other Internet traffic, or in creating fast lanes and slow lanes, ISPs and consumers should not be the sole parties bearing the costs for network improvements required for consumers to access large edge provider services. Mr. Commisso explained that consideration must be given to the fact that if the large edge providers that benefit the most from the investment that Mediacom and other ISPs make in their broadband networks, then there should be nothing wrong with requiring them to bear their fair share of the financial burden of such upgrades. To the extent any net neutrality rules prevent such cost sharing, consumers will ultimately be the ones harmed because of higher Internet access prices and less innovation.

In order to protect innovation in the broadband space, Mr. Young advocated for a distinction in the rules between large, well-capitalized edge providers, which would be exempt from such rules, and small, entrepreneurial, innovative content services, which would not. Mr. Young also expressed concern that one large edge provider, Netflix, may be intentionally degrading consumer experiences by routing traffic to congested ports at Internet peering locations with certain ISPs. Illustrative of that point is an article authored by Dan Rayburn that appeared in StreamingMediaBlog.com on June 10, 2014 (*see* attached or visit http://blog.streamingmedia.com/2014/06/netflix-isp-newdata.html).

Pursuant to Section 1.1206(b)(2) of the Commission's rules, a copy of this notice is being filed electronically in the relevant dockets and a copy is being provided to above-named participants in the meeting. If you have any questions regarding this matter, please communicate directly with the undersigned.

Sincerely,

Craig A. Gilley
Counsel for Mediacom Communications Corporation

cc: Chariman Wheeler
Maria Kirby

AM 34182890.1

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New Data Questions Netflix's Assertion That ISPs Are At Fault For Poor Quality

Dan Rayburn | Tuesday June 10, 2014 | 10:10 AM | 68 Comments

In the Netflix versus ISPs peering dispute, there are a lot of opinions and debate around who's at fault for letting some peering points degrade and who should be responsible for upgrading them. To date, many are having a hard time separating facts from opinions because Netflix and the ISPs haven't released any concrete data to back up their claims. In most industries, if one company accused another of doing something wrong, it would be expected that the company making the claim would back up their position with detailed data that proves their point and leaves little doubt as to who's responsible for the problem. Netflix has yet to do that.

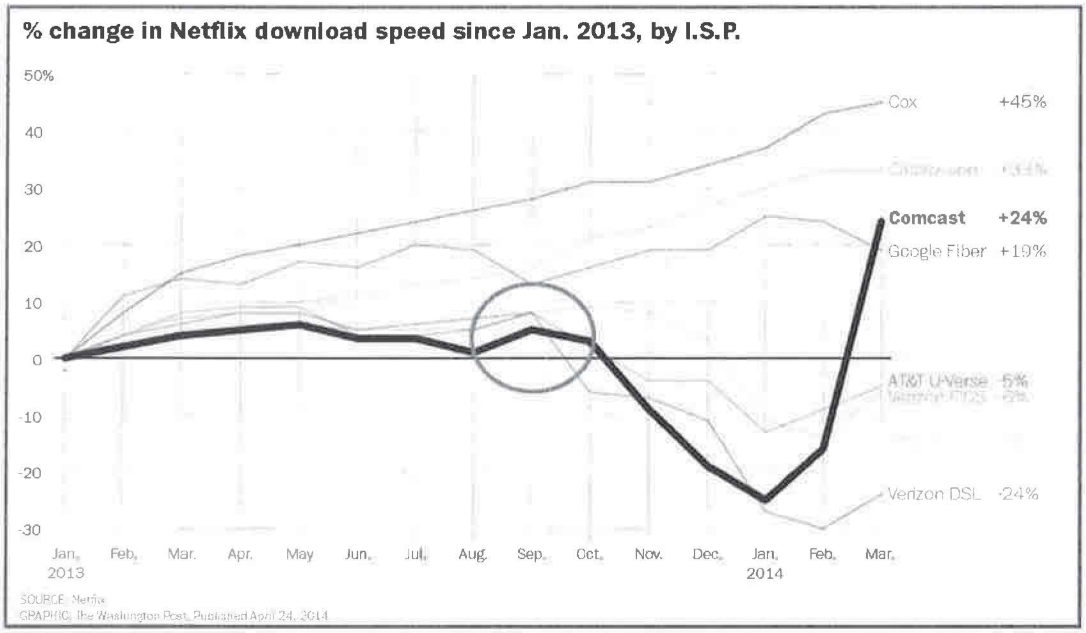
Most seem to be giving Netflix a pass, with very few demanding real transparency into what's taking place, or changed, that degraded Netflix performance back in September 2013. No company should try and force us to take their word for it, they should simply make the data public and let us decide on our own. Netflix says they are bringing transparency to the debate, but they are doing the opposite by using vague and high level terms with no definition. To date, Netflix has yet to set forth any details on how they want the current business models to change, how it should be regulated, what they consider "strong" net neutrality or even submitted a proposal to the FCC.

