

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Closed Captioning of Internet Protocol-	)	MB Docket No. 11-154
Delivered Video Programming:	)	
Implementation of the Twenty-First Century	)	
Communications and Video Accessibility Act	)	
of 2010	)	

**PETITION FOR WAIVER OF PLUTO, INC.**

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## **I. INTRODUCTION AND SUMMARY**

Pursuant to Section 1.3 of the Federal Communications Commission’s (“Commission”) Rules, 47 C.F.R. § 1.3, Pluto, Inc. (“Pluto TV” or “the Company”), by counsel, respectfully requests that the Commission temporarily waive its Internet Protocol (“IP”) captioning rules<sup>1</sup> with respect to Pluto’s service on certain platforms upon which users can access Pluto TV’s content. Specifically, Pluto respectfully requests that the Commission waive the IP captioning rules with respect to programming accessed through Pluto’s platforms for a period that ends one year from the grant of this waiver petition in certain specific cases, and extending to three years from the grant of this waiver petition in other specific cases. Pluto TV is a free service that offers streaming of content over the Internet via the Pluto TV app, a web browser, or integrated into certain platforms. This Petition acknowledges the critical importance of captions, and through the dedicated use of nearly 4000 engineering hours to date, the Company has ensured that more than 90% of active Pluto TV users can access the Company’s content with fully compliant captions.

However, despite the dedicated efforts of the Company, in some cases, its content does not feature the required captions on certain platforms at this time, and the reasons vary. In some cases the platform itself is dated and currently lacks certain core capabilities. For other platforms, the Company, which has fewer than 100 employees, has not yet completed the engineering work because its efforts were focused on the most heavily-used platforms. In still other cases, the platform needs to make available certain software upgrades, and the manufacturers of these platforms have not made such capabilities available, and may never do so. The Company already offers basic captions on certain platforms subject to this waiver

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<sup>1</sup> 47 C.F.R. § 79.4.

request, but cannot currently offer the fully dynamic functions it strives to offer, and which persons with disabilities deserve. The discussion below sets forth the details for each platform for which Pluto seeks a waiver and explains the reasons why the Commission should grant a waiver as to the specific platforms.

The public interest would be served by granting this Petition because it would allow a small and relatively new Company the necessary time to bring its services into full compliance with the Commission's IP captioning rules. The alternative would be to consider end of life procedures for certain of the platforms, which would permanently deny access for those Americans accessing Pluto TV's content in that manner, despite the Company's dedication to continue making its content accessible. The temporary nature of the requested waivers (1 year for some platforms, and 3 years for others) will allow the Company sufficient time to bring captions to the remaining platforms, while acknowledging the need to enable accessibility as expeditiously as possible.

## **II. PLUTO TV OFFERS COMPLIANT CAPTIONS FOR THE VAST MAJORITY OF USERS**

Pluto TV is a free service that offers streaming of content over the Internet via the Pluto TV app, a web browser, or an integration such as Vizio WatchFree. Pluto TV is a content aggregator, licensing third-party video content and organizing the content to provide a unique set of programming options through its apps and online. Pluto TV makes its content available on a variety of its own curated linear channels, such as "The Feed," "Anime All Day," and "Crime Network," and these channels offer viewers everything from classic television shows, such as the "Dick Van Dyke Show," to movies, to live news from CBS and NBC. All of the content on Pluto TV is made or produced by third parties, and the Company is a video programming

distributor under the FCC's IP captioning rules.<sup>2</sup> Accordingly, Pluto TV has acknowledged the importance of, and has made great strides in fulfilling, its obligations to pass through captions across the platforms that can be used to reach its service.<sup>3</sup>

Founded in 2013, the young Company has been working diligently to maximize its reach and ensure compliance with the Commission's IP captioning rules, while coping with limited engineering resources to create apps that function on 28 different platforms.<sup>4</sup> As a company of fewer than 100 employees, Pluto TV is very much a start-up trying to make its mark on the media landscape. Along with the excitement and promise of new technologies comes the difficulty of making the innovative product compatible and accessible across such a diverse array of platforms.

