

**Reply Comments**  
**In the Matter of**  
**Safeguarding and Securing the Open Internet**

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## **Introduction**

I welcome the opportunity to submit reply comments to this proceeding.

I submit my comments as a professor of law and, by courtesy, electrical engineering at Stanford University whose research focuses on Internet architecture, innovation, and regulation. I have a Ph.D. in computer science and a law degree and have worked on net neutrality for the past 23 years.

I have not been retained or paid by anyone to participate in this proceeding, and I speak only for myself.

I would welcome the opportunity to discuss these important issues further.

## **Specialized services or Non-BIAS data services**

### **Summary:**

The current proposal seems to allow ISPs to offer paid fast lanes to regular internet apps and services under the guise of “specialized services.”

The FCC’s proposed Open Internet rules ban ISPs from charging applications for a fast lane to the ISPs’ customers. But the Open Internet rules generally do not apply to so-called “specialized services” or “Non-BIAS data services” that are offered over the same last-mile connection as broadband internet access. That’s important: it allows applications to emerge that would not be able to function on the open internet because they need special treatment that the open internet cannot provide.

However, ISPs want to use the specialized services label to offer fast lanes to any application, not just to those that can’t function without it. The current proposal seems to allow that, turning it into a giant loophole.

The FCC needs to restore the nuanced framework for specialized services in the 2010 and 2015 Open Internet Orders and take additional steps to close that loophole.

### **Analysis:**

#### ***What are specialized services?***

In addition to offering broadband internet access service (BIAS), broadband providers might also offer other services that use the same last-mile connection as BIAS to reach customers. For example, a cable operator like Comcast or phone companies like AT&T uses the cable into a customer’s home to deliver phone, television, and internet service. A wireless phone company like Verizon Wireless uses its wireless spectrum to provide phone and internet services to its customer’s wireless devices. In the future, companies might also want to deliver other services over the same last-mile connection.

People would buy these services separately, in addition to their normal Internet access. Phone and cable companies find these services attractive because they can charge the providers of these services extra fees for special treatment.

The FCC’s 2010 Open Internet Order called these other services “specialized services;” the 2015 Order called them “non-BIAS data services.”

Some people use the term “specialized services” as a short-hand to denote other services that are offered over the same last-mile connection as regular broadband internet access service (“other services”). By contrast, others use the term to describe only a subgroup of these “other services” – those that are *not subject to the Open Internet conduct rules*.<sup>1</sup>

I will use the term “specialized service” simply as a short-hand for all of these “other services” (i.e. other services that are offered over the same last-mile connection as regular broadband internet access service), regardless of how these services are treated under the Open Internet framework. I will use the term “legitimate specialized services” to describe other services that are offered over the same last-mile connection as regular broadband internet access service and that are *not subject to the Open Internet conduct rules*.

### *What the FCC should do*

The 2010 and 2015 Open Internet Order adopted a nuanced framework for dealing with specialized services. The FCC should restore that framework, along with some important clarifications.

#### *Restore the nuanced framework in the 2010 and 2015 Open Internet Orders*

The 2010 and 2015 Orders generally allow BIAS providers to offer specialized services, as long as they comply with three conditions that, according to the Orders, are critical for preventing these services from harming the open Internet:

1. Specialized services may not be used to evade the Open Internet rules.
2. Specialized services may not be used to provide a functional equivalent of BIAS as defined in the first sentence of the BIAS definition.
3. Specialized services may not negatively affect the capacity available for, and the performance of, BIAS, both dynamically and over time.

The FCC announced in the orders that it would monitor the provision of these other services to determine whether they violate one of the three conditions above and take enforcement actions if BIAS providers violate these conditions.

Thus, neither the 2010 nor the 2015 Order created a blanket exception for specialized services from the Open Internet conduct rules. Specialized services were only exempt from the 2015 Open Internet conduct rules if they were neither a functional equivalent of broadband internet access nor used to evade the Open internet rules.

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<sup>1</sup> Under the FCC’s 2010 and 2015 Open Internet order, the transparency rule requires ISPs to disclose certain information regarding specialized services.

Even if they passed this hurdle, the FCC still monitored the impact of specialized services on BIAS to ensure they did not negatively affect the capacity available for, and the performance of, BIAS.

#### Close the specialized services loophole for applications that can function on the normal internet

However, simply restoring that framework is not enough.

ISPs around the world have long wanted to use the specialized services label to provide fast lanes to any content, application, or service, even if they can function on the open internet.

Commenters like T-Mobile claim the current proposal allows them to do this.

That would create a giant loophole.

It would allow ISPs to do what the Open Internet rules prohibit – charge regular internet applications, content, and services for a fast lane to the ISPs’ customers.

To close that loophole, the FCC needs to clarify that offering special treatment to content, applications, and services that can typically and objectively function on the open internet constitutes an evasion of the Open Internet rules and is prohibited by the FCC’s rules.

By contrast, offering special treatment to content, applications, and services that objectively cannot function on the open internet does not constitute an evasion of the Open Internet rules. This allows applications to emerge that would not be able to function on the open internet because they need special treatment that the open internet cannot provide, providing a critical safety valve for innovation.

The FCC should adopt a presumption that applications are able to function on the open internet unless evidence shows that the specific application objectively cannot function on the open internet.

This clarification mirrors the dividing line that BEREC, the EU’s top telecom regulator, drew in 2016 to differentiate between legitimate specialized services and specialized services that circumvent net neutrality. That has worked well in practice to prevent circumventions.

#### Exempt ISPs’ legacy telephony and, for fixed ISPs, legacy television services from the Open Internet rules

In a limited exception to the evasion-definition proposed above, fixed and mobile network operators should continue to be allowed to provide special treatment to their facilities-based legacy telephony services (e.g., VoLTE offered by cellular carriers); fixed network operators should continue to be allowed to provide special treatment to their facilities-based legacy linear broadcasting IPTV services.

These services should be grandfathered in as legitimate specialized services that do not evade the Open Internet rules to account for these operators’ reliance interests.

## **The 2010 and 2015 Open Internet Orders clearly prohibited ISPs from offering specialized services that evade the Open Internet rules or provide a functional equivalent to regular broadband internet access service. The FCC needs to restore these critical protections.**

The 2010 and 2015 Open Internet Orders clearly prohibited ISPs from offering specialized services that evade the Open Internet rules or provide a functional equivalent to regular broadband internet access service.

The discussion of specialized services in the 2023 Notice of Proposed Rulemaking omits these critical protections.<sup>2</sup> The Order needs to restore them.

### ***2015 Open Internet Order***

The FCC’s 2015 Open Internet Order stated repeatedly that ISPs may not offer specialized services that evade the Open Internet rules or provide a functional equivalent of regular BIAS. The Commission declared it would monitor the provision of these services to determine whether specialized services violate these conditions and take enforcement action if they do:

*To make it easier to track the different aspects of these concerns, the following quotes are color coded as follows: green: evasion and harm to open internet; light blue: functional equivalent; yellow: monitoring and enforcement.*

“207. [...] We emphasize that we will **act decisively** in the event that a broadband provider **attempts to evade open Internet protections** (e.g., by claiming that a **service that is the equivalent of Internet access** is a non-BIAS data service not subject to the rules we adopt today).” (2015 OIO, para. 207)

“210. We note, however, that non-BIAS data services **may still be subject to enforcement action**. Similar to the Commission’s approach in 2010, if the Commission determines that a particular service is “**providing a functional equivalent of broadband Internet access service**, or . . . **is [being] used to evade the protections set forth in these rules**,” we will **take appropriate enforcement action**.<sup>541</sup> [Fn. 541: *2010 Open Internet Order*, 25 FCC Rcd at 17966, para. 113.]”

