



4876 Santa Monica Avenue, Box 111. San Diego, CA 92017
+1 (619) 225-7882 fax +1 (619) 523-3862

June 22, 2015

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

Electronically Filed

RE: Informal Internet Neutrality Complaint (Commercial Network Services vs. Time Warner Cable)

To Whom It May Concern:

I am the CEO of Commercial Network Services (CNS), a Nevada Corporation. We operate Autonomous System 29697 on the open Internet. We have built out our infrastructure to maintain a presence on industry recognized public Internet peering exchanges (IX) in the US and Europe¹ in order to most effectively communicate with the millions of Internet users connecting through the Internet Service Providers and Broadband Internet Access Service (BIAS) providers who maintain a presence on these IX's. Our network directly peers with more than 1000 networks worldwide², providing end-users on those networks with a very high quality of service compared to what they would otherwise experience over higher latency, more congested and less redundant commercial transit routes.³

We primarily serve algorithmic traders located in more than 160 countries⁴, who use our virtual desktops and servers to host their automated trading applications that require a high quality of service and low latency to the online financial services they use. We also host a variety of other content and services for entities such as a municipal water authority in San Diego County, streaming content such as an AM Radio station feed, and other services, such as web and eMail hosting for (mostly) small business.

¹ See <http://as29697.peeringdb.com/> for details

² See <https://radar.grator.net/as29697/> for details

³ Peering is by nature always at least one more possible route over transit and transit cannot reasonably be considered to be lower in latency or congestion end-to-end vs. direct peering between autonomous systems

⁴ <https://helpdesk.commercialnetworkservices.net/CNSCountries.htm>

We have hosted a popular WebCam of San Diego at www.SunDiegoLive.com on our infrastructure for more than 15 years. The WebCam is a streaming technology requiring the true broadband internet access sold to and expected by BIAS subscribers, that –with modern broadband as advertised-only peering can provide for best quality to the consumer as I will detail further down in this complaint. The webcam is not a for profit venture. It is simply something we do because we can and San Diego is our home.

15 years ago the traffic demands of the webcam were much less than they are today. Today not only is broadband faster, but there are more users and each expects their BIAS provider to honor their obligation to responsibly transport their traffic to their chosen edge provider.⁵

I am writing to initiate an informal complaint against Time Warner Cable (TWC) for violating the “No Paid Prioritization” and “No Throttling” sections of the new net neutrality rules for failure to fulfill their obligations to their BIAS consumers by opting to exchange Internet traffic over higher latency (and often more congested) transit routes instead of directly to the edge provider over lower latency peering routes freely available to them through their presence on public Internet exchanges, unless a payment is made to TWC by the edge provider. These violations are occurring on industry recognized public Internet peering exchanges where both autonomous systems maintain a presence to exchange Internet traffic, but are unable to due to the management policy of TWC. As you know, there is no management policy exception to the No Paid Prioritization rule.

By refusing to accept the freely available direct route to the edge-provider of the consumers’ choosing, TWC is unnecessarily increasing latency and congestion between the consumer and the edge provider by instead sending traffic through higher latency and routinely congested transit routes. This is a default on their promise to the BIAS consumer to deliver to the edge and make arrangements as necessary to do that.⁶

We have requested exchange of Internet traffic with BIAS subscribers on the TWC network at three common public internet exchanges in the United States where both autonomous systems maintain a presence. They are Any2 Los Angeles, NYIIX and Equinix NYC.

TWC has repeatedly refused to peer and instead offered “a commercial transit arrangement that will provide you with a functionally equivalent solution.”⁷

By requiring any payment to peer at a common public internet exchange (a management policy), TWC is violating the No Paid Prioritization rule thru the creation of a paid fast lane to BIAS subscribers on their network by way of their peering policy. That is, despite both autonomous systems having a presence on multiple public Internet exchanges, without receiving a payment TWC will route traffic through higher latency, less redundant and often congested⁸ third party transit routes instead of responsibly exchanging it directly with the edge-provider on behalf of the BIAS subscriber over the direct, lower latency and uncongested peering route the public IX provides.

⁵ See paragraph 27 of the FCC’s Order In the Matter of Protecting and Promoting the Open Internet adopted February 26, 2015 (hereinafter, the “Open Internet Order”)

⁶ See paragraph 28 of the Open Internet Order.