Pluto TV takes seriously the Commission's important IP captioning rules that help ensure all Americans can access covered content that appears online. When the Company learned of its noncompliant captions in January 2018, it devised a plan to bring its content into compliance. Given the Company's limited resources, Pluto TV sought to maximize the benefit to consumers by prioritizing its initial work on captions to those platforms with the most viewers. In tandem with its engineering work to make captions available on its platforms, the Company also has expended great efforts to ensure that content required to have captions under the FCC's rules is in fact provided to Pluto TV with captions. This combined strategy has allowed the small company to make as large of a positive impact as quickly as possible.

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<sup>2</sup> *See id.*

<sup>3</sup> *See* 47 C.F.R. § 79.4(c).

<sup>4</sup> In March of 2019 Viacom acquired Pluto TV.

By focusing first on captions on its most frequently used platforms, Pluto is pleased to report that more than 90% of its users can access its content with fully compliant captions. Thus, users can access fully accessible captions on the following platforms: Amazon Fire TV, Android Mobile, Android TV, Apple iOS, Apple TV, MSN, NowTV, Roku TV, Samsung TV +, and web. With that work complete, Pluto's engineering team has now turned to the remaining platforms. As discussed in detail below, there are certain platforms that are not compatible and will not be in the immediate future. Also, as discussed below, a number of the platforms for which Pluto seeks a temporary waiver already offer basic captions, but they are not currently capable of providing all of the digital styles that allow for optimal accessibility.<sup>5</sup> Pluto is pleased that it is able to offer fully compliant captions and basic captions in many cases, and looks forward to continuing to increase the accessibility of its app across platforms.

### **III. GOOD CAUSE EXISTS FOR A LIMITED WAIVER OF THE IP CAPTIONING RULES ON CERTAIN PLATFORMS**

Although the vast majority of Pluto TV users can access fully compliant captions, certain specific platforms will not be able to be brought into compliance with the Commission's rules in the near- or mid- term. For these platforms, the Company requests a limited waiver so these platforms can be brought into compliance. Pursuant to Section 1.3 of the Commission's rules, the Commission may waive its rules for good cause shown.<sup>6</sup> As discussed further below, there is good cause to justify the one year and three year waivers.

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<sup>5</sup> See 47 C.F.R. § 79.103(c) (listing capabilities related to fonts, character size, and colors, among other requirements).

<sup>6</sup> See 47 C.F.R. § 1.3.

**A. A Waiver of the Commission’s IP Captioning Rules for Specific Platforms for One Year is in the Public Interest**

The Company seeks a temporary waiver of the Commission’s IP Captioning Rules for programming accessed through Pluto’s platforms to date and extending to one (1) year from the grant of this waiver petition for the platforms described below. This limited waiver is in the public interest because it will give the Company sufficient time to complete the engineering work to make compliant captions available, without needlessly delaying compliance. The short duration of the waiver for these platforms reflects the fact that the Company foresees a path forward for all of these platforms and needs only a modest amount of extra time to complete that work. Of course, once Pluto TV has engineered accessible captions on a particular platform, this functionality will be made available to the public, and so the Company expects some of the platforms will be fully compliant well in advance of the one-year mark.

We begin this section with a description of the platforms requiring a one year waiver and then describe why this limited waiver meets the Commission’s waiver standards.

Hisense. Hisense is a manufacturer of smart TVs capable of downloading applications, including the Pluto TV app, but the app does not currently provide any captions on these smart TVs. On these products, Pluto TV has had difficulty with resolving a memory leak issue in the Hisense video player which causes the player to crash after a short time playing.

PS3. Playstation 3 (“PS3”) is a video game system developed by Sony that was introduced in 2006, and which was discontinued in North America in 2016. The system has been replaced by Playstation 4 (“PS4”), on which Pluto TV provides captions. PS3 is a much less advanced system than the newer PS4, and the technical specifications and software present a more challenging ecosystem for which to design compliant caption functionality, and as such, no captions are currently available on PS3.