212. Nevertheless, non-BIAS data services still **could be used to evade the open Internet rules**.<sup>3</sup> [text of accompanying footnote below] Due to these concerns, we will **continue to**

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<sup>2</sup> 2023 NPRM, paras. 64-65.

<sup>3</sup> Fn. 546 to para. 212 of the FCC’s 2015 Open Internet Order: “*See, e.g.,* Jon Peha Comments at 9-10 (stating that without defining “specialized services,” the non-BIAS data service exemption can create a loophole that can threaten the open Internet); European Digital Rights Comments at 4 (“Any definition of ‘specialised services’ must be robust enough to prevent a ‘back-door’ undermining of net neutrality.”); Letter from Harold Feld, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 14-28, 10-127 at 24 (filed Dec. 19, 2014) (Public Knowledge Dec. 19, 2014 *Ex Parte* Letter) (“As new services evolve, the Commission must prevent ISPs from using specialized services as an excuse to delay upgrades and extract rents from new innovations.”); *see also* Open Internet Advisory Committee, Specialized Services Working Group, Video Set Top Box Case Study Summary, at 6 (2013), <http://transition.fcc.gov/cgb/events/Specialized-Services-Set-Top-Box-5-7-13.pdf> (noting how particular attributes of a service might characterize it as a non-BIAS data service or a Title VI IP-based cable service depending on the circumstances).”

monitor the market for non-BIAS data services to ensure that these services are not causing or threatening to cause harm to the open nature of the Internet. [...]

213. [...] Again, however, we will closely monitor the development and use of non-BIAS data services and have authority to intervene if these services are utilized in a manner that harms the open Internet.<sup>4</sup>

### 2010 Open Internet Order

Similarly, the 2010 Open Internet Order repeatedly discussed the concern that ISPs might try to avoid the application of the Open Internet rules, both generally, when discussing the definition of BIAS, and specifically with respect to specialized services. As explained in more detail in the next subsection, the Commission deliberately structured the 2010 Open Internet rules in a way that allows the FCC to address these concerns.

As the 2010 Order's section on the definition of BIAS points out, ISPs might try to avoid the application of the Open Internet rules in one of two ways:<sup>5</sup>

- (1) By offering a service that does not meet the standard definition of BIAS, but is marketed, provided, or can be used as a "functional equivalent" of standard BIAS.
- (2) By offering a service that does not meet the standard definition of BIAS, but is "used to evade" the Open Internet rules.

To guard against these threats, the Commission carefully structured its rules so they directly apply to such services as well.<sup>6</sup> That's because:

- (1) the 2010 and 2015 Open Internet rules apply to services that meet the definition of BIAS, and
- (2) the 2010 and 2015 Open Internet rules explicitly define the term BIAS to include not just services that meet the *standard definition* of BIAS ("a mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints ...."), but also services that "the Commission finds to be providing a functional equivalent of the service of *standard BIAS*, or that [are] used to evade the protections set forth in [the Open Internet rules]."<sup>7</sup>

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<sup>4</sup> 2015 Open Internet Order, paras. 207, 210-213.

<sup>5</sup> 2010 Open Internet Order, paras. 46-47.

<sup>6</sup> See 2010 Open Internet Order, paras. 46-47 ("46. [...] To ensure the efficacy of our rules in this dynamic market, we also treat as a "broadband Internet access service" any service the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in these rules." (para. 46, explaining the scope of the definition of BIAS)).

<sup>7</sup> 2015 Open Internet rules, § 8.2(a): "*Broadband Internet access service*. A mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in this Part." See also the identical definition of BIAS in 2010 Open Internet rules, § 8.11(a): "Broadband Internet access service. A mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are

Building on these earlier discussions, the 2010 Order’s section on specialized services explicitly highlighted concerns that specialized services might provide a functional equivalent of standard BIAS or be used to evade the Open Internet rules:

*green: evasion and harm to open internet; light blue: functional equivalent; yellow: monitoring and enforcement.*

“112. [...] [S]pecialized services” [] may raise concerns regarding **bypassing open Internet protections**, **supplanting the open Internet**, and enabling anticompetitive conduct.

For example, open Internet protections may be weakened if broadband providers offer specialized **services that are substantially similar to, but do not meet the definition of, broadband Internet access service**, and if consumer protections do not apply to such services.

“114. [...] We would also be concerned by any **marketing, advertising, or other messaging by broadband providers suggesting that one or more specialized services, taken alone or together, and not provided in accordance with our open Internet rules, is “Internet” service or a substitute for broadband Internet access service.**”<sup>8</sup>

The Order committed to monitoring market developments to ensure that specialized services do not “undermin[e] or “threaten[] the open Internet,” and reminded readers that the Open Internet rules already directly apply to services that provide a functional equivalent to standard BIAS or are used to evade the open internet:

“113. [...] We will **carefully observe market developments to verify that** specialized services promote investment, innovation, competition, and end-user benefits **without undermining or threatening the open Internet**. We note also **that our rules define broadband Internet access service to encompass “any service** that the Commission finds to be **providing a functional equivalent of [broadband Internet access service]**, or that is **used to evade the protections set forth in these rules.**” (citing the Order’s earlier discussion of these topics in the section on the definition of BIAS)

***Deep Dive: Services that do not meet the standard definition of BIAS can still be subject to the Open Internet rules.***

Under the 2010 and 2015 Open Internet Order, services that do not look like regular broadband internet access service can still be subject to the Open Internet rules.

That’s because of how the Orders structured the definition of Broadband Internet Access Service (BIAS).

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incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in this Part.”

<sup>8</sup> 2010 Open Internet Order, paras. 112, 114.

The 2010 and 2015 Open Internet rules apply to any service that meets the definition of “Broadband Internet Access Service.”<sup>9</sup>

According to the 2010 and 2015 Open Internet rules’ definition of BIAS, a service can meet the definition of BIAS in one of three ways:<sup>10</sup>

- 1) *Standard BIAS*: The service meets the “standard definition” of BIAS set out in Sentence 1 of the BIAS definition:

“A mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints ....”

- 2) *Functional Equivalent of Standard BIAS*. The Commission finds that the service “provid[es] a functional equivalent of the service described in the previous sentence.”

OR

- 3) *Evasion*. The service “is used to evade the protections set forth in this Part [i.e. the Open Internet rules codified in 47 C.F.R. Part 8].”

In other words, a service that does not meet “standard definition” of BIAS (i.e. sentence 1 of the BIAS definition) can still meet the definition of BIAS and, therefore, be subject to the Open Internet rules, if it provides a functional equivalent of standard BIAS or is used to evade the Open Internet rules.

In particular, a service that does not provide the capability to transmit data to and receive data from *all or substantially all internet endpoints* can still constitute BIAS and be subject to the Open Internet rules.

For example, the “Best of the Web” service discussed in the 2010 Open Internet Order, which provides access to the top 100 websites, does not meet the standard definition of BIAS, because it only transmits data to and receives data from to a limited number of end points on the internet.