⁷ See exhibit “A”, email transcript between myself and TWC

⁸ It is reasonable to assume this the congestion issue already documented by the commission. However, I will be happy to submit specific details if disputed. (It may be several more pages).

This behavior on a public Internet exchange directly degrades BIAS consumer quality of service by unnecessarily increasing latency and virtually eliminating the possibility that they will be able to enjoy the broadband quality access to the Internet that they are paying for unless the edge-provider has agreed to a “commercial transit arrangement” and paid TWC its ransom.

To be clear, we are not requesting transit service through TWC. Our network already peers with more than 1000 other networks worldwide settlement free and we do not require transit service through TWC. We are requesting peering access to the paying BIAS subscribers on the TWC network so that we can deliver the broadband quality content they are requesting over the (open) BIAS they are paying TWC for.

As you know, latency and congestion affect the maximum possible throughput between the BIAS subscriber and the edge provider they are communicating with. The impact to the BIAS subscriber quality of service can be substantial. Throughput on a single stream TCP connection is limited to the window size divided by latency⁹. Any BIAS circuit can only reasonably be expected to provide the subscribed quality between the BIAS consumer and their edge provider when end-to-end latency and congestion are low. On a 50Mb/sec consumer BIAS circuit, an unnecessary increase in latency of only 14ms will bring the maximum possible throughput available to the BIAS subscriber down to approximately 37Mb/sec¹⁰, despite the BIAS consumer paying the BIAS provider for 50Mb/sec of **open** Internet connectivity. Compare that with a lower latency peering route freely available to the BIAS provider, the maximum possible throughput would be closer to 80Mb/sec if not for the limit of the subscriber BIAS plan.¹¹

In order to provide BIAS subscribers on TWC with the throughput they have purchased and expect over their TWC BIAS circuit to our edge on the open Internet and without violating the No Paid Prioritization rule, open peering is required by TWC at all public Internet exchanges in the United States where they maintain a presence.

By refusing to responsibly accept the superior routes freely available to them on the public IX's without payment, TWC is acting as gatekeeper and degrading our ability to exercise free expression by presenting the San Diego Web Cam to their BIAS consumers who have connected to our edge to experience it. In this specific instance, TWC management policy is preventing the BIAS consumer from receiving content from the San Diego Web Cam (the BIAS consumers chosen- edge) with best possible throughput (and with that quality of service) available to them under the BIAS plan they are paying TWC for. Due to the rules of latency and speed, the higher latency (and often more congested during peak hours) route will always be slower than the peering route. And so by violating the No Paid Prioritization rule, they are also degrading our exercise of free expression to the BIAS consumer in that transit is reasonably expected to always be a slower and a lesser quality route for the BIAS consumer experience.

⁹ <http://routerjockey.com/2009/05/07/how-does-latency-effect-throughput/>

¹⁰ $65535 / 14 = 4681.071428571429$ kbytes/sec = ~36.57Mb/sec - effects of congestion = slower

¹¹ I respectfully offer this as a likely answer to two of the questions raised in paragraph 163 of the Open Internet Order, “We noted that consumers continue to express concern that the speed of their service falls short of advertised speeds, that billed amounts are greater than advertised rates, and that consumers are unable to determine the source of slow or congested service.”

I am unable to estimate how many times over this violation is occurring because TWC's management policy is restricting the open exchange of Internet traffic between BIAS consumers on the TWC network and other autonomous systems maintaining a presence on the same industry recognized public IX's as TWC. The numbers will be staggering, and the damage amplified by the fact that the content on participating autonomous systems likely have a stronger relationship to the BIAS consumer within the geographic region they serve.

For example, two participants on the Any2 IX stand out to me as being of regional importance because they happen to be located in my community. They are American Internet Services and Castle Access. In my 20 years of professional experience working in the local San Diego community, I can confidently declare to the commission that datacenters like these tend to host more content by and for their respective communities, but are denied the ability of open Internet peering with BIAS subscribers in these same communities because, in this case, TWC is acting as a gatekeeper on the public Any2 Internet peering exchange where these autonomous systems all maintain a common presence¹². As I write this, both are unnecessarily routing over transit from a TWC residential cable modem in North San Diego County. I presume it is because these two autonomous systems take issue with the TWC peering policy too (I have not spoken with them). Either way, it is a lost opportunity for the BIAS consumer experience on the open Internet and a violation of TWC's obligation to the BIAS consumer to make the interconnection arrangements necessary to allow access. There are many more specific instances (not necessarily involving TWC) similar to this no doubt repeating over and over again on public Internet peering exchanges all over the United States, and so these two examples I listed are by far not exclusive.

