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REDACTED – FOR PUBLIC INSPECTION

December 22, 2014

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: 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

Dear Ms. Dortch:

Pursuant to the *Second Amended Modified Joint Protective Order*¹ (“*Modified Joint Protective Order*”) in the above-captioned proceeding, DISH Network Corporation (“DISH”) hereby submits a public, redacted version of its December 22, 2014 Reply. The {{ }} symbols denote where Highly Confidential Information has been redacted, and the [[]] symbols denote where Confidential Information has been redacted. The Highly Confidential and Confidential versions of this filing are being simultaneously filed with the Commission and will be made available pursuant to the terms of the *Modified Joint Protective Order*.

¹ Applications of Comcast Corp. and Time Warner Cable Inc. for Consent to Assign or Transfer Control of Licenses and Authorizations, Docket No. 14-57, *Second Amended Modified Joint Protective Order*, DA 14-1639 (Nov. 12, 2014) (“*Modified Joint Protective Order*”).

Ms. Marlene Dortch
December 22, 2014
Page 2 of 2

Please contact me with any questions.

Respectfully submitted,

Sincerely,

A handwritten signature in black ink, reading "Stephanie A. Roy". The signature is written in a cursive style and is positioned above a thin horizontal line.

Pantelis Michalopoulos
Stephanie A. Roy
Counsel for DISH Network Corporation

Enclosure

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Applications of)
)
Comcast Corporation and Time Warner) MB Docket No. 14-57
Cable Inc.)
)
For Consent To Assign or Transfer Control)
of Licenses and Authorizations)

REPLY OF DISH NETWORK CORPORATION

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December 22, 2014

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Applications of)	
)	
Comcast Corporation and Time Warner Cable Inc.)	MB Docket No. 14-57
)	
For Consent To Assign or Transfer Control of Licenses and Authorizations)	

REPLY OF DISH NETWORK CORPORATION

“We know that no one ever seizes power with the intention of relinquishing it.”
George Orwell, 1984

INTRODUCTION

DISH Network Corporation (“DISH”)¹ replies to the Opposition to Petitions to Deny and Response to Comments (“Opposition”) filed by Comcast Corporation (“Comcast”) and Time Warner Cable, Inc. (“Time Warner Cable” or “TWC”) (collectively the “Applicants”) in the

¹ DISH is a competitor in the multichannel video programming distributor (“MVPD”) market with Comcast, TWC, and Charter Communications, Inc. (“Charter”), and is a purchaser of content both from Comcast and from its NBCUniversal division. DISH is also a competitor in the online video market with Comcast, TWC, and Charter. For these and other reasons described herein, DISH is a party in interest under Section 309(d)(1) of the Communications Act. *See* 47 U.S.C. § 309(d)(1). DISH filed a Petition to Deny this merger. *See* DISH Network Corporation, Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014) (“DISH Petition” or “Petition”).

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above-referenced proceeding.² The 80,000 plus comments from consumers and the 22 substantive Petitions to Deny make clear that a diverse group of stakeholders warn against the merger.³ Consumers don't want it,⁴ programmers don't want it,⁵ other MVPDs don't want it,⁶

² 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”).

³ These figures count only individuals and organizations that have filed directly with the Commission. In addition, almost 600,000 public comments have been submitted through Common Cause, Consumers Union, DailyKos, Demand Progress, Free Press, Media Mobilizing Project, Presente, and The Blaze. See Press Release, Consumers Union, Merger Opponents Have Submitted Nearly 600,000 Public Comments to FCC (Dec. 19, 2014) (“Consumers Union Press Release”), available at <http://consumersunion.org/news/comcast-merger-opponents-have-submitted-nearly-600000-public-comments-to-fcc/>. All told, more than 680,000 individuals and organizations in this country oppose this merger enough to formally register their opposition to it with the Commission. *Id.*

⁴ See, e.g., Consumer Federation of America, et al., Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); Consumers Union and Common Cause, Joint Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); Future of Music Coalition and Writers Guild of America, West, Inc., Joint Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); Free Press, Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014) (“Free Press Petition”); Greenlining Institute, Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); Los Angeles County, California; Montgomery County, Maryland; The City Portland, Oregon; and Ramsey-Washington Counties Suburban Cable Communications Commission, Joint Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); Public Knowledge and Open Technology Institute, Joint Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014) (“PK OTI Joint Petition”); Sports Fans Coalition, Petition to Deny and Comments in Opposition, MB Docket No. 14-57 (Aug. 25, 2014); Parents Television Council, Citizens for Community Values, American Decency Association, Morality in Media, Illinois Family Association, American Family Association of Pennsylvania, and Janice Crouse, Ph.D, Joint Comments, MB Docket No. 14-57 (Aug. 25, 2014). A Consumer Reports poll released last June found that just 11 percent of the public supports the merger while more than 54 percent oppose it. See Consumers Union Press Release.

⁵ See, e.g., ABC Television Affiliates, CBS Television Network Affiliates, and FCB Television, Reply Comments, MB Docket No. 14-57 (Sept. 24, 2014); Letter from Catherine Carroll, Discovery Communications, to Marlene Dortch, FCC, MB Docket 14-57 (Sept. 4, 2014); WeatherNation TV, Inc., Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); RFD-TV, Comments, MB Docket No. 14-57 (Aug. 25, 2014); Sinclair Broadcast Group, Inc., Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); Tennis Channel, Inc., Comments, MB Docket No. 14-57 (Aug. 25, 2014); NBC Television Affiliates, Comments, MB Docket No. 14-57 (Aug. 25, 2014); Monumental Sports and Entertainment, Comments, MB Docket No. 14-57 (Aug. 25, 2014); Independent Film & Television Alliance, Comments, MB Docket No. 14-57 (Aug. 25,

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OVDs don't want it,⁷ and advertisers don't want it.⁸ Indeed, on December 3, 2014, a broad coalition of consumer advocates, private companies, labor unions, and industry organizations launched the "Stop Mega Comcast Coalition" to oppose the proposed merger between Comcast and TWC.⁹ The Coalition is unified in believing that consumers, competition, and innovation will be severely harmed by combining the nation's two largest cable-and-broadband companies; that no set of conditions can alleviate those harms; and that the Federal Communications Commission ("FCC" or "Commission") should reject the merger.¹⁰

2014); Entravision Communications Corp., Comments, MB Docket No. 14-57 (Aug. 25, 2014); The Blaze, Inc., Comments, MB Docket No. 14-57 (Aug. 25, 2014).

⁶ See, e.g., CenturyLink, Inc., Comments, MB Docket No. 14-57 (Aug. 25, 2014); Independent Telephone & Telecommunications Alliance, Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); RCN Telecom Services, LLC, Grande Communications Networks, LLC, and Choice Cable TV of Puerto Rico, Petition to Deny Applications or Condition Consent, MB Docket No. 14-57 (Aug. 25, 2014).

⁷ See, e.g., COMPTEL, Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); Netflix, Inc., Petition to Deny, MB Docket No. 14-57 (Aug. 27, 2014) ("Netflix Petition"); Frontier Communications, Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014); Cogent Communications Group, Inc., Petition to Deny, MB Docket No. 14-57 (Aug. 25, 2014) ("Cogent Petition").

⁸ See e.g., Viamedia, Comments in Support of Conditions, MB Docket No. 14-57 (Aug. 25, 2014).

⁹ See *Stop the Merger*, Stop Mega Comcast Coalition, www.stopmegacomcast.com (last visited Dec. 20, 2014). The Coalition's members include Common Cause, Consumer Action, Consumer Federation Of America, Consumers Union, DISH Network Corporation, Engine, FairPoint Communications, Future of Music Coalition, Greenlining Institute, Hargray Communications Group, Independent Telephone & Telecommunications Alliance ("ITTA"), LPTV Spectrum Rights Coalition, Media Alliance, National Alliance for Media Arts & Culture, National Consumer Law Center, NTCA-The Rural Broadband Association, Open Technology Institute, New America Foundation, Parents Television Council, Public Knowledge, The Blaze, The National Asian American Coalition ("NAAC"), The Rural Broadband Alliance ("RBA"), The Sports Fans Coalition, WeatherNation TV, Writers Guild of America, East, Writers Guild of America, West, and Z Living.