However, as the FCC explains, the service would still meet the definition of BIAS.<sup>11</sup>

One might be able to argue that the service provides a functional equivalent to standard BIAS (e.g., for internet novices). In that case, the service meets the “functional equivalent” variant of the BIAS definition.

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<sup>9</sup> 2010 Open Internet Order, para. 44 (“We find that open Internet rules should apply to “broadband Internet access service,” which we define as [definition of BIAS].”) See also the 2015 Open Internet Order’s internet conduct rules. §8.5, §8.7, §8.9, §8.11 all start with the phrase: “Any person engaged in the *provision of broadband Internet access service, insofar as such person is so engaged, shall not ...*” (emphasis added).

<sup>10</sup> 2015 Open internet rules, § 8.2(a) “*Broadband Internet access service*. A mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in this Part.”

<sup>11</sup> 2010 Open Internet Order, para. 47.

The service also meets the “evasion” variant of the definition: A provider of standard BIAS that blocked all websites other than the top 100 websites and all other uses would violate the no-blocking rule. Thus, the “Best of the Web” service is used to evade the Open Internet rules.

In other words, the “Best of the Web” service would meet the definition of BIAS and be subject to the Open Internet rules, even though it does not provide access to all or substantially all end points on the internet.

By contrast, according to the 2010 Order, “services offering connectivity to one or a small number of Internet endpoints for a particular device ... *to the extent the service relates to the functionality of the device*” are unlikely to meet the definition of BIAS.<sup>12</sup> The Order lists “connectivity bundled with e-readers, heart monitors, or energy consumption sensors” as examples.<sup>13</sup>

Consider the connectivity bundled with a heart monitor against the definition of BIAS.

First, heart monitors send data to a limited number of internet end points – the servers of the device manufacturer. They do not “provide[] the capability to transmit data to and receive data from *all or substantially all endpoints*,” so they do not meet the standard definition of BIAS.

Second, the heart monitors envisioned by the 2010 Open Internet Order do not provide a functional equivalent to standard BIAS – the internet connection bundled with a heart monitoring device is limited to transmitting heart monitoring information to the device manufacturer’s servers; it cannot be used to, e.g., surf the internet.<sup>14</sup>

Finally, there is no reason to assume that such a service evades the Open Internet rules as it’s not being used, for example, to create a fast lane for data that would normally go on a broadband internet connection.

So a mobile connectivity service bundled with a heart monitor and used only to transmit heart monitoring information would not be defined as BIAS.

In sum, whether a service meets the standard definition of BIAS does not conclusively determine whether a service is subject to the Open Internet rules. The service can still be classified as BIAS

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<sup>12</sup> 2010 Open Internet Order, para. 47 (emphasis added). The Order’s description of these services ensures that they do not meet the *standard BIAS* or *functional equivalent* variants of the BIAS definition. Since the “services offer[] connectivity [only] to *one or a small number of Internet endpoints* for a particular device,” they do not meet the standard definition of BIAS, which requires that the service “provides the capability to transmit data to and receive data from *all or substantially all endpoints*. And limiting the FCC’s discussion to “connectivity services ... for a particular device ... *to the extent the service relates to the functionality of the device*” (i.e. connectivity used solely to transmit heart monitoring information, download books or audio-books to an e-reader, or transmit energy consumption information) ensures that the services are incapable of providing a functional equivalent to standard BIAS.

<sup>13</sup> Ibid.

<sup>14</sup> It’s worth noting that today, remote heart monitoring generally relies on a patient’s or caregiver’s existing regular internet connection, e.g., by relying on the internet connection of their smart phones or tablets to transmit the heart monitoring data. Alternatively, people can buy a specific device that transmits the data, which seems to include the kind of cellular connectivity envisioned by the FCC. Even these devices, however, recommend using existing WiFi connectivity as a default.

and, therefore, be subject to the Open Internet rules if it provides a functional equivalent of standard BIAS or is used to evade the rules.

### **ISPs want to use the specialized services label to offer fast lanes to apps that can function on the open internet. The FCC needs to close that loophole.**

While the 2010 and 2015 Open Internet Orders explicitly prohibited ISPs from using specialized services to evade net neutrality, the Orders mostly focused on discussing examples where ISPs might do so by offering specialized services that provide a functional equivalent to BIAS.<sup>15</sup>

Since then, a new threat has emerged – that ISPs might use the specialized services label to offer preferential treatment to apps and services, circumventing the rules’ ban on paid prioritization. That would create a giant loophole.

This is an urgent threat. Since 2015, ISPs around the world have expressed their desire to use the specialized services exception this way, including, repeatedly, in Europe and India. In this proceeding, T-Mobile has done the same.<sup>16</sup> The move to 5G will only intensify such calls.

Whether ISPs should be allowed to use specialized services to get around the ban on paid fast lanes was one of the key points of contention in the debate over how to implement Europe’s 2015 net neutrality law.

Contrary to the FCC’s 2010 and 2015 Open Internet framework, Europe’s net neutrality law includes an explicit exception for specialized services that meet certain requirements; services that meet these requirements are not subject to the law’s rules against blocking, discrimination, and paid fast lanes.

In a blog post published the day after the European Parliament passed the law, Deutsche Telekom’s CEO claimed that the law’s specialized services exception allows ISPs to offer preferential treatment for a fee to everyday Internet applications like online gaming, online telephony, online video conferencing, or online video.<sup>17</sup> The CEO went on to add that startups would be happy to give up a few percentage points of their revenue to ISPs for the privilege of being in a specialized services fast lane.

This caused an uproar.<sup>18</sup> Startups, small businesses, investors, public interest groups, digital rights groups, non-profits, and regular Europeans mobilized. Record numbers of Europeans

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<sup>15</sup> See, e.g., 2010 Open Internet Order, paras. 112-114; 2015 Open Internet Order, para. 207 (“[W]e emphasize that we will act decisively in the event that a broadband provider attempts to evade open Internet protections (e.g., by claiming that a service that is the equivalent of Internet access is a non-BIAS data service not subject to the rules we adopt today.” (emphasis added)).

<sup>16</sup> T-Mobile Comments, pp. 24-37. See also fn. 22 below and accompanying text.

<sup>17</sup> Hoettges, 2015, Net Neutrality: Finding Consensus in the Minefield, available at <https://web.archive.org/web/20151031172846/http://www.telekom.com/media/management-to-the-point/291728>.

<sup>18</sup> <https://www.euractiv.com/section/digital/news/deutsche-telekom-chief-causes-uproar-over-net-neutrality/>; <https://techcrunch.com/2015/10/30/guaranteed-good-transmission-quality-vs-paid-prioritisation/>.

participated in a consultation by Europe’s top telecom regulator BEREC over how to implement the law, asking BEREC to prevent ISPs from circumventing the law this way.

When BEREC’s draft implementation guidelines closed that loophole, the CEOs of Europe’s largest telcos and equipment manufacturers threatened not to invest in 5G unless BEREC watered down the guidelines.<sup>19</sup>

But BEREC stood firm. Since then, phone and cable companies have used every review of BEREC’s net neutrality implementation guidelines to push BEREC to remove the language closing the specialized services loophole – to no avail.

They are now trying to create this loophole in the US. The FCC should not let them.

The 2015 Open Internet rules ban ISPs from offering technical preferential treatment (so-called “fast lanes”) to providers of Internet applications, content, and services in exchange for a fee.