The best example of this is how Netflix's player recently gave out messages saying that Verizon was at fault regarding quality issues, but then when challenged by Verizon to back up their claim, Netflix announced they would discontinue showing these messages on June 16th. Originally Netflix said these messages would be rolling out in a phased deployment on all networks, but in their blog post yesterday, they now say these messages were just a "test". To me, it looks like Netflix simply created noise in the market, again with no data, and then when pressured by Verizon to prove their case, Netflix instead decided to stop sending the messages and now release any details. Why? If the problem lies within Verizon, Netflix should let us see the data that shows this and stand behind it. Why back down if they have the data to show where the problem is coming from?

This is just another example of many where all sides simply point the finger at each other and say it's the other guys fault, but then provide zero details to back up their claims. However, that may change soon as Netflix will likely publish network and performance graphs around a peering event, taking place in DC on June 18th, to bolster their argument. At the same time, some ISPs are actively working to release some data to the market, like the internal chart below [Figure 2] that I received from a major U.S. broadband provider, which gives us some more visibility into what's taking place inside an ISPs network.

Netflix's accusation is that ISPs have purposely congested their peering points in order to specifically degrade the Netflix service. What Netflix has failed to be transparent about is that Netflix has always paid to deliver their traffic. CDNs like Akamai, Limelight and Level 3 successfully managed the majority of all of Netflix's video and were responsible for Netflix customer performance. Each of these companies successfully delivered Netflix via all the same transit paths and business relationships equally available to Netflix today. When Netflix took over the routing controls for their video traffic with their own CDN Open Connect, customer performance began to suffer as highlighted in Netflix's own data that they shared with the Washington Post. I added a red circle to the chart to show when the Netflix changes took place and the impact to customer performance by ISPs.

Figure 1.



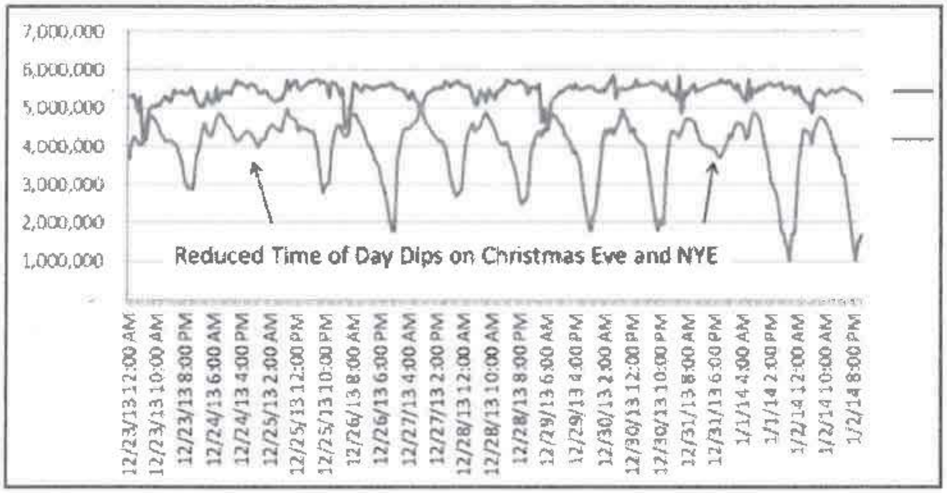
While Netflix was able to convince smaller regional ISPs to voluntarily offer settlement free peering, most large ISPs maintain national/international infrastructures, which require peering policies and consistent business practices to ensure fair and equal treatment of traffic. For the providers Netflix did not qualify for peering, Netflix moved their traffic onto very specific Internet paths that were not capable of handling their massive load and caused the congestion that impacted customers (as highlighted in Figure 2 below). In other words, if Netflix receives free peering, ISP customers receive good performance and high rankings and blogging praise from Netflix. But if Netflix does not receive free peering, ISP customers do not receive good performance and get low rankings and shame from Netflix.