¹⁰ See Press Release, Stop Mega Comcast Coalition, Stop Mega Comcast Coalition Urges FCC and DOJ to Reject Comcast-Time Warner Cable Merger (Dec. 3, 2014), *available at*

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The Commission’s transaction review comes down to a simple question: does the merger serve the public interest? Based on the facts and the law, the answer is straightforward: no. As the petitions and comments demonstrate, high-speed cable broadband connections are the lifeblood of over-the-top (“OTT”) video services that typically target national audiences. For that reason, among others, the relevant geographic market for this transaction is *national*. Furthermore, the relevant product market should include only those services capable of supporting the robust online video services that consumers demand, which requires a household to have actual and consistent download speeds of at least 25 Megabits per second (“Mbps”). If approved, the combined Comcast-TWC would control more than 54 percent of the broadband pipes in the United States that have speeds of at least 25 Mbps,¹¹ and will be on a path to virtual dominance of the high-speed broadband market given that the combined company will pass nearly 70 percent of pay-TV households in the U.S.¹² Most households will have no alternative to the combined company’s high-speed broadband pipe. Some will have one alternative at best. As companies such as DISH innovate and invest to meet the growing consumer demand for broadband-reliant video products and services, this chokehold over the broadband pipe would stifle future video competition and innovation, all to the detriment of consumers and the public interest. No set of conditions could conceivably alleviate these harms.

<http://stopmegacomcast.com/stop-mega-comcast-coalition-urges-fcc-doj-reject-comcast-time-warner-cable-merger/>.

¹¹ Opposition at 146-47 & n.454.

¹² Maurice E. Stucke and Allen P. Grunes, *Crossing the Rubicon: Why the Comcast/Time Warner Cable Merger Should be Blocked*, Global Competition Review, at 2 (Feb. 25, 2014) (“Stucke and Grunes”), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2422868; see also Netflix Petition at 9-10 (estimating that Comcast-TWC will pass approximately 81 million homes—almost two-thirds of U.S. households—according to figures provided by the National Broadband Map).

I. SUMMARY

The Applicants' bullying tone bodes ill for the merged company's conduct. The Opposition appears focused more on *ad hominem* attacks against the person and motive of those who dare contradict the Applicants than on the substance of the arguments presented. Examples abound. Arguments are dismissed as “extended riffs”¹³ and “apocalyptic forewarnings.”¹⁴ Merger opponents are accused of “egregious misuses of this license transfer process”¹⁵ and “extortion” that allegedly shocks the Applicants by its “sheer audacity.”¹⁶ The public interest community, for its part, is faulted for promoting only its “well-worn ‘doom and gloom’ prophecies.”¹⁷ And serious complaints about Comcast’s customer service reputation are discounted as “not part of [its] character qualifications.”¹⁸

Hectoring, high-handed, strident, shrill—the Opposition is all of those things. This is more than a stylistic matter. It bespeaks, first, an attempt to distract and deflect. Second, it gives us a view into the post-merger world that the Applicants will create if the Commission approves this transaction. In a sense, the Opposition is a very long “how dare you?” The arrogant tone and sense of entitlement on display provide useful insight into how the combined company will treat the American consumer and competitors if this merger is approved. This conduct, along with Comcast’s well-recorded attempts to vitiate the conditions to which it has already committed, should set off the public interest alarm bells.

¹³ Opposition at 13.

¹⁴ *Id.* at 14.

¹⁵ *Id.* at 17.

¹⁶ *Id.* at 16.

¹⁷ *Id.* at 17.

¹⁸ *Id.* at 283.

The Applicants fail to disprove the merger's anticompetitive effects. What the Opposition does *not* do is address several critical arguments made by DISH and others about the harms that would result from this proposed transaction. In some cases, the Applicants give conclusory, dismissive responses. In other instances, they do not bother to respond at all. The gaping holes in the Opposition include:

- The applicable case law—nothing said at all except for one case;¹⁹
- The ability to foreclose OVDs—little said consisting of some token objections relating to the Applicants' three choke points;²⁰
- The proportionately smaller costs and larger profits of foreclosure due to the merger—nothing said at all;²¹
- The reduced ability of consumers to benchmark based on neighboring offerings—the Applicants respond only that this reduced ability will not lead to higher prices;²²
- The argument previously made by Comcast's own economist that the existence of TWC as a separate company made NBCU foreclosure unprofitable for Comcast—nothing said at all;²³ and
- The examples of Comcast playing for time and thwarting the conditions already imposed on it—only two out of four examples identified by merger opponents are addressed, and even then only cursorily.²⁴

¹⁹ *Id.* at 20, 118-21.

²⁰ *Id.* at 18-19.

²¹ *See* DISH Petition at 69-76.

²² *See* Opposition at 194-95 (claiming “the effect of a benchmark on pricing is neutral”).

²³ *See* Letter from Michael Hammer, Comcast, to Marlene Dortch, FCC, MB Docket No. 10-56, Enclosure: Mark Israel and Michael Katz, Application of the Commission Staff Model of Vertical Foreclosure to the Proposed Comcast-NBCU Transaction ¶¶ 49-55 (Mar. 5, 2010) (“Israel and Katz Comcast-NBCU Declaration”).

²⁴ Comcast attempts to dismiss the significance of its disregard for the *Comcast-NBCU* conditions regarding benchmarking, online video program access, and neighborhooding exemplified in its disputes with Bloomberg and Project Concord. *See* Opposition at 247, 255-56. Comcast fails to address its violation of the standalone broadband condition and its disregard for its net neutrality commitments. *See* DISH Petition at 93-99.

Instead, the Applicants hang their case on one main claim: that the new Comcast-TWC would not have an incentive to foreclose other distributors because it would lose subscribers if it did so.²⁵ This claim is disproved by the very data that Comcast has submitted to the Commission, leaving the merger indefensible.

The relevant case law warrants denial. The Applicants do not have one word for the *Primestar* precedent,²⁶ where the FCC and the Department of Justice (“DOJ”) did not allow a consortium of cable operators, each controlling separate territories, to combine in order to stifle national competition from a new technology—Direct Broadcast Satellites (“DBS”). They only discuss one case, *AT&T-MediaOne*, which would have created a combined ownership interest in Excite@Home and Road Runner; but they attempt to distinguish the case on the curious ground that less was at stake than here—that the AT&T-MediaOne merger would produce only a subset of the anticompetitive effects that the instant transaction would.²⁷ That difference should not provide comfort for the Applicants, as it makes denial of this merger more, not less, warranted.

Almost no broadband subscribers seem to leave Comcast today. The Applicants claim that a large number of subscribers leave Comcast today and therefore would also leave the new Comcast, too, if it were to misbehave by blocking or degrading their service.²⁸ This claim is the principal basis for Comcast’s contention that consumers readily swap its high-speed access service for lower-speed Internet access offerings, and therefore that those services should be

²⁵ Opposition at 198-207.

²⁶ See *id.* at 20, 114-37 (attempting to rebut arguments that the relevant market is the national market for high-speed distribution of content over broadband but conspicuously ignoring *Primestar*).

²⁷ *Id.* at 20, 118-21.

²⁸ *Id.* at 134-37, 200-07.

considered part of the relevant product market.²⁹ Even more important, this claim is the basis of the Applicants' contention that the combined company would have no incentive to block or degrade OVDs.³⁰ Why would I want to do this, Comcast's argument goes, when I know that people would leave my broadband service in droves, as they do today?

But the Applicants' central factual contention is demonstrably false. Comcast claims that its monthly churn rate has been {{ }} percent for several years.³¹ This number is entirely misleading because it includes subscriber churn as a result of {{

}}.³² The real rate—voluntary departures—is only {{ }} of that.³³ This means that Comcast's true churn rate is {{ }}. Comcast is almost like the Hotel California of broadband, an establishment guests can check into but never leave. The Netflix incident provides a further and conclusive demonstration of this fact. There is no dispute that, in December of 2013 and January of 2014, the quality of Netflix's video went from viewing content at 720p on average (HD quality) down to "nearly VHS quality."³⁴ What did Comcast's subscribers do? According to Comcast, many of them called. But how many left? Comcast's own data reveal that {{ }}.