The ban on charging apps for a fast lane to the ISPs’ customers is a central component of the 2015 Open Internet rules. Allowing ISPs to sidestep this ban would be a fundamental departure from the way the Internet has operated for the past decades. It would increase the costs of developing new applications, content, and services; fundamentally change the environment for competition, innovation, and free speech online by making it harder for companies and speakers without deep pockets to compete and be heard; and harm all sectors of the economy.

In addition, closing this loophole is critical to ensure that the virtuous circle continues, where the internet continues to evolve so it can support new kinds of apps and services in the future.

The 2023 Notice of Proposed Rulemaking does not seem to recognize this problem. In fact, it can be read to *allow* ISPs to offer preferential treatment to regular applications under the guise of specialized services, and some commenters have interpreted it this way.

***The Commission should clarify that providing special treatment to applications separately from customers’ broadband internet access service evades the Open Internet rules, unless evidence shows that the application objectively cannot function on the regular, open internet.***

The 2015 Open Internet Order clearly prohibited specialized services from evading the Open Internet rules. As explained above, the FCC should restore this framework.

The 2015 Order did not, however, explain how to determine whether providing preferential treatment to specific apps, content, or services evades the rules.

To fix this problem, the Commission should clarify that providing special treatment to content, applications, or services separately from customers’ broadband internet access service evades the Open Internet rules, if the content, application or service can typically and objectively function on the normal internet. The FCC should adopt a presumption that applications are able to

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<sup>19</sup> <https://www.theverge.com/2016/7/10/12139700/telecom-companies-5g-service-european-union-net-neutrality>; [http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc\\_id=16579](http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc_id=16579).

function on the open internet unless evidence shows that the specific application objectively cannot function on the open internet.<sup>20</sup>

Applications such as online telephony, online gaming, online video, online video conferencing, home security services, or virtual reality applications<sup>21</sup> can all function over the normal internet; as a result, offering special treatment to these apps and services separately from customers' broadband internet access service would be considered an evasion of the Open Internet rules.

By contrast, providing special treatment to a remote surgery app separately from a customers' broadband internet access service would not be an evasion of the rules – assuming, a surgeon would perform such a surgery from his home rather than from a hospital. (A hospital's internet access service likely is a so-called “enterprise services,” a type of internet access service to which the Open Internet rules do not apply.) The technical requirements of remote surgery regarding reliability and delay are so stringent they cannot be met over the regular internet.

This standard prevents ISPs from using the specialized services label to circumvent the ban on paid prioritization. It fosters innovation by allowing applications to emerge that cannot function on the normal internet. And it fuels the virtuous cycle by ensuring that ISPs continue to improve the speed and capacity of the regular internet, which in turn allows new applications to emerge that may not be possible today.

[The Order needs to define what constitutes evasion.](#)

Clarifying what constitutes an evasion now is essential.

T-Mobile is already testing offering 5G fast lanes (so-called “5G network slices”) to the self-defined category of online video calling applications.

T-Mobile says this is not yet “commercially available” but is in testing with companies like Dialpad Ai, Google, WebEx, and Zoom.

These video calling apps get a section of T-Mobile's 5G spectrum set aside for them to get better performance. T-Mobile says it plans to offer slices for other applications that run on the general internet, including creating one for online games.

Using new network management capabilities, our 5G SA network can be configured into multiple virtual networks (aka slices) – each with customized network performance characteristics optimized for the unique needs of different types of traffic, such as specialized or enterprise services. Think highly reliable throughput for critical real-time communications where the slightest hiccup in wireless connectivity means lost words ...

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<sup>20</sup> See also Meta 2023 Comments in the OFCOM Net Neutrality Consultation, p. 2 (“Until evidence transparently demonstrates that a specific service objectively cannot function or be supported absent a specialised service, the presumption should be that services can and should be supported by the “best efforts” internet, consistent with net neutrality principles.”), pp. 12-13.

<sup>21</sup> See, e.g., Meta Comments in the OFCOM consultation on net neutrality, pp. 3, (“Meta so far has not seen evidence that specialised services are needed to support any particular new use case for advanced network services, including future metaverse services.”)

or consistent low latency (network responsiveness) for cloud gaming where poor latency can mean “Game Over.”<sup>22</sup>

It’s not quite clear why this kind of sectioning off of the network for select applications is even necessary for general mobile internet services. 5G is a generational jump from 4G. As Cisco describes it, 5G’s bandwidth capacity is up to 1000x higher than 4G; 5G radios can handle 100x the number of devices, has latency 4 to 5X better than 4G, and up to 10X the speed.<sup>23</sup>

Both T-Mobile and Verizon have so much extra capacity on their mobile networks that they sell unlimited 5G connections to people’s homes for less than \$50 a month.

One explanation is that industry watchers and participants view such tests as a first step towards charging app providers for the privilege of getting preferential treatment.

Equipment vendors’ marketing materials regularly tout charging online gaming companies and other app providers for special treatment as one of the ways in which ISPs can make money from 5G technology.

The FCC should make it very clear that ISPs can’t try to use the specialized services exemption to give preferential treatment, including via network slices, to select apps or categories of apps, regardless of whether it is charging for the privilege.

ISPs routinely complain that uncertainty around the general conduct rule and the Commission’s approach to specialized services stalls attempts to develop new services.

Clearly defining what constitutes evasion provides certainty to the market and allows ISPs to channel their energy into increasing the capabilities of their BIAS service and creating new offerings that do not evade net neutrality, such as enterprise features that fall outside of the scope of the FCC’s net neutrality protections.

As the experience with net neutrality in the US and abroad has shown, ISPs generally comply with clear rules, so clearly specifying the boundary between prohibited evasion and allowed specialized services avoids the need for lengthy enforcement proceedings and keeps the costs of regulation low.

[This definition of evasion strikes the right balance.](#)

Again, the FCC should find that charging apps for special treatment evades the Open Internet rules if the app in question can typically and objectively function on the normal internet. The FCC should adopt a presumption that applications are able to function on the open internet unless evidence shows that the specific application objectively cannot function on the open internet.<sup>24</sup>

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<sup>22</sup> <https://www.t-mobile.com/news/network/its-time-to-unleash-network-slicing>.

<sup>23</sup> <https://www.cisco.com/c/en/us/solutions/what-is-5g/5g-vs-4g.html#~how-5g-works>.

<sup>24</sup> See also Meta 2023 Comments in the OFCOM Net Neutrality Consultation, p. 2 (“Until evidence transparently demonstrates that a specific service objectively cannot function or be supported absent a specialised service, the presumption should be that services can and should be supported by the “best efforts” internet, consistent with net neutrality principles.”), pp. 12-13.

This definition of evasion strikes the right balance.

First, this definition correctly identifies practices that would circumvent the Open Internet rules.

Take online video conferencing applications. An ISP that charged video conferencing providers like Zoom, Microsoft Teams, Cisco WebEx, or Google Meet for a fast lane over a customer's regular BIAS connection would violate the Open Internet rules' ban on paid prioritization.

Allowing ISPs to offer the same functionality to video conferencing apps separately from the provider's BIAS offering would reach the same result and create the same problems. Video conferencing services paying for a fast lane over a customer's regular BIAS connection will work better than competing apps. The same goes for video conferencing services paying for a fast lane that's "separate" from BIAS. Apps that cannot afford to pay or do not have the capacity to negotiate and work with ISPs around the country to make their app work in every ISP's fast lane will find it harder to compete. This hurts startups, small businesses, and cash-strapped innovators of any kind, reducing application innovation.