It would be reasonable to assume public safety in communities served by TWC is in some way negatively impacted by TWC management policy. By not responsibly accepting the public peering route freely available to them through their presence on any public IX, TWC is leaving BIAS subscribers in the communities they serve a little 'less connected'¹³ than they need to be, which could potentially prove dangerous in an event which renders transit routes unusable. This could be a time when BIAS consumers need connectivity the most to the autonomous systems that maintain a presence on the open Internet in their respective communities. It may also impact BIAS consumers ability to access e911 over competitive VoIP services which might otherwise be reachable to them. These peering routes would normally be freely available to TWC BIAS consumers if not for a management policy of TWC requiring payment from the edge (knocking on their door) to open them.

For these reasons, I respectfully request that TWC and all BIAS providers be required to adopt an open peering policy on all public Internet exchanges where they maintain a presence.

I expect TWC will respond that they do not have enough capacity on their public IX ports. If that is true then I submit to you that this neglect of their public IX ports (and quite possibly capabilities) is likely a result of their management policy and not subject to exemption.¹⁴

¹² AIS and Castle maintain an open peering policy on Any2, so the only possible reason these autonomous systems are not exchanging traffic over the ideal Any2 peering route is TWC management policy

¹³ Perhaps more than "a little" because in this case, Any2 is the second largest Internet exchange in the United States and the largest Internet exchange on the West Coast

<http://www.coresite.com/solutions/interconnection/Peering-Exchanges/ANY2>

¹⁴ "a little neglect may breed great mischief." (Benjamin Franklin), also quoted in paragraph 21 of the Open Internet Order

As the commission clearly explained in the Open Internet Order¹⁵, “broadband providers not only have the incentive and ability to limit openness, but they had done so in the past.” I cannot agree more and this is another demonstration of that. In order to prevent BIAS providers from exiting the public Internet exchanges for commercial reasons and causing significant harm to the virtuous cycle¹⁶, I further request the commission adopt rules requiring BIAS providers reasonably maintain a presence on industry recognized public Internet peering exchanges located in the regions they serve.

I anticipate there will be objections from the BIAS providers who are not already peering responsibly on the open Internet. However, BIAS providers who are currently peering responsibly already maintain a presence on public Internet exchanges and should incur little burden as a result of these proposed rules.

I read the following public statement from TWC in the Washington Post in response to the news that this complaint may be filed:

"TWC's interconnection practices are not only 'just and reasonable' as required by the FCC, but consistent with the practices of all major ISPs and well-established industry standards," the company said. "We are confident that the FCC will reject any complaint that is premised on the notion that every edge provider around the globe is entitled to enter into a settlement-free peering arrangement."¹⁷

To save time, I will respond now.

It is not possible for any industry, only in existence for ~2 weeks, to have “well-established industry standards”. TWC does not understand, they are no longer an "ISP" - they are a "BIAS" with different obligations to the BIAS consumer. We are not asking to connect to their BIAS subscribers from “around the globe” either. We are standing at three of their doors and they are not opening any of them without payment.

In preparing this informal complaint, I have read and digested the neutrality order many times over and I have faith the commission will move quickly in making this right. For this reason, I have submitted this as an informal complaint. However, if by submitting an informal complaint we in any way wave our rights to re-file as a formal complaint then I respectfully ask you to return this complaint so I may re-file it as a formal complaint.

I remain reachable by email (Barry@CommercialNetworkServices.com) or by telephone at (619) 225-7882 x5200. I appreciate your time and consideration in this matter.

Sincerely,

Barry Bahrami

Barry Bahrami
Chief Executive Officer

¹⁵ See paragraph 79 of the Open Internet Order.

¹⁶ See paragraph 7 of the Open Internet Order.