²⁹ *Id.* at 204.

³⁰ *Id.* at 21-22.

³¹ *Id.* at 137.

³² Comcast Corporation, Responses to the Commission's Information and Data Request, MB Docket No. 14-57 (Sept. 11, 2014) ("Comcast Responses to Commission"), {{

}}.

³³ {{ }}

³⁴ Netflix Petition at 57.

The gross inaccuracy of Comcast's factual claim strikes at the heart of most competition-related arguments made by the Applicants.

The relevant geographic market is national. The Applicants dwell on the wrong question: whether the two cable companies' broadband services are substitutes in the eyes of end users.³⁵ The question, rather, is whether the two companies' offerings are substitutes from the standpoint of OVDs. The answer to the latter is yes: today, each of the two cable operators constitutes an alternative component in the mix of broadband access providers upon whom OVDs must depend in order to reach a critical mass of high-speed broadband subscribers. The merger will eliminate this choice and leave {{ }} percent of U.S households with existing 25 Mbps-plus connection in the hands of one single company.³⁶

Low-speed broadband access is not a substitute for the Applicants' service. The Applicants cite a Global Strategy Group ("GSG") survey, which concludes that over 70 percent of cable and phone companies' broadband subscribers would likely switch broadband providers if their service providers blocked or degraded access to Internet content.³⁷ This conclusion must be seen against the cold glare of the two facts mentioned above: that almost no one seems to leave Comcast's broadband business today, and that {{

}} left Comcast when Netflix's quality was degraded {{

}}. The GSG survey data only serve to punctuate the helplessness of Comcast's

³⁵ Opposition at 116-17.

³⁶ Memorandum from William Lake, FCC, to Marlene Dortch, FCC, Exhibit 1b (Dec. 9, 2014) ("FCC Memorandum"). Note that this percentage likely undercounts the combined company's share of 25 Mbps-plus households, as TWC has worked steadily in 2014 to increase 25 Mbps-plus connections in its service areas.

³⁷ *Id.* at 21-22.

consumers, whose best laid plans are easier said than done. Specifically, a large percentage of Comcast's subscribers are Netflix customers—36.03% or 6.88 million if the national percentage holds.³⁸ If the GSG survey is correct (which it is not), 71% of these 6.88 million Comcast subscribers, or about 4.88 million customers, would have left Comcast when their Netflix service was seriously degraded.³⁹ In fact, {{ }} of them actually did so. The data set forth in a December 9, 2014 memorandum from the Media Bureau shed additional light on the inadequacy of legacy DSL and even upgraded DSL technologies.⁴⁰ In areas that have cable and legacy DSL, an astounding 99% of 25 Mbps-plus customers subscribe to cable.⁴¹ Even upgraded DSL does not make significant inroads—where it is present, it commands a paltry 2% to cable's lion's share of 98%.⁴²

But the most effective witness against the Applicants' advocacy is Comcast and TWC's own marketing. While the Applicants tout a speed of 4 Mbps as suitable for HD video in this

³⁸ Netflix, Inc., Summary Q2 Results & Q3 Guidance Midpoints (July 22, 2013), *available at* <http://files.shareholder.com/downloads/NFLX/3535536251x0x678215/a9076739-bc08-421e-8dba-52570f4e489e/Q213%20Investor%20Letter.pdf> (reporting 29.81 million members); Press Release, Leichtman Research Group, About 295,000 Add Broadband in the Second Quarter of 2013 (Aug. 20, 2013), *available at* <http://www.leichtmanresearch.com/press/082013release.html> (reporting 82,735,812 total broadband subscribers (all speeds) in the United States and that 19.99 million of them are Comcast subscribers).

³⁹ Comcast Responses to Commission, Response to Request 74, Exhibit 74.3, Global Strategy Group, 6476 Comcast 2014 Broadband Survey (2014) (“GSG Survey”); Letter from Kathryn Zachem, Comcast Corporation, Catherine Bohigian, Charter Communications, Inc., and Steven Teplitz, Time Warner Cable Inc., to Marlene Dortch, FCC, MB Docket No. 14-57, at 5 (June 27, 2014) (“Comcast-TWC-Charter June 27 Letter”).

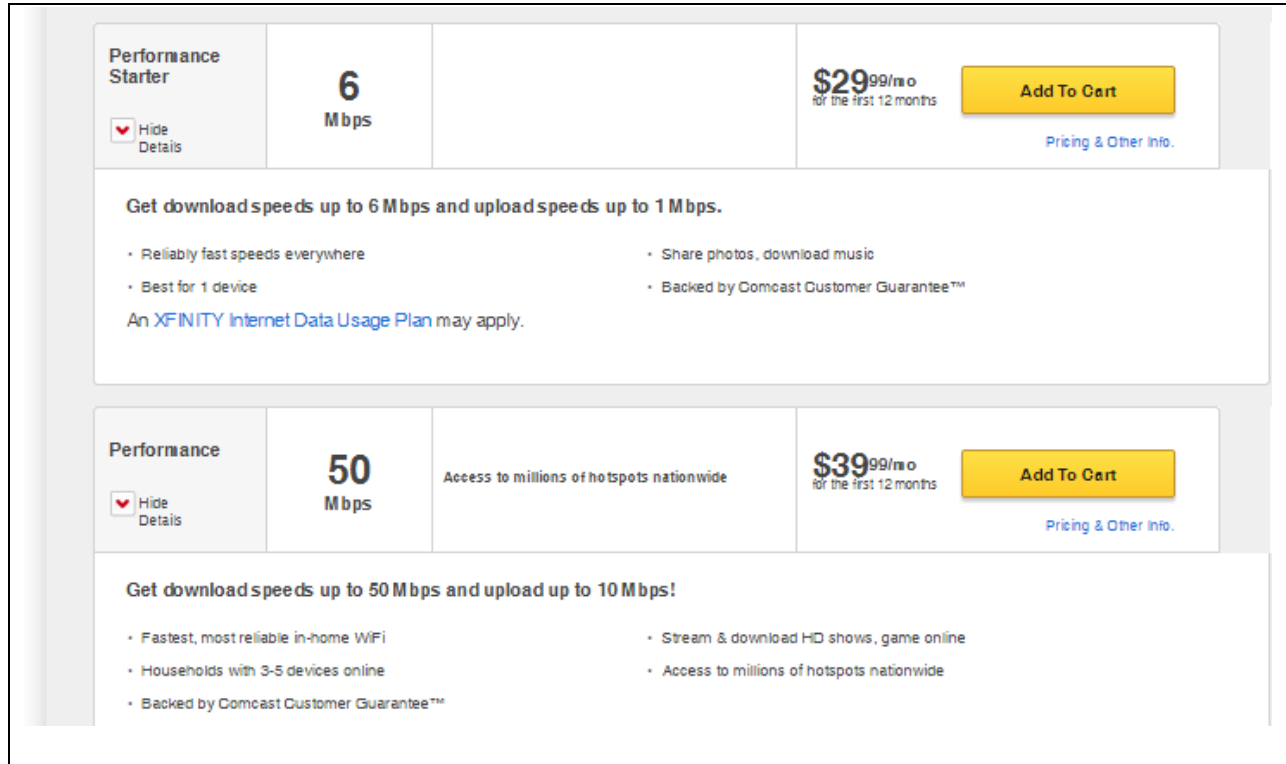
⁴⁰ *See generally* FCC Memorandum.

⁴¹ *Id.* at Exhibit 5.

⁴² *Id.*

proceeding,⁴³ their marketing documents, of which Figure 1 offers an example, tell an entirely different story—they present 6 Mbps as suitable for sharing photos/downloading music, but a minimum of 50 Mbps as suitable for streaming/downloading HD video.