From a consumer's perspective, both practices look the same, too: ISPs could simply bundle the video conferencing app in the separate fast lane with their regular broadband internet access offering, so consumers would not notice a difference between a paid fast lane that is part of their broadband internet access service and one that is not.

During the lockdown-era of the pandemic, Zoom succeeded because it was easier to use and more reliable (among other things) than competing video conferencing apps; all people needed to participate in a Zoom conference was an internet connection and a browser.<sup>25</sup> Would it have been able to outperform incumbent apps like Skype, WebEx, Teams, or Google Meet if those services had been in a fast lane?

But if charging video conferencing apps has the same effect and creates the same problems whether it's offered as part of or separately from a customer's regular BIAS service, banning the first, but not the second makes the ban on paid prioritization meaningless.

That's the essence of evasion.

Second, this definition of evasion maintains the virtuous cycle between improvements in the networks and improvements in applications. Allowing ISPs to charge video conferencing providers for a separate fast lane reduces ISPs' incentives to improve the performance of regular BIAS through clever engineering or capacity upgrades. That's because the better regular BIAS supports video conferencing applications, the less video conferencing apps would be motivated to pay for a specialized service fast lane, even if they can afford to do so. Allowing ISPs to offer a paid fast lane to online video conferencing services would thus hurt not just the competing video conferencing apps that can't afford to pay for a fast lane, but also other applications that would have benefited from the improvement in regular broadband.

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<sup>25</sup> See, e.g., <https://www.npr.org/2021/03/19/978393310/a-pandemic-winner-how-zoom-beat-tech-giants-to-dominate-video-chat>; <https://www.wired.co.uk/article/skype-coronavirus-pandemic>.

In other words, allowing ISPs to move applications off the normal internet at will to give them special treatment would break the virtuous cycle between improvements in applications and subsequent improvements in the network.

Years ago, ISPs argued that online calling, online video, and real-time data would be impossible to deploy without special treatment from the network. For example, in 2015, Verizon told the FCC that specialized services could be “critical” for distance learning and the Internet of Things (IoT).<sup>26</sup>

All of these proved to be false. Online courses and classes work just fine on the normal internet, and smart appliances all turn out to do just fine using the Wi-Fi in people’s houses. Data-heavy app makers figured out how to make these services work on lower-bandwidth connections, and demand for these services drove investment in network upgrades.

Once new capacity was created, application developers invented new uses for that capacity. They could do so, because this capacity was not limited to companies with deep pockets that can pay for special treatment.

This is the virtuous cycle in action.

By contrast, if ISPs had been able to shunt online voice, video, and real-time data into specialized services, they would have created a very different world that would have required app providers to pay ISPs.

That would have slowed innovation, impeded the emergence of competitive apps, raised prices for end users, and made free apps untenable.

Over and over, the internet has demonstrated the power of offering an ever-more powerful general-purpose internet service that allows *all* innovation to flourish without permission from or meddling by ISPs – not just the apps and services identified by ISPs for meriting special treatment.

ISPs such as T-Mobile want to offer special fast lanes to video calling services, ostensibly because T-Mobile thinks those are the most important apps that need low latency. But however much ISPs might like to try to define apps and slot them into categories, that’s not how the internet has developed.

A huge number of online games include the ability to have live video chat with the people you are playing with or against. Are these games or video calling apps? Is Twitch a video service, a game, a texting service, or a video calling service? Hard to say, because it’s all four of them. And all of them work over the open internet.

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<sup>26</sup> See 2015 Open Internet Order, p. 5698, fn. 543, citing Verizon’s comments (“See, e.g., Verizon Comments at 76 (“Specialized services are by definition distinct from the customer’s broadband Internet access service – they merely supplement such service, increasing the range of options available to the consumer and expanding consumer welfare . . . As technology advances and turns concepts such as [...] distance-learning, and the Internet of Things into realities, the ability to offer specialized services could be critical to promoting consumer interests and national policy priorities.”)).

Similarly, AT&T has “been testing quality-of-service adjustments that could ‘ensure resources are allocated to customers who are using a cloud gaming app,’” noting that cloud gaming needs consistent speed and latency.<sup>27</sup> Equipment vendors tout online gaming as a key target for 5G fast lanes called “network slices.”

But online video conferencing or online gaming are not the only services that benefit from low latency.

The hugely successful online design tool Figma lets people remotely collaborate on a design in a web browser at the same time, where seeing other people’s changes in real time is critical – which Figma itself called multiplayer.<sup>28</sup>

Many other web apps include similar technology, including multi-person same time editing in Microsoft Word, Google Docs, and even blogging platforms. Increasingly many other kinds of applications and websites have real-time features, powered by protocols like WebSockets.

Ensuring ISPs make low latency services available to all apps that can function over the open internet in a net neutrality-friendly manner rather than reserving them for specialized service offerings ensures that all uses can benefit from low latency – not just the online games and online video calling apps that have paid ISPs for a specialized service.

In sum, allowing ISPs to offer special treatment to apps that can function on the open internet as a legitimate specialized service creates the same harms for innovation, competition and free speech as fast lanes over customers’ internet connection.

Using this standard, offering special treatment to applications such as online gaming, online telephony, online video conferencing, or virtual reality applications would constitute an evasion of the Commission’s Open Internet rules.

*Fixed and mobile operators’ facilities-based legacy telephony services and fixed operators’ facilities-based legacy TV services should be exempted from the evasion-definition above to honor fixed and mobile operators’ reliance interests.*

In a limited exception to the evasion-definition proposed above, fixed and mobile network operators should continue to be allowed to provide special treatment to their facilities-based legacy telephony services (e.g., VoLTE offered by cellular carriers); fixed network operators should continue to be allowed to provide special treatment to their facilities-based legacy linear broadcasting IPTV services.

These services should be grandfathered in as legitimate specialized services that do not evade the Open Internet rules to account for these operators’ reliance interests.

The legacy mobile telephony services offered by mobile operators as well as the facilities-based legacy fixed telephony services offered by phone and cable companies are now routinely

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<sup>27</sup> <https://www.theverge.com/2022/7/27/23281073/att-no-cloud-gaming-business-matthew-wallace-qos>; <https://www.lightreading.com/oss-bss-cx/at-t-tests-gaming-traffic-prioritization-amid-net-neutrality-debate>.

<sup>28</sup> <https://www.figma.com/blog/how-figmas-multiplayer-technology-works/>.

provided using Internet-Protocol-based technology – technology that is built on and uses the same Internet Protocol that is used to provide broadband internet access service. The same is true for the facilities-based legacy linear television service provided by fixed phone and cable companies. At the same time, these companies use various network practices to improve the performance of these services; these practices would violate the Open Internet rules if they were provided to other online telephony and online video applications.

Online telephony and online video can function on the normal Internet, so without this exception, the legacy phone and television services offered by these companies would fail the test proposed above and be found to evade the Open Internet rules.

However, banning these services now would frustrate network operators' legitimate reliance interests.