¹⁷ <http://www.washingtonpost.com/blogs/the-switch/wp/2015/06/16/time-warner-cable-will-be-the-first-to-be-hit-with-a-net-neutrality-complaint/>

Exhibit "A"
(Reads from bottom up)

Dear Mr. Bahrami,

Thank you for returning the application I sent you. Our engineers have examined it, and have determined that your network does not meet the criteria for settlement-free peering laid out in our peering policy. However, as indicated to you previously, Mr. Parris remains ready to discuss a commercial transit arrangement that will provide you with a functionally equivalent solution.

Regards,

Jeff Zimmerman

Senior Vice President and Deputy General Counsel

Chief Counsel, Litigation | Chief Ethics Officer

Time Warner Cable | 60 Columbus Circle

New York, NY 10023

Tel 212.364.8536 | Mobile 646.734.7720

From: Barry Bahrami [<mailto:Barry@CommercialNetworkServices.com>]

Sent: Saturday, June 13, 2015 9:50 AM

To: Zimmerman, Jeff

Cc: matt@deen-law.com; legal@commercialnetworkservices.com; Parris, Barry

Subject: RE: Notice of intent to file FCC complaint [WAS RE: Intro]

Mr. Zimmerman,

I believe you mean peering 'guideline' and not peering policy. Your own peering policy says "This Policy is only a guideline. TWC reserves the right to decline any request or enter into a Peering relationship with any Candidate, whether or not they meet the requirements of this Policy." Anyway I have attached it and I already see where you are going. I do not expect that to work. I filled something like this out

before for TWC. Clearly, our network is more than capable of peering with yours and I intend to prove to the FCC that anything to the contrary from TWC is only a ploy to unreasonably demand paid peering. I know they are itching to get into TWC business so I'm sure it will be good enough for them.

To be frank, with much larger networks than TWC already peering, such as Google, Microsoft, even Cox Internet is onboard, I do not see how you expect to stand a chance with the regulators – explaining exactly how TWC network is no unique to these others that you can't possibly peer without payment (I know you're not a tech so I will just tell you right now, it's not). TWC intentions were made clear when Barry Parris said to me "The issue is I am not going to give you peering. It would be paid peering. ". You can read his own words below. This is the exact thing – on the nail – the FCC is looking for. Are you sure you rather roll those dice?

- 1) TWC enjoys a monopoly providing broadband access to these subscribers
- 2) TWC has a presence on major IX's, which is there for networks to peer just like this [you should already be on the route servers IMHO, but if you're demanding paid peering from everyone then I get why you are not]
- 3) It takes just a few minutes to peer. It can be done before you are done with your coffee
- 4) Peering makes sense because it will give your paying Internet access subscribers better QoS and without costing TWC a dime.

Let's not forget the paying TWC subscribers, who your policy is really affecting. Your subscribers will be extremely upset with TWC come July 4 for the Big Bay Boom. It is the largest Independence day fireworks display on the US West Coast. Multiple barges over San Diego Bay. While Cox Internet viewers are watching in 720p, TWC viewers will see a big note on the screen explaining to them how their ISP is demanding a fee to provide them (the paying subscriber) access to this Internet content, some with a picture and some without. Same thing for every US Navy deployment and homecoming, where TWC viewers from all over the USA tune in. I intend to make this very public on the strong social media following too.

So really I do not understand TWC logic. **Once again, we will be filling a complaint on Monday if TWC is not peering by then. And we intend to follow it thru vigorously, both with the FCC and your subscribers.**

We can enable peering with you in just a couple minutes. Just say the word and we can announce to our TWC viewers why their QoS is suddenly so good.

I know you have been busy working with the large carriers to avoid dealing with the FCC. I feel like I should tell you – don't under estimate the wild card. It will get the FCC in your business much faster. I hope you will bring some sanity to TWC and let us all get on with providing good QoS instead of sorting out FCC complaints.

Thank you,

Barry Bahrami

Commercial Network Services

www.CommercialNetworkServices.com

San Diego, CA: +1 (619) 225-7882 x5200

Los Angeles, CA: +1 (213) 769-1787 x5200

New York, NY: +1 (646) 930-7435 x5200

London, UK: +44 (2035) 191453 x5200

Fax: +1 (619) 523-3862

NOTE: Please be sure and open a support ticket for all new support related issues. I do not monitor my email 24/7/365. To open a support ticket, please login to your CNS control panel and click "Help Desk" at the top, then "Submit Ticket". We are there to help you 24/7/365. Many questions are already answered in our Knowledge Base and Trouble Shooter.