Figure 1. Screenshot of Comcast’s Online Description of Xfinity Internet⁴⁴



The merger will heighten Comcast-TWC’s ability to leverage its three choke points—the last mile, interconnection, and managed services—as well as its recently acquired online ad fulfillment service. To counter DISH’s arguments in that regard, the Applicants confine themselves to the most general of rebuttals.⁴⁵ At the very most, the net neutrality commitment

⁴³ Opposition at 122.

⁴⁴ *Xfinity Internet*, Comcast, <http://www.comcast.com/internet-service.html> (last visited Nov. 18, 2014) (“Xfinity Internet Offerings”).

⁴⁵ Opposition at 15, 18-19.

cited by the Applicants only limits behavior at the last mile⁴⁶—just one of the three choke points. Even with respect to the last mile, Comcast’s recent and vocal opposition to the reclassification of broadband access under Title II of the Communications Act raises questions: Comcast seems to regard the net neutrality condition it is prepared to accept as narrower than the rule that would result from reclassification.

Regarding the interconnection choke point, the Applicants do not deny that they have the power to do harm there, but argue only that this power is curtailed by their settlement-free peering and interconnection deals.⁴⁷ But it is not clear how existing, settlement-free peering or interconnection agreements can diminish this power, especially after they expire, and especially since all of them are {{ }} and most of them are {{ }}. Review of those deals that are in writing reveals them {{ }}. Furthermore, in a significant blow to Comcast’s credibility, {{ }} a key provision that Comcast says they “typically” contain.⁴⁸ As to specialized services, Comcast claims only that it has not provided them to rival parties. But Comcast reaps the benefits of this loophole for its Xfinity offering today, making the risks of abuse not “theoretical” at all.⁴⁹

These are some, but hardly the only, choke points at the Applicants’ disposal. Earlier this year, Comcast acquired FreeWheel, the dominant online video advertising fulfillment company. The transaction will increase the combined company’s ability and incentive to use that choke

⁴⁶ *Id.* at 18.

⁴⁷ *Id.* at 218-22; *see also* Mark A. Israel, Economic Analysis of the Effect of the Comcast-TWC Transaction on Broadband: Reply to Commenters, MB Docket No. 14-57, ¶¶ 131-38 (Sept. 22, 2014) (attached as Exhibit 1 to Opposition) (“Israel Reply Declaration”).

⁴⁸ Opposition at 217 n.661.

⁴⁹ *Id.* at 18-19.

point, too. Comcast's ownership of FreeWheel opens several more avenues of mischief, such as the ability of the combined company to interfere with an OVD's video ad revenue, and the ability to steer programmers away from other OVDs and towards Xfinity as a condition of preferential arrangements with FreeWheel.

The evidence shows Comcast-TWC has no basis for denying its heightened incentive to harm OVDs. To DISH's showing that the merger will heighten Comcast-TWC's anticompetitive incentive to harm OVDs, the Applicants counter principally that such conduct would make no sense because it would also hurt the Applicants themselves.⁵⁰ But the fact that {{ }} leaves Comcast today soundly rebuts that argument. Comcast-TWC will be able to destroy OVDs with impunity. And destroy them it will: DISH's experience based on the business case for DISH World and DISH's soon-to-be-launched domestic OTT service demonstrates that an OTT could still turn a profit if it were to suffer foreclosure at the hands of a standalone Comcast, but not if the effects of the foreclosure spread across both of the Applicants' systems. Based on his analysis of that business case, DISH's expert economist Professor David Sappington concludes that, while foreclosure conduct on the part of Comcast today is probably survivable for an OVD such as DISH's new OTT service, the same conduct would be lethal if undertaken by Comcast-TWC.

The Applicants also claim that they would not harm OVDs because NBCU makes money from selling programming to OVDs. But the calculus of costs and benefits tilts the balance towards foreclosure even more in the case of an OVD than in the case of an MVPD: after all, subscribers of targeted OVDs have much lower switching costs and would be much more likely

⁵⁰ *Id.* at 200-07.

to jump ship than MVPD customers. As demonstrated below, MVPD foreclosure is bound to be profitable for Comcast-TWC; OVD foreclosure will be even more so.

In addition, documents produced by Comcast show that the merger is likely to tilt that balance decisively. In an exchange of email correspondence, {{

}}.⁵¹

{{

}}⁵² In short, it only takes a straw to break the camel's back. By increasing the benefits of foreclosure (more revenues from subscribers who leave an OVD) without increasing its costs (lost programming revenues), this merger is heftier than a straw.

The merger will eliminate both current and future competition. Although Comcast has rested its case on its emphatic and unequivocal statement that it and TWC “do not compete for customers, but rather offer services in separate local markets,” and “do not overlap each other,”⁵³ it turns out that Comcast itself has doubts about the veracity of that statement. Comcast is apparently “still working with a vendor to analyze [the situation] . . . but in case it shows that

⁵¹ Comcast Corporation, Responses to the Commission's Information and Data Request, MB Docket No. 14-57 (Oct. 14, 2014) (“Comcast Supplemental Responses to Commission”), {{

}}.

⁵² Comcast Supplemental Responses to Commission, {{

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⁵³ Opposition at 44 n.75, 138.

there are any consumers in census blocks that may lose a broadband choice,” the Applicants will need to “nuance” their response to the Commission.⁵⁴ These doubts undermine Comcast’s core argument in support of this merger, as well as its credibility. It also casts a shadow on the Applicants’ other assertion that they have no plans to compete with each other in the OVD market, and indeed would not have done so—an assertion further weakened by Comcast itself with its recent announcement about its plans to make certain NBCU content available on-demand in an early release format.⁵⁵ Absent the merger, both Comcast and TWC would likely feel compelled to compete by extending OVD offerings to each other’s footprint—an extension that would come at a low incremental cost to each of them.⁵⁶

The merger will facilitate collusion between cable operators. {{

}}—show the risk of coordination between cable operators {{ }}. Fewer people can collude among themselves with greater ease than a larger group. The merger will thus facilitate collusion, as it will reduce by one the number of smoke-filled room participants or email correspondents that are needed to reach an agreement blanketing the entire country and harming national OVDs.

⁵⁴ Kate Cox, *Comcast Forgets to Delete Revealing Note from Blog Post*, Consumerist (Dec. 3, 2014), <http://consumerist.com/2014/12/03/comcast-forgets-to-delete-revealing-note-from-blog-post/>. A recent letter filed by Comcast with the Commission sheds no additional light on this issue. See Letter from Kathryn Zachem, Comcast Corp., to Marlene Dortch, FCC, MB Docket No. 14-57 (Dec. 11, 2014).

⁵⁵ Joe Flint, *USA Network Experiments with On-Demand*, Wall Street Journal (Dec. 9, 2014), available at <http://www.wsj.com/articles/usa-networks-experiments-with-on-demand-1418101347>.

⁵⁶ DISH Petition at 71-73.

Foreclosure of NBCU programming will be very profitable for the combined company.

The Applicants' economists force the opposite conclusion on the data by resorting to sleight-of-hand, including arbitrarily changing the time horizon of temporary foreclosure incidents from six months to one.⁵⁷ Even their flawed analysis, however, cannot conceal the fact that the merger will {{ }} the breakeven point beyond which foreclosure would be profitable for Comcast-TWC. Use of the Commission's own method for estimating actual departures of a rival's subscribers due to temporary foreclosure with a time horizon of six months leads to the conclusion that Comcast-TWC can reap eye-popping gains from denying its competitors NBCU programming. This will affect competition in a number of ways. It will cause subscribers to leave the competing distributor in favor of Comcast-TWC; it will cause dissatisfied Comcast-TWC subscribers to stay put instead of losing their access to NBCU; and it will let NBCU extract higher prices for its own programming by leveraging the fear of foreclosure. A bargaining-model analysis conducted for DISH by expert economist William Zarakas concludes that the price paid by those of Comcast-TWC's competitors that will still be able to secure NBCU programming will increase by {{ }} as a result of the merger.⁵⁸

The merger's claimed benefits, if any, cannot outweigh the merger's harms. In the Opposition, the Applicants devote hundreds of pages to extolling the purported benefits of the

⁵⁷ Gregory L. Rosston and Michael D. Topper, An Economic Analysis of the Proposed Comcast Transactions with TWC and Charter in Response to Comments and Petitions, MB Docket No. 14-57, ¶ 143 (Sept. 20, 2014) (attached as Exhibit 2 to Opposition) ("Rosston-Topper Reply Declaration").