Samsung Orsay 2013/2014 and Samsung Tizen 2015/2016. Samsung manufactures many consumer electronic devices, and it has continued to update its operating systems. In 2015, Tizen took the place of the Orsay system, and Samsung continues to update its software. PlutoTV has implemented fully compliant captions on the Samsung Tizen 2017/2018 operating systems. However, the older versions of the operating systems present different engineering challenges. These include, for example video playback bugs which cause captions to disappear intermittently and cause the player to crash.

Vizio Via and Vizio Via+ Blink Browser. Caption support is present on the Vizio Via and Vizio Via+ Blink Browser, but there are a few outstanding bugs that are being addressed and currently in engineering. Vizio Via and Vizio Via+ use the Blink browser (on TVs manufactured in 2016 and later). This browser is proprietary to Vizio and only exists on Vizio TVs and all of the required integrations that must be designed are specific just to these browsers. Pluto TV is not currently able to offer fully compliant captions on these platforms, but does offer some basic captions.

Vizio WatchFree. Through a collaboration with Vizio, Pluto TV and Vizio provide a service called Vizio WatchFree, in which users can access various television content through Pluto TV. With WatchFree, the Company does offer basic captions; however, no digital styles are available as of today. Additional time will be needed to make digital styles operational because Vizio has not yet provided support for digital styles which could be leveraged by the Pluto TV app in the manner it is installed on these devices. As soon as Vizio does provide support for digital styles, Pluto TV will update the Vizio WatchFree app to full compliance with digital styles.



In the case of these devices, a one year waiver of the Commission’s IP captioning rules would promote the public interest by providing Pluto TV with the necessary time to continue its hard work in providing fully compliant captions. In the absence of a modest extension of time, the company lacks the engineering and financial resources to bring the captions into immediate, full compliance. Additionally, as explained above, in some cases Pluto will need to wait for certain devices to be updated before the Company will be able to engineer and implement upgraded captions. To date, Pluto has expended nearly 4000 hours of engineering resources to bring the majority of its platforms into compliance, and the remaining platforms present even more substantial engineering challenges.<sup>7</sup> With limited resources, and the need to engineer for a variety of different platforms, critical growth and maintenance demands will compete for the same engineering time and resources that must also address captioning issues.

As discussed above, the platforms for which Pluto TV seeks a one year waiver experience a variety of issues that can be resolved, but additional time is needed in order to carry out the necessary engineering work. Pluto’s endeavors to provide compliant captions on such a variety of platforms and operating systems means that engineering work done for compliance in one instance is not directly transferable to the next project. This is a particularly difficult factor that not only increases the cost of providing closed captions, but also reduces the engineering and financial resources available for other Company needs, such as app maintenance, feature development, and responding to requests from current distribution partners—across 28 platforms.

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<sup>7</sup> The amount of money spent working on captions is confidential, although Pluto is prepared to provide this information to the FCC staff on a confidential basis.

The Commission has stated that “on balance, it is preferable to provide additional time for compliance so that technical capabilities are adequately developed and tested to ensure a seamless viewing experience.”<sup>8</sup> Even when products use the same operating system, particular platforms may nevertheless require certain specifications. These problems are amplified by Pluto TV’s relative small size, and additional time will help ensure a seamless viewing experience.

In terms of increasing accessibility, the Company notes that partially compliant captions are in many cases achievable along the way. Certain of the platforms in this category such as the Vizio and Samsung platforms already offer some basic captions, and the Company anticipates being able to roll out partially compliant captions iterating towards full compliance, specifically relating to the digital styles, over time.

