**To: Federal Communications Commission and staff**

**Date: 11-27-2017**

**As requested by FCC CTO, Eric Burger, I am filing this notice of ex-parte presentation regarding WC Document No. 17-108:**

The regulation of Broadband Internet Access via the Title II Order was put into place to proactively prevent ISPs from selectively choosing how "open and free" the Internet is for the consumer. This action was taken as a result of overwhelming feedback from the American People - feedback that is readily quantifiable with the FCC's Electronic Comment Filing System but which is not mentioned anywhere in the Docket.

WC Docket No. 17-108 describes the Internet in a deeply broken manner. The Internet is free and open and always will be irrespective of legislature and FCC regulations because the Internet is not a place nor is it a physical thing. The Internet is an agreement between N number of parties to obey a common code: to proxy data received by one party to another party with the intent to deliver the data to its intended destination without bias or restriction and at the bandwidth rate mutually agreed upon. The failure of one party to follow this code is what results in lost connectivity and the orphaning of a localized network and results in an "Internet Outage" to subset of users. In reality, the Internet isn't "Down" nor "Broken" but instead some parties are simply excluded from it. The Internet is not being stifled or at risk but rather the ability for the common American to be included in the Internet.

This concept of Internet Exclusion manifests itself in many ways. China's "Great Firewall" excludes the Chinese people from accessing content from countries with a Free Press. Countries like Iran and Russia restrict access to social networks to maintain control over their people and for petty political reasons. As such, the citizens of China, Iran and Russia all have some access to Internet content and services but they do not have Internet Access because their Internet Service Provider has broken the common code -- they are excluded from the agreement. Citizens in those countries will illegally rely on VPNs and SSL tunnels to gain Internet Access and be included.

The ability of every American to be included in the Internet has always been in jeopardy -- for a variety of reasons. There are physical proximity constraints that require America to build out infrastructure to rural areas and then there are monopolistic forces that actively work to control the free market and limit competition.

Verizon, AT&T, Comcast and Time Warner Cable have all used their collective power to manipulate the free market options for Internet Service Providers. They use a variety of tactics -- from lawsuits over the technicalities of pole ownership at the municipal level to exclusive agreements with municipalities and good 'ole acquisition and squashing of the competition. These legacy telecom and cable institutions have reluctantly become aware that their lack of control over content and delivery will deprecate them to "dumb pipe status" as technology advances and renders their profitable services undesirable and inferior to the common consumer. As such, the Title II Order was put into place to ensure that the American people can participate in the advancement of technology irrespective of the consequences to large telecom and cable companies.

Rolling back the Title II Order will enable Internet Service Providers to monetize individual packets differently based on content and destination. While Docket 17-108 attempts to compensate for risks by attempting to establish more transparency, industry specialists know that such transparency is unenforceable and unverifiable.

If free market forces applied in the Broadband Service Provider industry, this type of monetization would not be a concern because healthy competition would eliminate such attempts at control. However, since virtually no household in the country has two or more Broadband Service Provider options that offer equivalent quality of service, there is no healthy competition. This lack of competition means that Broadband Service Providers could strong-arm backend deals with common utility providers resulting in hidden fees for their basic water, gas and electrical service without the consumer's awareness.

Comcast has very boldly demonstrated their desire to selectively prioritize packets in recent history. They have used their monopolistic power (as ISP for 25% of American households) to manipulate Netflix into hosting media content on Comcast servers at the cost of millions of dollars per year to Netflix – costs that are rolled into monthly service fees for Netflix users. Netflix had no choice but to comply because Comcast was actively deprioritizing and dropping some of their network packets and limiting bandwidth. This de-prioritization resulted in lower quality video and longer buffering times which are both side effects of packet loss in video streaming protocols. Coincidentally, Comcast is a by-proxy owner of 30% of Hulu, a competing online streaming provider that for a while attempted to adhere to the old school concept of service payments and forced commercial interruptions for consumers. Rolling back the Title II Order will embolden and validate such behavior by Broadband Service Providers.

This simple ability to selectively prioritize a network packet based on content will enable companies like Comcast to apply the same principals to other services whose core business models depend upon Internet access. It is realistic to imagine over the next few years a scenario where smart meters for common utilities rely on local Wi-Fi to transmit a single packet to the utility provider for billing purposes. Currently, utility services like gas, electric and water all require a person to physically drive to a home to read a meter before billing can be processed. The Internet-of-Things technology revolution will slowly remove this requirement for physical access as smarter meters get deployed and homes adopt automation hubs powered by wired and wireless protocols (ZWave, Zigbee, IP, etc). If ISPs are allowed the ability to selectively prioritize packets based on their content and destination then ISPs will be able to restrict transactions based on their perceived value and this is extremely concerning. Packets containing only a few bytes of data could end up costing the consumer the equivalent of gigabytes worth of data, simply because the transmissions of these few bytes of data are required to complete a billing transaction worth tens of dollars per month. Broadband Service Providers are aware that some packets of data are worth more than others and will use their dominant positions over local markets to squeeze out more value from the consumer. The worst part is that the consumer would see this as marginal increases in common services and be otherwise totally unaware of it.

For example, consumers who live in an apartment building whose smart electrical meter relies on Internet connectivity to transmit telemetry for billing purposes could find their utility bills invisibly inflated because the ISP required an additional financial agreement with the utility company to transmit a few bytes of data. Essential services like Home Security Monitoring (a service industry Comcast has recently entered) could very realistically be burdened with hidden fees to compensate for backroom agreements between provider and the consumer's ISP, all in the name of Quality of Service.

This will introduce an additional cost to create a new online service, which will need to be factored into business plans. It will have a measurable effect on software startups looking for venture capital. If the Title II Order is reverted, the ability for the next innovative startup to acquire funding will depend upon business plans that will factor in the expected projected payments to ISPs like Comcast in order to gain access to consumers.

As an American, a Technologist and Entrepreneur, I urge Commissioners to maintain the Title II Order as-is because it is currently the best scenario for the American people. Without it, some Americans will not have actual Internet Access but will instead receive slivers of pre-approved content and services, just like the citizens of oppressive regimes. Broadband Service Providers must be compelled to maintain the ‘common code’ of the Internet and the FCC is the only governmental agency empowered with this capability.

Sincerely,

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