Fixed phone and cable companies made significant investments to upgrade their networks so they could offer phone, cable television, and internet services over the same network infrastructure. Before online telephony and online video applications started exerting competitive pressure on legacy fixed telephone and television services, the fixed telephone services offered by cable operators and the television services offered by phone companies were critical for introducing competition into the heavily concentrated local markets for these services. Similarly, mobile carriers made significant investments (e.g., acquiring spectrum) with the expectation that they would be able to offer both mobile telephony and Internet services over that spectrum.

The FCC's Open Internet framework should continue to honor those expectations. Open Internet protections should not deter phone and cable companies from moving these legacy services to modern IP-based technology.

Creating an explicit, limited carve-out for these legacy services is preferable over trying to tweak the definition of evasion so it does not capture these services.

In principle, these services are no different from other services that can function on the normal internet, so there are no other criteria that could be used to meaningfully distinguish them from specialized services that evade that ban. Thus, any definition of evasion that would allow these services to be offered as a specialized service would essentially allow ISPs to offer specialized services fast lanes to *any* application that can function on the open internet, opening a giant loophole that makes the ban on fast lanes meaningless. The only reason to treat these services differently is the reliance interest, so treating them as an explicit exception is the best way to solve that problem.

To prevent BIAS providers from turning this exception into their private loophole, the FCC should make clear that this exception will be interpreted narrowly. This exception is meant to capture the legacy facilities-based telephone and television services provided by ISPs. It does not allow mobile phone companies to provide special treatment to their own online video services, and it does not allow fixed phone and cable companies to provide special treatment to online video or online telephony applications other than their legacy offerings.

Some commenters propose to tie this exception to the regulatory status of these services.<sup>29</sup> However, this might be difficult to specify in a way that captures the services that qualify for this exemption.

Both the 2010 and 2015 Open Internet Orders explicitly pointed to “some broadband providers’ existing facilities-based VoIP and Internet Protocol-video offerings” as examples of specialized services (in 2010) or non-BIAS data services (in 2015) that BIAS providers are allowed to offer under the Order. However, the Orders did not explain the rationale for these decisions.

*The 2023 Notice of Proposed Rulemaking does not seem to recognize the problem and can be read in a way that creates the loophole.*

The FCC’s Notice of Proposed Rulemaking can be read to suggest that offering special treatment to apps that can function on the open internet can be a specialized service that is not subject to the Open Internet rules.

According to the notice,

“We also seek comment on whether to continue excluding non-BIAS data services (formerly “specialized services”) from the scope of broadband Internet access service. In the 2015 *Open Internet Order*, the Commission explained that certain services offered by ISPs that share capacity with broadband Internet access service over ISPs’ last-mile facilities were not broadband Internet access service and provided examples and characteristics of services that, at that time, likely fit within this category of non-BIAS data services. The Commission defined characteristics of these services, explaining that they (1) are not used to reach large parts of the Internet; (2) are not a generic platform, but rather a specific “application level” service; and (3) use some form of network management to isolate the capacity used by these services from that used by broadband Internet access service.”<sup>30</sup>

In short,

- (1) Non-BIAS data services are excluded from the scope of broadband internet access service.
- (2) The Commission defined characteristics of services that “likely fit within this category of non-BIAS data services.”

Not surprisingly, some commenters have interpreted the NPRM as saying that services that exhibit the defining characteristics listed in the Notice are non-BIAS data services to which the Open Internet rules do not apply. Under this interpretation, services with these characteristics could therefore be offered as legitimate specialized service.<sup>31</sup>

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<sup>29</sup> See, e.g., Peha Comments, pp. 12-13 (“A communications service can be considered a specialized service under Open Internet rules if the service is only used to provide a service that is subject to telephone regulations or to cable TV regulations.”)

<sup>30</sup> FCC 2023 NPRM, para. 64 (footnotes omitted).

<sup>31</sup> See, e.g., T-Mobile Comments, pp. 26, 34-37; New America Open Technology Institute Comments, pp. 57-68.

That would be an inaccurate reading of the 2015 Open Internet Order. However, it is not surprising that commenters interpret the NPRM this way.

Open Internet rules apply to services that meet the definition of broadband internet access service.<sup>32</sup> If services exhibiting the characteristics listed in the Order are non-BIAS data services (statement 2) and non-BIAS data services are excluded from the scope of broadband internet access service (statement 1), this means that the Open Internet rules do not apply to these services.

T-Mobile has argued that the service of offering special treatment in the network (aka a “fast lane”) to an app meets the defining characteristics of services that can be offered as legitimate specialized services:

The fast lane offered to a specific app will often be used to reach the servers of that app, so it is “not used to reach large parts of the Internet” (condition 1). While the 2015 Order did not define the terms “generic platform” and “application-level service,” the characteristics of the service are likely optimized for the requirements of that application, so it can fairly be characterized as “a specific ‘application level’ service,” “not a generic platform” (condition 2). And technically, to provide the fast lane, the ISP likely “use[s] some form of network management to isolate the capacity used by these services from that used by broadband Internet access service.” (condition 3).<sup>33</sup>

Nothing in this analysis depends on whether the application can function on the open internet.

Thus, stating that services that exhibit the three defining characteristics can be offered as legitimate specialized services would allow ISPs to offer special treatment to many applications, content, or services that can function on the normal internet – circumventing the ban on paid prioritization.

It would open the loophole, rather than close it.

As this example shows, these characteristics do not reliably define legitimate specialized services that do not evade the Open Internet conduct rules.

These characteristics might have helped identify services that are unlikely to provide a functional equivalent to regular BIAS.<sup>34</sup> They are, however, incapable of reliably identifying specialized services that evade the open internet rules by providing special treatment to applications that can

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<sup>32</sup> 2010 Open Internet Order, para. 44 (“We find that open Internet rules should apply to “broadband Internet access service,” which we define as [definition of BIAS].”) See also the 2015 Open Internet Order’s internet conduct rules. §8.5, §8.7, §8.9, §8.11 all start with the phrase: “Any person engaged in the *provision of broadband Internet access service, insofar as such person is so engaged, shall not ...*” (emphasis added).

<sup>33</sup> See, e.g., T-Mobile Comments, pp. 34-35.

<sup>34</sup> See also T-Mobile Comments, pp. 35-36 (“The distinction between application-level services and generic platforms was originally intended to prevent circumvention of the open internet rules by providers setting up platforms that, although technically not offering access to “all or substantially all” internet endpoints, nevertheless offered access to a very large number of internet endpoints in a way that could supplant general-purpose broadband.”).

function on the open internet and would therefore have been prohibited under the 2010 and 2015 Open Internet Orders.

As a result, they are not helpful, and even counterproductive, and should be deleted from the Order.<sup>35</sup>

Moreover, commenters err when they treat the 2015 Order's three defining factors "generally shared" by specialized services as the test that definitively determines whether a specific specialized service would be allowed under the Open Internet framework.

The 2015 Open Internet Order never suggested that services with these characteristics would always be allowed under the Open Internet framework. Instead, the Order expressly noted multiple times, including immediately before and after discussing the "examples of services and characteristics of those services that, at this time, likely fit into the category of services that are not subject to our conduct-based rules" that the Commission "will act decisively" and "take appropriate enforcement action" "if the Commission determines that a particular service is "providing a functional equivalent of broadband Internet access service, or . . . is [being] used to evade the protections set forth in these rules." In other words, a specialized service that exhibits the three characteristics will nevertheless be prohibited if it is used to evade the Open Internet rules.