From: Zimmerman, Jeff [<mailto:jeff.zimmerman@twcable.com>]

Sent: Saturday, June 13, 2015 5:21 AM

To: Barry Bahrami

Cc: matt@deen-law.com; legal@commercialnetworkservices.com; Parris, Barry; Zimmerman, Jeff
Subject: RE: Notice of intent to file FCC complaint [WAS RE: Intro]

Dear Mr. Bahrami,

Thank you for your email.

Time Warner Cable's peering policy provides guidance for those Internet networks seeking to interconnect with TWC's Internet network on a settlement-free basis. http://help.twcable.com/twc_settlement_free_peering_policy.html. If you are interested in exploring such a relationship with TWC, the first step is for you to consider whether your network meets the criteria set forth in the policy. If you believe it does, you should fill out the attached Interconnect Request Form, and return it to peering@twcable.com. If it is more convenient for you, you may also return the form to my attention.

Sincerely,

Jeff Zimmerman

Senior Vice President and Deputy General Counsel

Chief Counsel, Litigation | Chief Ethics Officer

Time Warner Cable | 60 Columbus Circle

New York, NY 10023

Tel 212.364.8536 | Mobile 646.734.7720

From: Barry Bahrami [<mailto:Barry@CommercialNetworkServices.com>]

Sent: Thursday, June 11, 2015 5:52 PM

To: Zimmerman, Jeff

Cc: Parris, Barry; Matt Deen(matt@deen-law.com); legal@commercialnetworkservices.com

Subject: Notice of intent to file FCC complaint [WAS RE: Intro]

Importance: High

Mr. Zimmerman,

My name is Barry Bahrami. I am the CEO of Commercial Network Services. We are a hosting company operating out of datacenters in Los Angeles, New York City and London. Our AS is 29697 and it is one of the most connected AS's on the Internet – all settlement free. We are a San Diego company formed in 1995. Many Time Warner subscribers visit our network to view six web cams of San Diego that we host at www.SunDiegoLive.com. The site also has a strong following of military families all over the USA because San Diego is a major base for the US Pacific Fleet and they are able to watch their mothers, fathers, sons & daughters come home from deployment.

The site presents high quality video to users on peering ISP's. And unfortunately, Time Warner is the only real broadband provider in San Diego who does not peer. So about ½ of San Diego County can't view their own webcam in 720p, but much of the rest of the Internet can – including Cox Internet subscribers. Your firm may have already received requests from subscribers to peer with AS29697 because we explain to them exactly why they cannot receive the high quality video on the site.

I have in the past requested peering at our common peering exchanges with Time Warner and have been shut down by a Mr. Barry Parris (cc'd in this email), who is demanding a fee from us. Effectively, your firm is demanding our firm pays a fee to enable your paying Internet access subscribers access to our Internet content over public Internet exchanges. This seems even more absurd because all it is doing is forcing the traffic over costly transit links for both sides, yet it costs nothing to peer on an IX as you well know.

Sir- to make this email (relatively) short. I realize you are unaware of any of this and with the new net neutrality rules taking effect, I wanted give you this courtesy notice. **I intend to instruct our corporate council to file a complaint against Time Warner with the FCC on Monday.**

Time Warner enjoys a monopoly to provide true broadband connectivity to these paying Time Warner subscribers. And trying to charge any network to exchange traffic with your paying internet access subscribers over public IX's is wrong for that reason. It is also your network users requesting the data from our network. Clearly we can't "push" it to them. If your IX capacity is not what it should be, I suspect it may be a result of your policy of demanding paid peering. I'm sure the FCC can sort it out.

I hope a formal complaint with the FCC will not be necessary. My only interest is improving the QoS to everyone. But again, I intend to proceed on Monday. You can find our peering info at <http://as29697.peeringdb.com>. I believe both networks are on Any2, NYIIX and Equinix NYC.