The issue is not simply caption availability on these apps. The current approach to captions implemented by Pluto TV involves HTTP Live Streaming (“HLS”), a sophisticated technology that consumes more resources (e.g. memory, CPU, etc.) than prior, outdated technologies. This provides for the most dynamic captions possible, but the solution to full caption compliance is not simply a matter of adding captions to the app, but rather engineering around complex problems such as memory management on weaker, older devices. Implementing HLS technology allows the Company to provide users with a multi-bit rate stream that works for variable internet speeds, reducing buffering, and ads are stitched in mid-stream as well for a better overall experience that users expect, as it is more similar to standard television

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<sup>8</sup>*Closed Captioning of Internet Protocol-Delivered Video Programming: Implementation of the Twenty-First Century Commc'ns & Video Accessibility Act of 2010*, Petitions for Temporary or Partial Exemption or Limited Waiver, MB Docket No. 11-154, 27 FCC Rcd 9630, 9637, para. 11 (2012).

viewing. This core technology and all new implementations and distributions use this stitched stream app (HLS streams).

For many of the older devices where Pluto is currently distributing its app (specifically PS3, Samsung Orsay, Samsung Tizen 2015/2016, and the Vizio Blink devices), the memory, CPU, and other hardware limitations make integrations difficult. When it comes to engineering for older devices, this often doubles or triples the required efforts to create a working product. Compliance on newer devices, on the other hand, is much easier to accomplish. When a problem arises, this often only requires patching the software, as opposed to completely redesigning core aspects of the app.

With respect to the above platforms, a modest one year waiver of the IP captioning rules is in the public interest and meets the Commission's good cause standard<sup>9</sup> because the Company has demonstrated its dedication to enabling fully compliant captions, but needs additional time to address engineering obstacles, some of which are dependent on actions by third-parties, before implementation is possible. The nature and cost of implementing the required updates in the near term will strain the Company's financial and engineering resources, and in many cases, basic captions are already available. However, despite the challenges Pluto TV sees going forward, the Company anticipates being able to roll out improved captions over the course of the requested one year waiver period, which will benefit the public interest by improving accessibility on an ongoing basis.

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<sup>9</sup> See 47 C.F.R. § 1.3.

**B. A Waiver of the Commission's IP Captioning Rules for Certain Platforms for Three Years is in the Public Interest**

Pluto TV seeks a temporary waiver of the Commission's IP captioning rules for programming accessed through Pluto's platforms to date and extending to three (3) years from the grant of this waiver petition for the platforms described below. These specific platforms that may be used to access Pluto TV present additional barriers to fully compliant captions such that a waiver of the Commission's IP captioning rules for three years would be in the public interest. A three year waiver will provide additional necessary time to complete engineering on these platforms, while still recognizing the importance of the Commission's IP captioning rules. The platforms described below are continuing to decrease in percentage of users as relative to other platforms used to access Pluto TV content, so the percentage of users affected by the lack of fully compliant captions continues to decrease as compared to the number of Pluto TV users as a whole.

Vizio Via and Vizio Via+ Presto Browser. Vizio Via and Vizio Via+ use the Presto browser (on TVs manufactured in 2016 and before). This browser is proprietary and only exists on Vizio TVs, and all integrations are specific just to these browsers. Vizio has moved beyond this browser and now offers the Blink Browser on newer televisions, and the Blink Browser is one of the platforms described above for which Pluto seeks only a one year waiver. Because the Blink Browser is the more modern browser still being deployed in new televisions by Vizio, the Company anticipates a quicker solution to the challenges with that browser, as opposed to the Presto Browser.

Xbox 360. Xbox 360 is a video game console from Microsoft, which has been replaced by the newer Xbox One (Pluto TV is not currently available on Xbox One). Pluto TV has had difficulty with captions on Xbox 360 because is unable to update the app on XBox 360, as

Microsoft closed the store in January of 2018, and is no longer allowing updates to any apps. Without the ability to further update the app, this substantially complicates achieving fully compliant captions.

For these platforms, a waiver of the Commission's rules for three years is justified and in the public interest. Captions are not currently available on these platforms, and to achieve compliance will require significant financial and engineering resources. Even a shorter-term waiver would not be sufficient because limited resources would be better spent ensuring full compliance on the more modern platforms that attract more users than these legacy systems. Solutions to the engineering problems on these platforms will occupy a substantial amount of time while providing accessibility to a relatively smaller audience than if the time and effort were spent bringing other products into compliance.

