

**REDACTED – FOR PUBLIC INSPECTION**

October 27, 2014

**VIA ELECTRONIC FILING**

Marlene H. Dortch  
Federal Communications Commission  
Office of the Secretary  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

**Re: *Applications of Comcast Corp., Time Warner Cable Inc., Charter Communications, Inc., and SpinCo for Consent to Assign or Transfer Control of Licenses and Authorizations, MB Docket No. 14-57***  
**REDACTED – FOR PUBLIC INSPECTION**

Dear Ms. Dortch:

Pursuant to the Modified Joint Protective Order in this proceeding,<sup>1</sup> Comcast Corporation hereby submits the enclosed redacted *ex parte* notice containing Confidential Information, Highly Confidential Information, and Video Programming Confidential Information (“VPCI”). The [[ ]] symbols denote Confidential Information, and the {{ }} symbols denote Highly Confidential Information and VPCI. The unredacted, Highly Confidential version of this filing was submitted to the Secretary’s Office under separate cover and will be made available for inspection pursuant to the terms of the Modified Joint Protective Order.

Please contact the undersigned should you have any questions regarding this matter.

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<sup>1</sup> *Applications of Comcast Corp. and Time Warner Cable Inc. for Consent to Assign or Transfer Control of Licenses and Authorizations, MB Docket No. 14-57, Modified Joint Protective Order, DA 14-1464 (Oct. 4, 2014) (“Modified Joint Protective Order”).*

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Respectfully submitted,

/s/ Jessica Greffenius  
Jessica Greffenius  
*Counsel for Comcast Corporation*

Enclosures



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**VIA HAND DELIVERY**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

**Re: *Applications of Comcast Corp., Time Warner Cable Inc., Charter Communications, Inc., and SpinCo for Consent to Assign or Transfer Control of Licenses and Authorizations, MB Docket No. 14-57***  
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Dear Ms. Dortch:

On October 23, 2014, Tony Werner, Executive Vice President and Chief Technology Officer, Comcast Cable; Mark Hess, Senior Vice President, Business and Industry Affairs, Comcast Cable; Lynn Charytan and Jordan Goldstein of Comcast Corporation (“Comcast”); Jonathan Friedman of Willkie Farr & Gallagher LLP; and the undersigned met with the Commission staff copied below regarding issues related to equipment. Led by Mr. Werner and Mr. Hess, we discussed points made in Applicants’ Public Interest Statement relating to the Time Warner Cable Inc. (“TWC”) transaction<sup>1</sup> and Applicants’ Opposition and Response.<sup>2</sup>

We underscored that the transaction will accelerate the deployment of the X1 platform and other advanced video technologies, to the benefit of customers in cable systems that Comcast will be acquiring in the transaction. We discussed the evolution of the Comcast network over the last decade

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<sup>1</sup> See Applications and Public Interest Statement of Comcast Corporation and Time Warner Cable Inc., MB Docket No. 14-57 (Apr. 8, 2014) (“Public Interest Statement”).

<sup>2</sup> See Comcast Corporation and Time Warner Cable Inc., Opposition to Petitions to Deny and Response to Comments, MB Docket No. 14-57 (Sept. 23, 2014) (“Opposition and Response”).

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from delivering analog video services to now delivering all-digital services, which has enabled Comcast to dedicate reclaimed bandwidth for faster Internet, more HD channels, and new IP cable services, among other things.<sup>3</sup> We explained that Comcast is now in the midst of transitioning its video services to all-IP, and described the many benefits of IP, including providing a platform for rapid innovation, enabling more efficient use of bandwidth, customizing the user experience, and, as detailed further below, supporting consumer access to cable services on a wider range of devices. We mentioned that Comcast is readying its networks for the deployment of DOCSIS 3.1, which will enable the delivery of Gigabit broadband speeds,<sup>4</sup> and in response to questions from staff, we noted that, while there is currently little customer demand for Gigabit speeds, competition is driving the deployment of such ultra-fast broadband capability.

We discussed how the X1 platform gives customers unmatched interactive TV functionality, including a state-of-the-art user interface and other product features that revolutionize customers' viewing experiences. We noted that Comcast made a substantial investment to develop the platform, and that Comcast was now offering X1-enabled services across its footprint.<sup>5</sup> We explained that a key objective of X1 was to migrate away from the legacy set-top box model – where navigation, security, and business logic were tied to a single piece of hardware – to a cloud-based model, where many of these features are now resident in cloud-based servers. This has allowed Comcast to innovate far more rapidly than under the legacy model, as new features can be downloaded to the set-top box or run out of the cloud. For example, Comcast is leveraging the X1 cloud-based platform to deliver the first “talking guide” in the MVPD industry, which will assist blind or visually-impaired customers in navigating around the X1 user interface and selecting the services they want to use.<sup>6</sup> Likewise, the X1 platform is enabling support for enhanced parental controls, such as giving parents the ability to use ratings from Common Sense Media and to set parental controls across devices in the home.