⁵⁸ William P. Zarakas, Analysis of the FCC's Vertical Foreclosure and Nash Bargaining Models Applied to the Proposed Comcast-Time Warner Cable Merger, MB Docket No. 14-57 (Dec. 22, 2014) (attached hereto as Exhibit C) ("Zarakas Declaration").

merger.⁵⁹ Many of these benefits are illusory or speculative—characteristically, the Applicants offer no more precise quantification than “hundreds of millions of dollars.”⁶⁰ Many of the benefits are also not merger-specific. The upgrade of TWC systems, supposedly made possible thanks to the merger, is a prime example.⁶¹ Public documents show that TWC had planned to complete this transition itself as a standalone company. This means that large portions of the claimed benefits attributed to TWC upgrades (again left unquantified) should be disallowed in their entirety.

Other claims of benefits are also pockmarked with holes. The Internet Essentials program has resulted in less Internet adoption by low-income families than should be expected from a broadband provider of Comcast’s size without the program, throwing into serious question whether Comcast is truly proposing to export a success story to TWC.⁶² The claimed economies of scale will not redound to the public’s benefit, as there is no competitive discipline that could result in lower prices, and Comcast candidly admits that it will not lower its prices.⁶³

⁵⁹ See e.g., Opposition at 1-30, 36-113. In addition to their prolonged list of purported benefits, the Applicants counter arguments of alleged harms by citing these benefits, rather than squarely addressing many of the issues raised by DISH and other commenters. See, e.g., *id.* at 144 (avoiding arguments of alleged horizontal harms by referencing the “substantial efficiencies and other consumer benefits.”); *id.* at 169 (arguing that the enlarged Comcast will not have the greater incentive or ability to impose non-market based contract terms, while also asserting the “public interest benefits of MFNs”).

⁶⁰ *Id.* at 2, 38.

⁶¹ *Id.* at 2-3.

⁶² *Id.* at 50-53.

⁶³ Jon Brodtkin, *Comcast: No Promise that Prices “Will Go Down or Even Increase Less Rapidly,”* ArsTechnica (Feb. 13, 2014), <http://arstechnica.com/tech-policy/2014/02/comcast-no-promise-that-prices-will-go-down-or-even-increase-less-rapidly/> (quoting Comcast Executive Vice President David Cohen’s statement during a conference call).

All in all, the Applicants' Swiss-cheese benefit case does not begin to counterbalance the serious harms posed by the merger.

Conduct conditions would fail to address the merger's many harms. Conduct conditions did not work for *Comcast-NBCU*, and they would not work for this transaction, which poses substantially greater risks of harm. There is little reason to believe that Comcast will alter its pattern of repeatedly breaking promises. Moreover, the complexity of the gatekeeping function over the Internet choke points alone promises a myriad of technicalities that would likely allow circumvention of, and/or interpretive debate over, any conditions. Ultimately, if the Commission approves the merger believing that conditions are sufficient to address all the harms, there is no going back. The consequences of getting it wrong are too great, the risks too high. The public deserves better.

II. THE APPLICANTS IGNORE OR DISMISS MANY OF DISH'S LEGAL ARGUMENTS AND FACTUAL ASSERTIONS

Despite the volume of the Applicants' response, their filing fails to address critical arguments raised by DISH. These run the gauntlet from the precedent that should inform any review of the merger to the combined company's ability and incentive to foreclose competing OVD services from its broadband access services. They include:

- ***Applicable Legal Precedent.*** DISH discussed a variety of precedents that should inform Commission and DOJ review of the proposed merger, only one of which the Applicants address in their Opposition.
- ***Ability to Discriminate Against Rival OVDs.*** DISH demonstrated that the combined company will have the ability to discriminate against rival OVDs by degrading their offerings at any one of three choke points. The Applicants do not deny that the combined company would have that ability. They respond only that Comcast-TWC's ability will be constrained by its net neutrality commitment and its interconnection deals.⁶⁴ With respect to the third choke point—specialized services, they say only

⁶⁴ Opposition at 18.

that Comcast-TWC's ability to use this choke point is theoretical because Comcast has not used it in the past.⁶⁵

- ***Increased Anticompetitive Incentive Because of Lower Per Subscriber Foreclosure Costs.*** DISH explained that Comcast-TWC's cost of foreclosure would not "scale up" as a result of Comcast-TWC's increased size because of the non-linear nature of reputational damage.⁶⁶ The Applicants fail to offer any substantive arguments to counter these concerns.
- ***Threat of Foreclosure.*** DISH explained that Comcast's privileged position as a gatekeeper for its broadband customers, buttressed by the acquisition of TWC's subscriber base, allows it to leverage the threat of foreclosure to extract from OVDs a fraction of the incremental profit the OVD derives from uncompromised access to Comcast-TWC's broadband customers.⁶⁷ The Applicants do not refute this.
- ***Foreclosure Detection.*** DISH pointed out that foreclosure is more likely to go undetected if the transaction is approved because of consumers' decreased ability to benchmark their service against the service in nearby markets. The Applicants counter only that the elimination of benchmarking will have a negligible effect on competition.⁶⁸
- ***The Restraining Effect on Comcast from a Standalone TWC.*** DISH pointed out that Comcast's own economist, Professor Israel, had relied on the existence of TWC to argue that Comcast would not foreclose its rivals from NBCU's programming.⁶⁹ The Applicants have failed to produce Professor Israel's prior calculations, Professor Israel's current views, or an explanation as to why the absorption of TWC does not now make foreclosure profitable.
- ***Failure to Honor the Standalone Broadband Access Commitment.*** DISH pointed out that Comcast honored the standalone broadband condition imposed in connection with the *Comcast-NBCU* merger only after the FCC was forced to pursue enforcement action against the company.⁷⁰ Comcast avoids responding.

⁶⁵ *Id.* at 18-19.

⁶⁶ DISH Petition at 74-75; David Sappington, The Anticompetitive Effects of the Proposed Merger of Comcast and Time Warner Cable, MB Docket No. 14-57, ¶¶ 52-53 (Aug. 25, 2014) (attached as Exhibit B to DISH Petition) ("Sappington Declaration").

⁶⁷ DISH Petition at 71-72.

⁶⁸ See Israel Reply Declaration ¶ 207 (claiming "[b]enchmarking has no such systemic effect on pricing incentives"); see also Opposition at 194.

⁶⁹ DISH Petition at 81.

⁷⁰ *Id.* at 93-95.

- ***Playing for Time to Forestall Prior Merger Conditions.*** DISH described the great lengths to which Comcast went to delay implementation of other *Comcast-NBCU* conditions, forestalling implementation of the news “neighborhooding” condition until more than three years after the merger was approved and only after Comcast had decided to acquire TWC.⁷¹ Comcast also litigated an OVD out of business when it tried to obtain access to NBCU programming. The Applicants offer an unsatisfactory response for the latter case,⁷² and no explanation at all for the former.
- ***The Inadequacy of Behavioral Conditions.*** Despite DISH’s focus in its Petition on the inability of behavioral conditions to cure these problems,⁷³ the Applicants are once again silent on this point. They fail to provide any reason to believe that conditions can work for this merger.

The Applicants bear the burden of proving that their unprecedented merger will serve the public interest. To satisfy that burden in light of the merger’s competitive harms, they need to climb a metaphorical Mt. Everest; but they are still on the tarmac at Philadelphia International Airport. Of course, the arguments that Comcast and TWC have left unaddressed reflect their larger problem: they cannot show that concentrating access to half of the country’s high-speed broadband subscribers in a single company would serve the public interest.⁷⁴

⁷¹ *Id.* at 89-91.