A limited waiver of the Commission's IP captioning rules will provide a runway to address other critical Company needs, while designing solutions to the particularly challenging engineering problems these platforms present. The waiver is vital to reducing the difficulty and expense of bringing these platforms into compliance. Pluto TV is dedicated to accessibility of its content, but as a relatively nascent technology, the Company must navigate a variety of competing demands for its limited resources.

Bringing these platforms into compliance with the Commission's IP captioning rules continues to be especially difficult because of heightened compatibility problems with these older products that are no longer regularly updated. Pluto TV's popular service requires resources not anticipated by these earlier devices, which makes providing the functionality required by the Commission's rules even more difficult to accomplish. For example, platforms that are underpowered might not support Pluto TV's more powerful modern app, or have not

been updated with the necessary firmware to support HLS streams and Discontinuity Tags, which are core to the Company's service. In the context of a relatively declining percentage of the user-base for Pluto TV on these devices, limited resources are better allocated to ensuring compliant captions on the more heavily-utilized products.

On these older operating systems, the major problems stem from the lack of necessary support, such as a lack of required CPU power to support modern video standards and captions. Pluto's approach to caption integration is according to modern standards as defined by the HLS specifications and older device apps have not been updated to use HLS streams. Pluto does not currently have engineers working in the older standards, which are backwards facing technologies. So, the challenge is basically forcing modern technology into underpowered hardware (and old according to hardware lifespans) which also uses outdated software.

Certain Vizio devices simply do not meet the modern technical requirements for HLS streams, and Vizio will not update these old devices as they no longer update these models' hardware or software, and are currently manufacturing devices with very different technology. Without software changes on these devices, captions will not work on Pluto's app. To circumvent these issues would require Pluto TV to either serve captions on a non-stitched stream (technology that the Company is no longer focused on or staffed for), or update the app to use a stitched stream, which is precisely the core problem, as there are challenges with memory usage and other issues, and these browsers appear to be incompatible with stitched streams. With respect to XBox 360, Microsoft no longer allows updates to the app, so Pluto TV's path forward to add captions for the device is exceedingly complex.

In the absence of a waiver, a highly possible impact would be to consider end-of-life procedures for the Pluto TV service on these specific devices. Pluto TV has been working hard

to bring its products into compliance, but may be forced to shut down service on these platforms rather than risk enforcement proceedings. This would permanently foreclose access to the Pluto TV programming on these platforms by anyone.

Pluto TV already offers its service with fully compliant captions on a variety of platforms. In fact, some users may possess more than one device upon which Pluto TV may be accessed, and accordingly may be able to benefit from captions on another platform, even if they also own one of these devices. While the Company strives to continue to bring all of its offerings into compliance, the public interest is better served by focusing on the more heavily utilized platforms, which may be an alternative means of accessing Pluto TV content for many users.

With respect to these platforms, the requested waiver meets the Commission's good cause waiver standard and is in the public interest<sup>10</sup> because despite substantial work on enabling fully compliant captions, these platforms present significant added barriers to compliance, and affect a relatively lower percentage of active Pluto TV users. The engineering and financial resources required to implement fully compliant captions are high relative to the declining percentage of the user base of these platforms, and the Company's limited resources are better expended to make more heavily-utilized platforms accessible quicker. The lack of updates to the Vizio software and the inability to release a new app in the Xbox 360 store present barriers to compliance that are not within the Company's control, and thus a waiver acknowledging these realities is justified and in the public interest.

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<sup>10</sup> *See id.*

#### IV. CONCLUSION

The Commission's IP captioning rules are a critical means of ensuring accessibility of television content for Americans all over the country. Pluto TV is committed to ensuring that its services promote accessibility across the platforms upon which the Pluto TV app is available. Despite significant engineering progress, as discussed above, certain platforms will need additional time in order to provide access to fully compliant captions. Grant of the requested waivers is in the public interest because the proposed deadlines for compliance will provide necessary time, while ensuring accountability and progress towards the important goal of accessible content.

/s/

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