“207. [...] While the services discussed below are not broadband Internet access service, and thus the rules we adopt do not apply to these services, we emphasize that we will act decisively in the event that a broadband provider attempts to evade open Internet protections (e.g., by claiming that a service that is the equivalent of Internet access is a non-BIAS data service not subject to the rules we adopt today).

208. We provide the following examples of services and characteristics of those services that, at this time, likely fit within the category of services that are not subject to our conduct-based rules.

209. These services may generally [but not always] share the following characteristics identified by the Open Internet Advisory Committee. [List of the three characteristics]

210. We note, however, that non-BIAS data services may still be subject to enforcement action. Similar to the Commission's approach in 2010, if the Commission determines that a particular service is "providing a functional equivalent of broadband Internet access service, or . . . is [being] used to evade the protections set forth in these rules," we will take appropriate enforcement action."<sup>36</sup>

As explained above, these critical statements are missing from the Notice of Proposed Rulemaking, inviting the misinterpretations discussed above.

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<sup>35</sup> See also T-Mobile Comments, pp. 34-37 (reaching the same conclusion for different reasons).

<sup>36</sup> 2015 Open Internet Order, paras. 210-207.

Finally, trying to specify defining features that reliably identify legitimate specialized services is not necessary under the Open Internet framework established by the 2010 and 2015 Orders.<sup>37</sup> The Orders simply noted that ISPs are generally free to allow other services that are offered over the same last-mile connection as regular BIAS, as long as they do not evade the Open Internet rules or provide a functional equivalent to regular BIAS. While the 2010 Order’s discussion of specialized services noted that services that violate these conditions meet the definition of BIAS, which means the 2010 Open Internet rules directly apply to such services, the 2015 Order simply noted that “similar to the Commission’s approach in 2010,” the Commission would prohibit such services.

By contrast, Europe’s net neutrality law expressly allows ISPs to offer specialized services to applications, content, and services if they meet certain conditions set out in the law, and includes rules made specifically for these services. In other words, the law positively defined the conditions that made specialized services legitimate (i.e. allowed under the law). This meant BEREC’s implementation guidelines had to follow this approach, too.

### **The FCC needs to ensure that “legitimate” specialized services do not negatively affect the performance of and capacity available for BIAS.**

The 2010 and 2015 Open Internet Orders expressed concerns that specialized services might harm the open internet by reducing the capacity available for or the performance of BIAS, either dynamically or over time. Taken together, the Orders included a set of important requirements for specialized services related to their impact on the performance and capacity of broadband Internet access service.

Building on these requirements, the Order should clarify that “legitimate” specialized services may not negatively impact the performance of and the capacity available for regular BIAS provided over the same connection, and it should restore the 2015 Open Internet Order’s disclosure requirements related to specialized services.

The 2023 Notice of Proposed Rulemaking is silent on this important issue.

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<sup>37</sup> See also T-Mobile Comments, pp. 34-37. However, while T-Mobile mentions that the BIAS definition includes services that are used to evade the Open Internet rules (ibid., p.36), its comments generally try to present services that provide a functional equivalent of BIAS as the *only* kind of evasion that the 2010 and 2015 Open Internet Orders were concerned about.

But that’s inaccurate. While the 2010 and 2015 Open Internet Orders sometimes discussed offering a service that provides a functional equivalent to BIAS as an example of evasion, they used it as *a possible* example of evasion – not as *the only one*, and consistently treated both variants in sentence 2 of the BIAS definition as alternative, independent ways to meet the definition rather than a single one. See, e.g., 2015 Open Internet Order, para. 207 (We emphasize that we will act decisively in the event that a broadband provider attempts to evade open Internet protections (e.g., by claiming that a service that is the equivalent of Internet access is a non-BIAS data service not subject to the rules we adopt today).“ (emphasis added)).<sup>38</sup> <https://webfoundation.org/2016/07/four-days-to-save-the-open-internet-in-europe-an-open-letter/>.

*Even “legitimate” specialized services might harm consumers and the open internet by negatively affecting the capacity available for and the performance of BIAS.*

Services that are delivered over the same last-mile connection as a customer’s regular broadband internet access service can negatively impact the capacity available for and the performance of regular BIAS. This is a problem even for “legitimate” specialized services that neither provide a functional equivalent of regular BIAS nor evade net neutrality.

That’s because specialized services are delivered to the BIAS customer over the same last-mile connection as the broadband internet access service – over the same wire into the house (for cable and fixed phone networks) or the same spectrum (for mobile networks). Whether the last-mile connection is wired or wireless, its capacity is finite.

As a result, even “legitimate” specialized services could harm consumers and the open internet, either in the moment or over time.

First, these services might dynamically take away bandwidth from people’s internet connection, which would reduce the performance of their broadband service. As I have explained elsewhere, “[i]n essence, telecom companies would take bandwidth that a customer bought to connect to the Internet and use it for a specialized service that the same person (and, potentially, the provider of the specialized services) is paying for separately. That means people signing up for a specialized service would pay twice for the same bandwidth, and would have less bandwidth available for the websites and Internet apps of their choice. This harms people signing up for a specialized service, and makes it harder for Internet applications, content, and services to reach consumers.”<sup>38</sup>

Second, carriers might allocate more of the last-mile connections’ capacity to “specialized services” over time, e.g. because they can charge both the customers and the provider of these services. To date, the speed and performance of consumers’ internet connections has increased dramatically over time, which in turn has allowed new applications to emerge that weren’t possible before. If ISPs that upgrade their networks channeled most of the new capacity and functionality into specialized services, the capabilities of the open internet would stagnate, breaking this virtuous cycle.

To prevent that from happening, the FCC should state clearly that specialized services should not negatively affect the capacity available for and the performance of BIAS provided over the same last-mile connection, both in the moment and over time.

*The 2010 and 2015 Open Internet Orders share these concerns and include requirements to address them.*

The 2010 and 2015 Order both expressed concerns regarding the impact of specialized services on the capacity available for and the performance of broadband Internet access service and adopted a set of important requirements for specialized services that tackled these concerns.

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<sup>38</sup> <https://webfoundation.org/2016/07/four-days-to-save-the-open-internet-in-europe-an-open-letter/>.

The 2023 Notice of Proposed Rulemaking is silent on these issues.

## 2010 Open Internet Order

The FCC's 2010 Open Internet Order expressed concern that specialized services might negatively affect the capacity and the performance of broadband internet access service, ultimately harming the Internet's ability to serve as an open platform for competition, innovation, and free expression.

The Order expresses the expectation that ISPs would continue to upgrade their broadband internet access service and requires ISPs to disclose the impact of any specialized services on the "last-mile capacity for, and the performance of, broadband Internet access service" to allow the FCC to monitor this problem and to intervene, if necessary:

*Color coding: Concerns about capacity: light blue; transparency obligations: violet; impact on open internet: green.*

"112. [...] In addition, broadband providers may constrict or fail to continue expanding network capacity allocated to broadband Internet access service to provide more capacity for specialized services. If this occurs, [...], the Internet may wither as an open platform for competition, innovation, and free expression. (footnotes omitted)"

"113. [...] We will closely monitor the robustness and affordability of broadband Internet access services, with a particular focus on any signs that specialized services are in any way retarding the growth of or constricting capacity available for broadband Internet access service. We fully expect that broadband providers will increase capacity offered for broadband Internet access service if they expand network capacity to accommodate specialized services. We would be concerned if capacity for broadband Internet access service did not keep pace. We also expect broadband providers to disclose information about specialized services' impact, if any, on last-mile capacity available for, and the performance of, broadband Internet access service. (footnotes omitted)"

"56: We expect that effective disclosures will likely include some or all of the following types of information [...]: Impact of Specialized Services: If applicable, what specialized services, if any, are offered to end users, and whether and how any specialized services may affect the last-mile capacity available for, and the performance of, broadband Internet access service. (footnotes omitted)"

Source: 2010 Open Internet Order, paras. 56, 112, 113.