⁷² Opposition at 90 n.255.

⁷³ DISH Petition at 86-89.

⁷⁴ This reply cannot be considered complete for two reasons. First, Comcast’s programming agreements and related documents are still unavailable to parties because of a court-imposed stay. The documents are relevant to the effects of the transaction on OVDs and MVPDs alike. They are also important to determine whether Comcast has tried to extract anti-competitive concessions from third-party programmers with respect to terms of carriage, dealing with other distributors, and OTT rights. Second, initially as a result of significant delays by the Applicants, and then as a result of objections filed by third-party programmers, DISH’s outside and inside counsel received only belated access to a significant portion of the documents that have nothing to do with video programming information. Specifically, disks containing over two terabytes of information and about three million documents did not make it to the desks of DISH’s counsel until December 10, five business days after the Commission ruled in part on certain objections. It took five more days of uploading for this vast document set to become accessible and reviewable by counsel. Naturally, DISH’s counsel and experts have not been able to digest more

III. ALMOST NO ONE APPEARS TO LEAVE COMCAST TODAY

The Applicants repeatedly assert that Comcast’s ability to harm competing OVDs is undermined by the ability of consumers to switch broadband providers.⁷⁵ In an attempt to buttress that claim, Comcast commissioned a survey from the GSG. According to that survey, 70 percent or more of respondents indicated that they would likely switch broadband providers if their service provider took one of several actions that blocked or degraded access to Internet content.⁷⁶ Comcast also points to its overall churn rate—between {{ }} percent per month—and concludes that “no customer is ‘captive’ to Comcast.”⁷⁷ If anything, however, the GSG survey punctuates the helplessness of Comcast’s customers, who almost never leave Comcast despite their intention to do so, as shown by the juxtaposition of the survey results and Comcast’s own churn data. The disconnect between consumer intention and action proves, in turn, that low-speed Internet access alternatives are not even remotely substitutes for Comcast’s service. Even more important, this evidence destroys Comcast’s claim that it will be restrained by fear of consumer departures: few, {{ }} left Comcast when Internet content was degraded before. The fear of customer departure simply will not be an adequate restraint.

than a small subset of these three million documents in the few days since. DISH reserves the right to submit further views to the Commission when that review is complete, and when the still unavailable documents become available and are themselves reviewed.

⁷⁵ See, e.g., Opposition at 21-22, 134, 137.

⁷⁶ *Id.* at 21-22, 137. The GSG survey asked a series of specific questions regarding blocking and degradation by Internet service providers (“ISPs”), and the percentage of respondents indicating that they were very or somewhat likely to switch ISPs varied depending on the ISP’s specific behavior. See GSG Survey at 3. When asked whether they would switch to “DSL or Wireless broadband,” the respondents became less certain as to each response. *Id.* at 4.

⁷⁷ Opposition at 137.

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In attempting to document the existence of alternatives and Comcast's fear that its customers will flee to them, the GSG survey is flawed from its inception. The questions posed by the survey are leading: they assume that consumers have perfect knowledge that their ISP has blocked or degraded their broadband access. This ignores the fact that ISPs hotly contest who is to blame for degradation. In fact, Comcast has vigorously disputed whether it was to blame for its consumers' degraded access to Netflix content.⁷⁸ The Netflix dispute was not the first time Comcast professed its innocence. As the Commission found, Comcast made misrepresentations to consumers about its blocking of Bittorrent traffic.⁷⁹ Comcast specifically, and falsely, stated that it was "not blocking any access to any application, and [it does not] throttle any traffic."⁸⁰ In sum, consumers are rarely, if ever, faced with the certain knowledge of blame that predicated the GSG survey's pertinent question. The fact that 71 percent or more gave that answer is

⁷⁸ *Id.* at 219-23; Declaration of Kevin McElearney, Comcast Corporation, MB Docket No. 14-57, ¶¶ 3, 27 (Sept. 23, 2014) (attached as Exhibit 4 to Opposition) ("McElearney Declaration"); *At a Tipping Point: Consumer Choice, Consolidation and the Future Video Marketplace: Hearing Before the S. Comm. on Commerce, Science, & Transportation*, 113th Cong. 13 n.43 (2014) (written statement of David L. Cohen, Executive Vice President, Comcast Corporation), available at <http://corporate.comcast.com/images/written-statement-july-16-2014.pdf> ("Tipping Point Hearing"); Daniel Frankel, *Net Neutrality: Cohen Says Comcast Not 'Degrading' Content, Netflix Tells FCC to Classify ISPs as Utility*, FierceCable (July 17, 2014), <http://www.fiercecable.com/story/net-neutrality-cohen-says-comcast-not-degrading-content-netflix-tells-fcc-c/2014-07-17>.

⁷⁹ Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Secretly Degrading Peer-to-Peer Applications, *Memorandum Opinion and Order*, 23 FCC Rcd. 13028, 13028 ¶ 1 (2008) ("[W]e conclude that the company's discriminatory and arbitrary practice unduly squelches they dynamic benefits of an open and accessible Internet and does not constitute reasonable network management. Moreover, Comcast's failure to disclose the company's practice to its customers has compounded the harm.").

⁸⁰ *Id.* at 13031-32 ¶ 6 ("When first confronted with these press reports, Comcast . . . *misleadingly* disclaimed any responsibility for the customers' problems.") (emphasis added).

meaningless.⁸¹ Many people can be expected to answer that they plan to switch ISPs if their ISP blocks or degrades their content. But the natural aspiration of most people to leave if mistreated is easier said than done (even if they possess perfect knowledge of the cause of any degradation, as assumed by the survey).

And, willingness does not mean ability. As Chairman Wheeler recently explained, at 25 Mbps “there is simply no competitive choice for most Americans,” and at 4 to 10 Mbps, most Americans are faced with a “‘duopoly,’ a marketplace that is typically characterized by less than vibrant competition.”⁸² Even where there is a competitive option, high switching costs can limit the consumer’s ability to switch ISPs.⁸³

Comcast’s internal data confirm that, no matter how much they may want to, Comcast broadband customers rarely leave voluntarily. While Comcast cites a monthly churn rate of about {{ }},⁸⁴ its own internal analysis shows that {{ }} of that churn is the result of involuntary or “force majeure” consumer behavior such as disconnect for {{ }

⁸¹ See Opposition at 136 (“The GSG survey found, for example, that degradation would cause 70 percent or more of consumers to switch.”).

⁸² Tom Wheeler, Chairman, FCC, Prepared Remarks at the 1776 Headquarters, Washington DC: The Facts and Figures of Broadband Competition, at 4 (Sept. 4, 2014), *available at* http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0904/DOC-329161A1.pdf (“Wheeler Remarks”).

⁸³ See Preserving the Open Internet, *Report and Order*, 25 FCC Rcd. 17905, 17925-26 ¶ 34 (2010) (“*Open Internet Order*”), *aff’d in part, vacated and remanded in part sub nom. Verizon v. FCC*, 740 F.3d 623 (D.C. Cir. 2014) (citing, among other costs, “the inconvenience of ordering, installation, and set-up, and associated deposits or fees; possible difficulty returning the earlier broadband provider’s equipment and the cost of replacing incompatible customer-owned equipment; the risk of temporarily losing service; the risk of problems learning how to use the new service; and the possible loss of a provider-specific email address or website”).

⁸⁴ Opposition at 137.

}} and disconnects for the simple reason {{ }}.⁸⁵ The problem is, of course, that Comcast’s understandable decision to stop serving customers {{ }} says nothing about the existence of alternative choices for these customers. Moreover, it would be a high switching cost indeed if one needed to {{ }} in order to leave Comcast—disconnects due to {{ }} say nothing about choices {{ }}.

Only voluntary churn is indicative of a competitive market, and according to Comcast’s data, only {{ }} of its churn is voluntary.⁸⁶ That puts Comcast’s voluntary monthly national churn rate at only {{ }}.⁸⁷ That churn of {{ }} is put in perspective by comparing it to DISH’s voluntary monthly churn rate for its MVPD services—which face daunting competition from still-dominant cable operators, among others. DISH’s monthly voluntary churn in that more competitive market ranges from {{ }}—{{ }}.⁸⁸ {{ }} Comcast faces either little or no competition (depending on the area) from other high-speed broadband providers.