In response to questions from staff, we explained that Comcast is still experimenting with various apps on the X1 platform, including some over-the-top and cable apps, but that we have not come to definitive views on the best direction for the platform.<sup>7</sup> We noted customer use of the apps

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<sup>3</sup> Comcast noted in its Public Interest Statement that, as a result of its transition to all-digital, it typically bonds eight QAM channels together in its systems for delivery of high-speed Internet service. *See* Public Interest Statement at 32. However, that understates the situation. As explained during the meeting, Comcast typically bonds a *minimum* of eight QAM channels together in its systems, but in some systems Comcast has bonded 12 or 16 QAM channels.

<sup>4</sup> *See id.* at 35-36.

<sup>5</sup> *See id.* at 79 (noting that “Comcast made an upfront investment of {{ }} to develop the platform”).

<sup>6</sup> *See id.* at 121.

<sup>7</sup> *See* Opposition and Response at 189-191; September 11, 2014 Responses of Comcast Corporation to the Commission’s Information and Data Request (“RFI Responses”), at 122-126.

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has been modest so far – for example, [[

]] And we explained that our research and meetings with others in the industry suggest that apps are not a main focus for interconnected-TV providers; for example, the Apple TV does not feature Apple’s iTunes store and app platform. We explained that developing apps for the X1 involved integration and other work with the app provider to tailor the app for the platform. We emphasized that the devices served by X1, or connected to an X1-capable set-top box, typically can access apps and view over-the-top content. This includes smart TVs, game consoles, Blu-ray players, streaming devices, iOS and Android devices, and laptops/desktops, among others. An X1-capable box does not limit the ability of customers to access apps and over-the-top video services via these other device platforms. We also noted that the X1 platform allows customers to access Internet content using the Send-to-TV feature, which allows a customer to use her X1-capable box to pull up a webpage or content that is accessed using a smartphone or tablet, and view it on the television.

More generally, we discussed Comcast’s strong record of support for retail devices over the years. We noted that Comcast currently supports about 350,000 CableCARDs in retail devices, and that we are committed to ongoing support for CableCARD.<sup>8</sup> We also explained that we have gone above and beyond our CableCARD obligations under the Commission’s rules by supporting delivery of video-on-demand (“VOD”) to retail TiVo devices across our footprint, and we will support this capability in systems we acquire through the transaction. Furthermore, we detailed how the transition to IP is enabling delivery of our cable services on a growing array of third-party devices. Aside from getting the X1 experience on Comcast-supplied set-top boxes, customers also can get the experience on tablets, smartphones, and other customer-owned devices in most X1 markets, and Comcast is working to expand that capability to all of its markets. In this regard, Comcast has developed the Xfinity TV app to allow access within the home to Comcast’s IP cable services (which delivers essentially the entire channel lineup, including all PEG and local broadcast channels) on such devices, and has also launched a product that enables college students to watch live TV and VOD on their laptops, smartphones, and tablets without the need for any set-top box.

In response to questions from staff, {{

}} Comcast has said that it will make available to retail device manufacturers a downloadable security solution for accessing all linear and VOD programming.<sup>9</sup> {{

}} The solution, {{

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<sup>8</sup> See Opposition and Response at 186-188; RFI Responses at 127-128.

<sup>9</sup> See Letter from Jordan Goldstein, Comcast Corporation, and Matthew Zinn, TiVo Inc., to Marlene H. Dortch, FCC, CS Docket No. 97-80, MB Docket No. 10-91 (July 14, 2014).

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}} is the same solution that Comcast will be using in its own IP set-top boxes. {{

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In further response to questions from staff, we explained that Comcast's downloadable security solution {{

}} Among other things, the Comcast solution will be used exclusively with IP cable services (Comcast will continue to use CableCARD-enabled set-top boxes and digital transport adapters ("DTAs") for delivery of QAM-based cable services). Regarding Comcast's plans for the cable systems Comcast will be acquiring from Charter, we explained that Comcast did not intend to use Charter's downloadable solution in those systems. Rather, Comcast planned to migrate those systems over to Comcast's downloadable solution over time. We also discussed Comcast's request that, to the extent necessary, the Commission grant Comcast the benefit of the *Charter Waiver Order* through April 18, 2016 in order to give Comcast time to migrate the acquired systems over to the Comcast solution.<sup>10</sup> During this additional time, Comcast does not intend to deploy any new integrated set-top boxes, and will deploy only CableCARD devices or those using Comcast's new downloadable solution; however, Comcast noted that some limited inventory received from Charter might have to be deployed in conjunction with post-closing integration, i.e., to support existing customer orders.

We also discussed Comcast's strong support for TV Everywhere ("TVE") services on customer-owned devices. Comcast provides authentication services for more than [[ ]] different program networks on up to [[ ]] different device platforms.<sup>11</sup> This includes support for both programmer apps and websites. For example, HBO Go is authenticated on the HBO website, as well as iOS and Android devices, Apple TV, Xbox 360, Kindle Fire, and Samsung smart TVs. Comcast also makes its own TV Everywhere services available via the Xfinity TV website and TV Go app. The website and app include thousands of on-demand assets and more than approximately 60 live TV channels, and are supported on a variety of devices. The Xfinity TV website can be accessed on devices using Internet Explorer, Firefox, Chrome, and Safari browsers. The Xfinity TV Go app is available on iOS and Android smartphones and tablets and Kindle Fire. Comcast's TVE services are popular with customers. We noted that there have been over [[ ]] unique signed-in users of

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<sup>10</sup> See Public Interest Statement of Comcast Corporation and Charter Communications, Inc., Charter-to-Comcast Exchange Transaction, MB Docket No. 14-57, at 18 (June 4, 2014); see also Letter from Kathryn A. Zachem, Comcast Corporation, to Marlene H. Dortch, FCC, MB Docket No. 14-57 (July 2, 2014).