It was Netflix that specifically chose transit paths to those ISPs who refused to give it free peering that it knew (and measured) were not capable of handling an increase in load. In some cases I was told by ISPs that traffic levels increased by 500% in only a few months where normal Internet growth with these same peers was less than 20-30% across an entire year. These ISPs' customers did not request traffic to be served from poorly performing paths. Netflix chose to create, and use, paths that they knew were congested, simply because they were cheaper than using paths that were less congested. While some may not like that decision, Netflix is running a business and like all businesses, cost is a factor in a lot of decisions. I'm fine with Netflix having to make tradeoffs between quality and cost, but it's not true that 100% of every path going into Comcast was "congested".

Some of the many other transit providers I have spoken with confirm this, saying that they could have handled incremental Netflix traffic into Comcast, but that it would have been more expensive than Cogent, which was Netflix's primary transit provider at the time. Even Cogent would not deny they were the cheapest transit provider of all the ones Netflix was using, but as we've all learned, cheap does not guarantee quality. During this same time, Netflix was still using other third-party CDNs for some of their video delivery. These CDNs were delivering the same Netflix service at the same time, to the same locations and with good quality. That is why some customers said their Netflix video was working great, while others said it was buffering and it is also why if some customers used VPNs, their performance improved. Netflix had control over who to give good service to and who to degrade, as shown in this chart below, from a major U.S. broadband provider:

Figure 2: Major U.S. broadband provider

Red is Netflix Video Bitrate delivered via a 3rd Party CDN
Blue is Netflix Video Bitrate delivered via Netflix internal CDN



When Netflix delivered video through similar sized third Party CDNs, customers received a consistent HD video stream 24 hours a day and from the CDNs I have spoken to, none of them had any problems getting Netflix's traffic to the ISPs. When Netflix sent the video stream through their own CDN using their used newly congested transit paths, prime time viewing based on these decisions had buffering and low quality video.

Amongst those in the industry, there is a widely used term "traffic manipulation" and is "one of the most clever and devious of all the [negotiation] tactics" as described in The Peering Playbook. As the playbook details, the problems this traffic manipulation strategy introduces are three-fold. It negatively impacts customers; the levels of Netflix traffic also impacts other services sharing the same path; and if the "traffic manipulation" tactic is successful by Netflix or any other large CDN provider, it will be repeated by others creating further instability on the Internet.

Netflix's point of view is that the Internet has changed a lot since many of these paid interconnect deals were done ten years ago. Today only a few ISPs control the vast majority of the market in the U.S. and Netflix would like to see peering and interconnect business models change. While that's a fine argument to make, Netflix has yet to deliver any proposal or suggest an alternative other than to say it should be free. Netflix only confuses the discussion by involving "net-neutrality" in the debate and opportunistically point fingers at specific ISPs like Verizon and Comcast. But, Netflix has always had all the same delivery options as every major CDN and video provider on the planet. Many of these CDNs and large content sources have large volumes of traffic as Netflix and able to deliver Netflix and other Internet services with high quality service for their customers. The transmission decisions that Netflix makes are just as suspect to what is impacting their customers' performance. Putting all the fault on ISPs is not accurate as both sides share the blame in not being able to make this work.

I've also heard from some that Netflix has told them that they have self-limited their transit decisions to only ISPs without residential access customers. Most CDNs use ISPs like AT&T, Sprint, Centurylink, Verizon and Comcast as transit options to reach the entire Internet, including each other's network. Akamai and Limelight for example are connected to every Tier 1 provider and most Tier 2's to deliver their service. They do not impose these business limitations in order to ensure they deliver services with high quality, so why is Netflix? These are not "peering issues", these are first mile network decisions that Netflix is 100% in control of.

By Netflix limiting themselves to only Cogent, Level 3 and smaller International ISPs, they could find themselves buying capacity that is just not available. "Just upgrade your peering links" is not always the answer due to Internet peering policies as well as concerns that after investing capital, Netflix will just move terabits of traffic again in a few months making the problem start all over. What if Comcast gave Cogent all the capacity it wanted and footed the bill for it, and then the next year, Netflix moved away from Cogent and used Tata instead? Now Comcast would be forced to have to give Tata all the capacity they wanted and this change could happen every year. In fact, over a 3-4 year period, Netflix moved some or all of their video traffic amongst multiple CDNs including Akamai, Limelight and Level 3 and in some cases, due to lower pricing, left one provider only to come back to them a year or two later.