⁸⁵ Comcast Responses to Commission, {{ }}.

⁸⁶ Evidently, Comcast could not determine whether another {{ }} of churning subscribers left voluntarily for another broadband alternative. {{ }}

⁸⁷ {{ }}

⁸⁸ Declaration of Roger J. Lynch, MB Docket No. 14-57, ¶ 5 (Dec. 22, 2014) (attached hereto as Exhibit A) (“Lynch Reply Declaration”).

Comcast's low churn rate is particularly telling in light of Comcast's well-documented customer-satisfaction and customer-service problems.⁸⁹ To put it bluntly: if almost no one leaves a company that has been characterized as one of "the two most hated companies in America,"⁹⁰ the choice of meaningful alternatives must be non-existent.⁹¹

Comcast's churn data stand {{ }} to the 17 percent of respondents in the GSG survey who are said to have reported actually switching ISPs in the last year. This could suggest that Comcast consumers simply have {{ }} alternative choices than did the consumers surveyed by GSG. In any event, the GSG survey appears to overstate the customer churn related to service quality provided by cable and fiber-based broadband providers, for at least four reasons.

First, the survey notes, for instance, that 40 percent of those who reported switching said they did so involuntarily as a result of having "[m]oved."⁹²

Second, the results are likely inflated because of the migration *from DSL to cable*.⁹³ Some 34 percent of respondents in the GSG survey indicated that they switched to get "a faster

⁸⁹ See Brad Reed, *Massive Survey Finds Comcast and TWC Are the Two Most Hated Companies in America – Period*, BGR (May 20, 2014), <http://bgr.com/2014/05/20/comcast-twc-customer-satisfaction-survey-study/>; Jade Walker, *Listen to A Comcast Rep Torture Customers Trying to Cancel*, The Huffington Post (July 15, 2014), http://www.huffingtonpost.com/2014/07/14/the-comcast-call-from-hell_n_5586476.html; Cyrus Farivar, *Comcast Got Me Fired After Billing Dispute, Says California Man [Updated]*, ArsTechnica (Oct. 7, 2014), <http://arstechnica.com/tech-policy/2014/10/comcast-got-me-fired-after-billing-dispute-says-california-man/>.

⁹⁰ Brad Reed, *Massive Survey Finds Comcast and TWC Are the Two Most Hated Companies in America – Period*, BGR (May 20, 2014), <http://bgr.com/2014/05/20/comcast-twc-customer-satisfaction-survey-study/>.

⁹¹ According to that survey, TWC is the second most-hated company in America, right behind Comcast. *Id.* It is hard to see how this union could possibly portend customer service improvement.

⁹² GSG Survey at 5.

or higher performance Internet connection,” and 28 percent indicated that they switched in order to receive “a bundle of Internet, TV, and/or phone services from a single company.”⁹⁴ All of these percentages seem to capture nothing more than the shift away from traditional DSL services and toward higher-speed, bundled cable or fiber-to-the-premises (“FTTP”) services, such as those offered by Comcast.

Third, the survey could not possibly reflect migration from cable to DSL, since it was not addressed to any consumers using DSL.⁹⁵ It is well established, of course, that product market definition is not a two-way street. The number of people leaving DSL for cable does not mean that people are equally likely to leave cable for DSL, and therefore the survey says nothing about DSL as a constraint on the conduct of cable companies.

Fourth, the survey includes mobile broadband subscribers within its sample of broadband customers, even though it excludes DSL subscribers. Consumer choice for mobile providers is somewhat greater than it is for fixed providers—though switching can be painful. This means that the inclusion of mobile broadband customers has likely contributed to inflating the percentage of switchers merely by virtue of the fact that, say, an AT&T smartphone subscriber switched to T-Mobile.

While the general month-to-month churn data would be enough to show that leaving Comcast is easier said than done, a closer look at the numbers yields an even more thorough rebuttal of the inference that Comcast draws from the GSG survey. Remember, the survey specifically asked what broadband customers would do if their ISP were to “[s]low down

⁹³ See Opposition at 130 n.398.

⁹⁴ GSG Survey at 5.

⁹⁵ See Opposition at 130 n.398.

streaming or downloading speed of movies or TV shows, so that the video is jumpy and stops in places or has lower-quality resolution”—with some 82 percent indicating that they were very or somewhat likely to switch ISPs and 79 percent indicating that they were very or somewhat likely to switch to a “DSL or Wireless broadband” provider.⁹⁶ Well, the recent past provides evidence of how many broadband customers actually left when their Internet content suffered that fate. The ISP in question was, of course, Comcast itself, which was recently, and notoriously, accused of degrading access to Netflix. How many Comcast customers left Comcast because their access to Netflix was degraded? Seemingly {{ }}.⁹⁷

Far from demonstrating “that Comcast reaches flexible, mutually beneficial agreements that do not reflect the exercise of market power on Comcast’s part,” or that Comcast lacks bargaining power vis-à-vis edge providers,⁹⁸ the Netflix dispute and its dénouement prove that Comcast has the power, incentive, and ability to force edge providers into one-sided agreements—a power that will only be enlarged by the merger with the addition of TWC’s subscriber base. Here are the facts. Starting in late 2013, the speed at which Comcast’s customers were able to access Netflix content dropped from about 2.1 Mbps in October 2013 to 1.5 Mbps in January 2014—a 25 percent decline.⁹⁹ As a consequence of that decline, Comcast’s

⁹⁶ GSG Survey at 4.

⁹⁷ Reply Declaration of Professor David Sappington, MB Docket No. 14-57, ¶ 14 (Dec. 22, 2014) (attached hereto as Exhibit B) (“Sappington Reply Declaration”) {{

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⁹⁸ Letter from Kathryn Zachem, Comcast Corporation, to Marlene Dortch, FCC, MB Docket No. 14-57, Response to Question 3 at 7 (Nov. 26, 2014) (“Comcast November 26 Response”).

⁹⁹ *USA ISP Speed Index Results Graph*, Netflix, <http://ispspeedindex.netflix.com/results/usa/graph> (follow “Select Dates” hyperlink; then select “May 2013” to “August 2014”; then select “Comcast”).

customers went from being able to access Netflix content at 720p to “nearly VHS quality.”¹⁰⁰ The notoriety of the incident and the public intimations that Comcast was culpable¹⁰¹ make it as close to a real-life replica as can be of GSG’s hypothetical question—what would subscribers do if their ISP blocked or degraded their service? What actually happened was enlightening. Comcast says that the incident produced a dramatic increase in Netflix-related customer calls.¹⁰² The customers who called Comcast to complain, however, appear to have been venting their anger at their powerlessness to choose another provider. Because very few, {{ }}, of them seem to have left Comcast.¹⁰³

Comcast’s churn data show that Comcast’s churn {{ }}. Specifically,

Comcast has submitted month-to-month data for its total churn—voluntary or not. While Comcast has not disclosed a month-to-month breakdown of that total churn into categories that explain the reasons for customer departures, it is reasonable to assume that the breakdown remains roughly unchanged from that reflected in {{

¹⁰⁰ Netflix Petition at 57.

¹⁰¹ Jon Brodtkin, *Netflix Performance on Verizon and Comcast Has Been Dropping for Months*, ArsTechnica (Feb. 10, 2014), <http://arstechnica.com/information-technology/2014/02/netflix-performance-on-verizon-and-comcast-has-been-dropping-for-months/>.

¹⁰² Opposition at 204 (“[A]mid the dispute with Netflix, Comcast suffered a surge in Netflix-related customer calls complaining about Comcast’s broadband service.”).

¹⁰³ Sappington Reply Declaration ¶ 16 n.10 (“[T]here is {{ }} that Comcast’s customers discontinued their HSD subscriptions in the months following the slowing of Netflix’s traffic on Comcast’s network.”).