<sup>11</sup> See Opposition and Response at 183-186; RFI Responses at 111-121. Authentication services verify that (i) a consumer trying to access TVE video programming over the Internet is a Comcast customer, and (ii) the video programming the customer is attempting to access is part of that customer's cable service package.

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TVE services across Xfinity.com, Xfinity TV Go, and authenticated programmer apps and websites so far this year, a [[ ]] increase over last year. In response to a question from staff we confirmed that when we authenticate a programmer's own app or website, we allow the customer to have access to whatever content is consistent with that customer's cable subscription.

With respect to TVE rights, we noted in response to questions that these rights sometimes involve substantial negotiation concerning what rights we are able to obtain from programmers or studios; how customers are authenticated; on what platforms and devices customers may be authenticated (which is often driven by rights issues); whether the programmer has an acceptable privacy policy in place when it authenticates our customers on its site; and other issues. These negotiations can be complex, and coming to agreement can take time.<sup>12</sup>

Comcast typically enters into an agreement with a device platform provider where Comcast is seeking the right to include its own Xfinity app on the device.<sup>13</sup> In determining whether to enter into a direct agreement with a device platform provider for its own app, Comcast will take a number of considerations into account, including, among other things, the platform's usage and performance in order to assess whether the platform is likely to add value for subscribers and assess the availability of resources to build an app for that platform; whether the platform is able, and the device platform provider is willing to, respect the integrity of Comcast's look-and-feel in Comcast's own app; whether Comcast can ensure high quality customer service on the platform; and whether the platform can deliver Comcast services consistent with applicable regulatory requirements, such as closed captioning.

In response to questions from staff, we explained that, with respect to programmer apps, the programmer, not Comcast, is responsible for developing its own app for different device platforms. To ensure that the authentication process goes smoothly, Comcast and the relevant programmer (or its vendor, such as Adobe or Akamai) will engage in some amount of integration work, which typically takes two to three months. We also explained that, while authenticating a programmer app on an additional device typically does not involve significant technical hurdles, it can raise privacy issues regarding the device maker's access to our customers' data and the device maker's use of that data for "targeting" purposes. With respect to Comcast's own app, Comcast is responsible for developing the app for different device platforms, and will incur costs for the initial development and deployment of the app, as well as updates and feature enhancements and ongoing maintenance. Comcast has been expanding the range of devices on which customers can access TVE services. Comcast initially focused its TVE efforts on those platforms with the greatest customer usage (tablets and smartphones), and has been integrating with new device platforms over time, including Apple TV and Xbox. With

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<sup>12</sup> See Letter from Kathryn A. Zachem, Comcast Corp., to Marlene H. Dortch, FCC, MB Docket No. 14-57, at 3 (Oct. 16, 2014).

<sup>13</sup> See RFI Responses at 120.

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respect to Roku, we explained that Comcast currently authenticates certain programmer apps on that platform, and {{

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Finally, we discussed the role of industry standards in the set-top box marketplace. We explained that Comcast is an active participant in many standards bodies, including, among others, W3C, SCTE, MPEG, and DLNA, and is also active in numerous open source software initiatives. We noted that standards bodies play an important role in developing technologies that are widely used in cable set-top boxes, such as MPEG video standards and standards for closed captioning, emergency alerts, and cable connectors.<sup>14</sup> In addition, we discussed the increasing use of open sources. As noted, a key goal of X1 was to migrate to open, web-centric solutions. For example, X1 runs on top of the Reference Design Kit (“RDK”), which is a pre-integrated software platform based upon a collection of open source modules, including Linux and others. RDK includes common components, but also gives operators the flexibility to select their own components, such as the DRM, video player, and user interface. We noted that RDK is made available on a free, shared-source license, and now has over 200 licensees. We also underscored that the development of RDK, like the development of DTAs, is providing benefits to cable operators across the industry, including smaller cable operators.<sup>15</sup>

Please direct any questions to the undersigned.

Respectfully submitted,

/s/ Kathryn A. Zachem

Senior Vice President,  
Regulatory and State Legislative Affairs  
Comcast Corporation

cc: Allen Barna  
Jim Bird  
Tim Brennan  
Steven Broeckaert

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<sup>14</sup> See RFI Responses at 106-110.

<sup>15</sup> See Opposition and Response at 179-183. Comcast estimates that over 5.5 million DTAs have been sold to small and mid-sized cable operators, at attractive pricing enabled by Comcast’s innovation and scale, and are playing an important role in driving the transition to all-digital service across the industry.

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