Thank you,

Barry Bahrami

Commercial Network Services

www.CommercialNetworkServices.com

San Diego, CA: +1 (619) 225-7882 x5200

Los Angeles, CA: +1 (213) 769-1787 x5200

New York, NY: +1 (646) 930-7435 x5200

London, UK: +44 (2035) 191453 x5200

Fax: +1 (619) 523-3862

NOTE: Please be sure and open a support ticket for all new support related issues. I do not monitor my email 24/7/365. To open a support ticket, please login to your CNS control panel and click "Help Desk" at the top, then "Submit Ticket". We are there to help you 24/7/365. Many questions are already answered in our Knowledge Base and Trouble Shooter.

From: Parris, Barry [<mailto:barry.parris@twcable.com>]

Sent: Tuesday, September 09, 2014 4:02 PM

To: Barry Bahrami

Subject: RE: Intro

Barry,

The issue is I am not going to give you peering. It would be paid peering.

Barry Parris

Wholesale Content Manager

Time Warner Cable Business Class

(305) 401-5970

From: Barry Bahrami [<mailto:Barry@CommercialNetworkServices.com>]

Sent: Tuesday, September 09, 2014 10:27 AM

To: Parris, Barry

Subject: RE: Intro

Hi Barry,

The traffic varies greatly because of the cam. The cam is my personal hobby that I am able to operate because I own this company. I am able to let it use our infrastructure to stream out. It's at www.SunDiegoLive.com

We have grown tremendously and now have an absolutely massive navy following. It actually maxed capacity (3Gb currently) a couple weeks ago when the Carl Vinson Carrier Strike group went out. It has been growing each time when a navy ship comes or goes.

Anyway, it's come to a point where I need to either peer or throttle both time warner and cox traffic. Time Warner is a local cable company, incidentally the same I have at home. And so I really don't want to throttle it. but I'm not going to throw more money at it either. and so peering is the answer.

I know you're already at Any2 at one Wilshire. Are you at any of these other ones too?

AMS-IX 195.69.147.151 1000

AMS-IX 2001:7f8:1::A502:9697:1 1000
CoreSite - Any2 California 206.72.211.5 10000
CoreSite - Any2 California 2001:504:13:0:0:0:211:5 10000
DE-CIX Frankfurt 80.81.193.207 1000
DE-CIX Frankfurt 2001:7f8::7401:0:1 1000
Equinix New York 2001:504:f::2:9697:1 1000
Equinix New York 198.32.118.227 1000
LINX Juniper LAN 195.66.225.6 1000
LINX Juniper LAN 2001:7f8:4::7401:1 1000
NYIIX 198.32.160.78 1000
NYIIX 2001:504:1::a501:1403:2 1000

Thank you much,

Barry Bahrami

Commercial Network Services

www.CommercialNetworkServices.com

San Diego, CA: +1 (619) 225-7882 x5200

Los Angeles, CA: +1 (213) 769-1787 x5200

New York, NY: +1 (646) 930-7435 x5200

London, UK: +44 (2035) 191453 x5200

Fax: +1 (619) 523-3862

NOTE: Please be sure and open a support ticket for all new support related issues. I do not monitor my email 24/7/365. To open a support ticket, please login to your CNS control panel and click "Help Desk" at the top, then "Submit Ticket". We are there to help you 24/7/365. Many questions are already answered in our Knowledge Base and Trouble Shooter.

From: Parris, Barry [<mailto:barry.parris@twcable.com>]
Sent: Tuesday, September 09, 2014 6:17 AM
To: Barry@CommercialNetworkServices.com
Subject: RE: Intro

Hi Barry,

I don't remember if I wrote you back yesterday. I was sent your email yesterday.

How much traffic do you send to the TWC AS?

BR,

Barry Parris

Wholesale Content Manager
Time Warner Cable Business Class

475 Brickell Ave | Miami, FL 33131

(305) 394-8506 (o) | (305) 401-5970 (m)

www.business.twc.com/carrier



Connect with TWBC:    

This E-mail and any of its attachments may contain Time Warner Cable proprietary information, which is privileged, confidential, or subject to copyright belonging to Time Warner Cable. This E-mail is intended solely for the use of the individual or entity to which it is addressed. If you are not the intended recipient of this E-mail, you are hereby notified that any dissemination, distribution, copying, or action taken in relation to the contents of and attachments to this E-mail is strictly prohibited and may be unlawful. If you have received this E-mail in error, please notify the sender immediately and permanently delete the original and any copy of this E-mail and any printout.