Netflix dominates close to 70% of the long form streaming traffic which is 10x their nearest competitor. This market dominance allows Netflix to use their massive traffic controls in ways to force or demand special free peering privileges from ISPs rather than continuing to include these market based delivery costs in their service as others do. These costs that Netflix is objecting to have always been a cost of doing business for large CDNs in the U.S. That's why to date, no other large CDN like YouTube, Apple, Microsoft, Amazon, Akamai or Yahoo! has come out publicly and backed Netflix's position. Some ISPs, like Google Fiber, have said they think interconnects should be free, but that's not the CDN portion of Google's business, which for years, has done some paid interconnect deals.

Netflix has always paid a portion of their traffic delivery cost just like all of Netflix competitors large and small. Netflix is unhappy that they are being held to the same Internet policies as every other player. With great power comes great responsibility, and if Netflix will be operating one of the largest CDNs in the world, they must start behaving like one of the largest CDNs of the world. If they think the current model is broken or feel that market dynamics have changed enough to where new models needs to be put in place, that's a fair argument. But you can't make that argument and expect any change when you don't put forth any kind of proposal. Netflix says they want changes that are "fair" and rules that are "strong", but those words don't mean anything without details.

Netflix hasn't been clear with their arguments. First it was really about transit, but now they are saying it's about "terminating access monopolies," broadband competition and such. Problem is that is a much different issue and they're having a hard time making that case and tying it to why they must have this or that remedy to lower their own costs. If broadband competition is now their issue, then it clearly is unrelated to net neutrality or the Comcast and TWC merger since the companies don't overlap. There are other ways to go about addressing broadband competition constructively without bad-mouthing ISPs and confusing the public and throwing out made-up regulatory remedies like Title II or strong net neutrality.

If you talk to the major transit providers, CDNs, ISPs and the companies tied up in this debate, many will detail what has been going on behind the scenes with traffic manipulation and only using the data that makes them look good. There is more to it than that, and it's one of the main reasons why those involved won't detail what's really taking place, where the problem lies, what their business motivations are for some of the decisions they make and the impact these decisions have on their bottom line. Remember, Netflix locked in a fixed rate with Comcast, for more than five years, for nearly a third of their traffic, which gives them a clear advantage over any other OTT competitor. So lets not forget the positive impact these interconnect deals are having on Netflix's bottom line. Cheaper costs, lower churn, better quality video and the longest length contract, which I have come across, in the industry.

If Netflix really believes broadband competition is an issue, why make enemies with the companies who you can partner with to address it? To me, it all seems like an irrational strategy, especially when some of the arguments Netflix makes, don't align with what some transit providers, CDNs and data from within ISPs shows. If Netflix wants real transparency, then they need to come out and put their cards on the table and show us what they have. It's easy for anyone to complain and blame the other guy, but just because you might not like your ISP, think your cable bill is too high or have some other reason not to like your ISP, that's not a reason to give Netflix a free pass and not demand they give us the transparency that they themselves keep saying they want.

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Dorian Cole • 16 hours ago

Well, yeah, Netflix is a big - biggest - squeaky wheel. And the public demands Netflix content and their ISP to deliver it, and they like Netflix, but commonly don't like their ISPs, so Netflix has a louder bark, and therefore a better negotiating position. There is nothing unusual about bullies in business, and using unusual tactics to force the issue. Satellite and cable services and broadcast networks do it regularly. And part of business is living with the uncertainty you alluded to in the article, and finding ways to make things less uncertain. Netflix, CDNs, and ISPs are free to negotiate long term contracts that give them certainty of price, performance, and longevity. The question is, "What is standing in the way of their doing that?" It's a shell game until we know the real answer.

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andxx • a day ago

Dan you are saying that the original degradation of service experienced by Comcast and Verizon customers back in September was a result of NFLX switching over their traffic routing to their internal systems and then choosing "congested" connections to those ISPs who did not participate in Open Connect in order to save on the cost of the more expensive "less congested" connections? Seems like a strange business decision given we have all heard that this is a de minimis part of their cost structure and it obviously significantly harmed their end customer experience? Hard for me to rectify it being small cost but big impact on their consumers...what other motivations would NFLX have to do that? Conspiracy theory regarding wanting an ax to wave? Would seem a foolish business decision. Thoughts?

And Brian Roberts has said that the deal they struck w/ NFLX resulted in NFLX paying less...I guess that doesnt necessarily mean Comcast is receiving less since theoretically NFLX could pay them more but still less than they were paying third parties to deliver the traffic previously, but the dramatic improvement of service levels that resulted from the deal doesnt make sense to me if Comcast did not come out better off in the deal?

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Vivien Milat → andxx • a day ago

I think what Dan is saying is a little more extreme.

i.e. that Netflix chose congested paths, not to save money in the short term, but in order to

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