## 2015 Open Internet Order

Building on the 2010 Open Internet Order, the 2015 Open Internet Order discusses the impact of non-BIAS services on the capacity and the performance of broadband Internet access service in the context of how such services could be used to evade net neutrality protections. As the Order shows, the FCC was concerned that specialized services might harm the open Internet by negatively affecting broadband Internet access service.

As the context of the discussion shows, the 2015 Order views monitoring the impact of specialized services on the performance of and the capacity available for broadband Internet access service as one of the ways in which the Commission could ensure that specialized services did not evade the protections of the open Internet rules or undermine investment, innovation, competition, and end-user benefits. Throughout the Order's discussion, the FCC stressed that it had authority to intervene if its monitoring showed that specialized services were harming the open Internet.

*Color coding: Concerns about capacity: light blue; transparency obligations: violet; impact on open internet: green.*

“210. We note, however, that non-BIAS data services may still be subject to enforcement action. [...] Further, if the Commission determines that these types of service offerings are undermining investment, innovation, competition, and end-user benefits, we will similarly take appropriate action. We are especially concerned that over-the-top services offered over the Internet are not impeded in their ability to compete with other data services.

[...]

212. Nevertheless, non-BIAS data services still could be used to evade the open Internet rules [the accompanying footnote cited concerns about ISPs delaying internet service upgrades, along with other concerns about circumvention of the rules].<sup>39</sup> Due to these concerns, we will continue to monitor the market for non-BIAS data services to ensure that these services are not causing or threatening to cause harm to the open nature of the Internet. Since the 2010 Open Internet Order, broadband Internet access providers have been required to disclose the impact of non-BIAS data services on the performance of and the capacity available for broadband Internet access services. As discussed in detail above, we will continue to monitor the existence and effects of non-BIAS data services under the broadband providers' transparency obligations. (footnotes omitted)

213. [...] Again, however, we will closely monitor the development and use of non-BIAS data services and have authority to intervene if these services are utilized in a manner that harms the open Internet.”

Source: 2015 Open Internet Order, para. 210-213.

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<sup>39</sup> Fn. 546 to para. 212 of the FCC's 2015 Open Internet Order (“See, e.g., Jon Peha Comments at 9-10 (stating that without defining “specialized services,” the non-BIAS data service exemption can create a loophole that can threaten the open Internet); European Digital Rights Comments at 4 (“Any definition of ‘specialised services’ must be robust enough to prevent a ‘back-door’ undermining of net neutrality.”); Letter from Harold Feld, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 14-28, 10-127 at 24 (filed Dec. 19, 2014) (Public Knowledge Dec. 19, 2014 *Ex Parte* Letter) (“As new services evolve, the Commission must prevent ISPs from using specialized services as an excuse to delay upgrades and extract rents from new innovations.”); see also Open Internet Advisory Committee, Specialized Services Working Group, Video Set Top Box Case Study Summary, at 6 (2013), <http://transition.fcc.gov/cgb/events/Specialized-Services-Set-Top-Box-5-7-13.pdf> (noting how particular attributes of a service might characterize it as a non-BIAS data service or a Title VI IP-based cable service depending on the circumstances).”)

In addition, the 2015 Order strengthened the disclosure requirements regarding specialized services under the transparency rule:

“167. In addition, the existing rule concerning performance characteristics requires disclosure of the “impact” of specialized services, including “what specialized services, if any, are offered to end users, and “whether and how any specialized services may affect the last-mile capacity available for, and the performance of, broadband Internet access service.”<sup>413</sup> [Fn. 413: 2010 Open Internet Order, 25 FCC Rcd at 17939, para. 56.] As discussed below, today we more properly refer to these services as “non-BIAS data services.” Given that the Commission will closely scrutinize offerings of non-BIAS data services and their impact on competition, we clarify that in addition to the requirements of the existing rule concerning what was formerly referred to as “specialized services,” disclosure of the impact of non-BIAS data services includes a description of whether the service relies on particular network practices and whether similar functionality is available to applications and services offered over broadband Internet access service.”

Source: FCC 2015 Open Internet Order, para. 167

*Adopting this requirement would align the FCC with Europe’s and California’s net neutrality laws.*

#### EU Net Neutrality Law

Driven by the same concerns as the FCC’s 2010 and 2015 Open Internet Orders, the EU’s net neutrality law explicitly prohibits ISPs from offering specialized services if they negatively affect the capacity and the performance of broadband Internet access service:

“Providers of electronic communications to the public, including providers of internet access services, may offer or facilitate such services only if the network capacity is sufficient to provide them in addition to any internet access services provided. Such services shall not be usable or offered as a replacement for internet access services, and shall not be to the detriment of the availability or general quality of internet access services for end-users.”<sup>40</sup>

As BEREC explains in the law’s implementation guidelines, this means that “[s]pecialised services shall only be offered when the network capacity is sufficient such that the IAS is not degraded (e.g. due to increased latency or jitter or lack of bandwidth) by the addition of specialised services. *Both in the short and in the long term*, specialised services shall not lead to a deterioration of the general IAS quality for end- users.”<sup>41</sup>

The law’s transparency rule requires providers of internet access services to “include in the

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<sup>40</sup> Article 3(5), second subparagraph of the Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users’ rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union (“Open Internet Regulation”), <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R2120&from=EN>

<sup>41</sup> BEREC 2022 Open Internet Implementation Guidelines, para. 116.

contract and publish clear and comprehensible information about how specialised services included in the end-user's subscription might impact the IAS [internet access service].”<sup>42</sup>

### California Net Neutrality Law

Similarly, California's net neutrality law prohibits BIAS providers from offering specialized services that “negatively affect the performance of broadband Internet access service.”<sup>43</sup>

This provision distills the 2010 and 2015 Open Internet Order's discussion and requirements regarding the impact of specialized services on the performance and capacity of broadband Internet access service into more simplified legislative language that captures their essence.

The transparency rule in California's net neutrality law simply copies the text of the 2015 Open Internet Order's transparency rule without providing any additional details on what kinds of disclosure would be required under the law.<sup>44</sup>

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<sup>42</sup> BERIC 2022 Open Internet Implementation Guidelines, para. 139. See Art. 4(1)(c) Open Internet Regulation (“Art. 4(1): Providers of internet access services shall ensure that any contract which includes internet access services specifies at least the following: [...] (c) a clear and comprehensible explanation of how any services referred to in Article 3(5) to which the end-user subscribes might in practice have an impact on the internet access services provided to that end-user; [...] Providers of internet access services shall publish the information referred to in the first subparagraph.”)

<sup>43</sup> SB 822, §3102(a)(2) §3102(2).

<sup>44</sup> SB 822, §3101(a)(8).