¹⁰⁴ {{

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}}.¹⁰⁵ The total churn of Comcast for residential connections—including involuntary churn—was {{ }} in November 2013, {{ }} in December 2013, {{ }} in January 2014, and {{ }} in February 2014.¹⁰⁶

The comparison of these data with the GSG survey results allows some further inferences. Since Netflix now has about 30 million customers nationwide,¹⁰⁷ or about 36.03% of 82.74 million fixed broadband subscribers,¹⁰⁸ it follows that many of Comcast's broadband subscribers are Netflix customers; if the national percentage holds true for Comcast's subscriber base, about 36.03%, or 6.88 million, of Comcast's subscribers also subscribe to Netflix. Now, if the GSG survey results are valid, and if consumers did act on their plan to leave an ISP in cases of severe degradation, 71 percent, or 4.88 million, of those 6.88 million subscribers would have left Comcast. What does this tell us? Most {{ }} of those 4.88 million Comcast customers may have seethed in anger at Comcast, but did not leave the Comcast service. This observation is confirmed by a regression analysis of Comcast's churn data, conducted by Professor Sappington, which finds {{ }} in Comcast's churn during the relevant period.¹⁰⁹ In fact, Professor Sappington's analysis shows {{

¹⁰⁵ Comcast Responses to Commission, {{ }}.

¹⁰⁶ Comcast Responses to Commission, {{ }}.

¹⁰⁷ Netflix, Inc., Letter to Shareholders, Summary Q2 Results & Q3 Guidance Midpoints (July 22, 2014), *available at* <http://files.shareholder.com/downloads/NFLX/3535536251x0x678215/a9076739-bc08-421e-8dba-52570f4e489e/Q213%20Investor%20Letter.pdf>.

¹⁰⁸ Press Release, Leichtman Research Group, About 295,000 Add Broadband in the Second Quarter of 2013 (Aug. 20, 2013), *available at* <http://www.leichtmanresearch.com/press/082013release.html>.

¹⁰⁹ Sappington Reply Declaration ¶ 18.

}}¹¹⁰

{{

}}¹¹¹

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Comcast itself seems to understand that the immense difficulty and rarity of leaving is the Achilles heel of its own case, as it has attempted to further buttress its claims that it has no incentive to foreclose rival OVDs in a number of additional submissions (apparently to discount

¹¹⁰ *Id.* ¶¶ 20, 23, 72.

¹¹¹ {{ }}

the significance of its {{ }}).¹¹² But these further submissions fare no better. For one thing, they are largely limited to repetition of previous arguments in different words.¹¹³

The only additional explanation offered by Professors Carlton and Israel is economically suspect, does not make common sense, and relies on conclusory assertions. To begin with, their argument appears to amount to a defense of a monopolist on the curious ground that it *is* a monopolist. They contend that, if Comcast has significant market power, it would have an incentive merely to squeeze that OVD rather than to put it out of business. In theory, they argue, this allows “Comcast to capture some (but not all) of that incremental surplus, thus leaving both Comcast and the OVD better off than under a foreclosure strategy.”¹¹⁴ In other words, Comcast would use its power to capture a share (presumably the lion’s) of the value created by the OVD.

¹¹² See e.g., Comcast November 26 Response, Response to Question 1 at 14 (“[M]ost customer would readily switch ISPs, including to a DSL or wireless provider with slower speeds, if their provider were to degrade access.”); *id.* Response to Question 3 at 15-16 “Customers who value edge providers’ content would likely switch to competing ISPs that offer unimpeded access to such services, particularly because switching costs are low.”).

¹¹³ For example, Comcast argues its “interconnection contracts [are] inconsistent with claims that Comcast has the incentive or ability to foreclose OVDs,” and that it has “no incentive to foreclose OVDs *directly* via interconnection (and no ability to do so, given the rich set of interconnection paths on which Comcast depends to provide broader interconnectivity.” Letter from Kathryn Zachem, Comcast Corporation, to Marlene Dortch, FCC, MB Docket No. 14-57 at 2 (Nov. 12, 2014) (“Comcast November 12 Response”) (emphasis in original). Comcast also notes “how Comcast’s program carriage contracting practices do not and are not designed to prevent OVDs from licensing content.” *Id.* While DISH and other commenters have already addressed the former two arguments in their filings in this proceeding, the third is an argument the only the Applicants themselves are in a position to address. DISH cannot respond to these arguments unless access is provided to the Video Programming Confidential Information.

¹¹⁴ Compass Lexecon Supplemental Responses on Broadband Prices, Customer Lifetime Value Calculations, and Alternative Theories of Foreclosure, ¶ 17 (Dec. 3, 2014) (attached to Letter from Francis Buono, Comcast Corporation, to Marlene Dortch, FCC, MB Docket No. 14-57 (Dec. 3, 2014)) (“Compass Lexecon Response”).

It takes quite a substantial leap of faith to accept that, even in the most benign of cases, Comcast does not harm the OVD even assuming that the OVD makes just enough to continue existing. As Professor Sappington observes, when OVDs anticipate this behavior by Comcast, they will have little incentive to create innovative new products, knowing that, at best, they will secure meager returns from their diligent efforts.¹¹⁵

Of course, the next question is: why would Comcast not want to capture *all* the rent, as compared to leaving any of it on the table for the OVD? And why would Comcast not pursue that good by “self-supply”—*i.e.*, by supplying its own service and not that of the rival OVD. The two Comcast experts’ responses to those questions fail to withstand serious scrutiny. They say, first, that self-supplying “an OVD service—the most relevant alternative to third-party OVDs like Netflix—is both highly costly and risky to Comcast.”¹¹⁶ As proof they cite the fact that “Comcast recently discontinued provision of Streampix as a subscription OVD service and now offers it only as part of its cable product.”¹¹⁷

To begin with, the timing of this convenient discontinuance and the venue of its announcement are curious: Comcast announced the end of Streampix *in its Opposition*.¹¹⁸ In addition, Comcast’s experts gloss over the fact that Comcast still provides the service, albeit as

¹¹⁵ Sappington Reply Declaration ¶ 29.

¹¹⁶ Compass Lexecon Response ¶ 19.

¹¹⁷ *Id.*

¹¹⁸ *Opposition* at 198-99; *see also* Karl Bode, *Comcast: Nobody Really Liked Our Netflix Wannabe Streampix*, DSLReports (Sept. 25, 2014), <http://www.dslreports.com/shownews/Comcast-Nobody-Really-Liked-Our-Netflix-Wannabe-Streampix-130601>; *see also* Jon Brodtkin, *Comcast: Our Netflix Competitor is Too Unpopular to Survive on Its Own*, ArsTechnica (Sept. 26, 2014), <http://www.dslreports.com/shownews/Comcast-Nobody-Really-Liked-Our-Netflix-Wannabe-Streampix-130601>.

part of a bundle, meaning that Comcast does not view it as too costly or risky after all. And they are totally silent about Comcast's Xfinity service. Comcast already supplies that OVD service within its footprint. What is the incremental cost of developing it into a full-fledged Netflix-like service that appropriates all of the available rent for Comcast, not just most of it? Presumably very little, but the question is left unanswered.

The second proposition offered by Comcast's experts is also implausible. To quote them:

In addition, Comcast relies on third parties for the vast majority of its content, whether delivered via traditional video or broadband, so foreclosing a particular OVD would likely just shift Comcast's negotiation from one third party (the OVD) to another (*e.g.*, other OVDs, studios and other programmers). Such a strategy would likely not be profitable, as Comcast would simply find itself more dependent on the remaining, smaller set of third-party content providers.¹¹⁹

This seems absurd. Programming costs are bound to be lower for the number-one purchaser of content in the nation, who moreover owns a major network and studio, than for Netflix or any other OVD. Negotiations with programmers that already have agreements with Comcast are not likely to be an arduous deterrent.¹²⁰

In sum, the conclusions directly drawn from Comcast's churn data strike at the heart of Comcast's competitive case. In particular, they have profound implications for the relevant product market, discussed in Section V.B below, and the merged company's heightened incentive to harm OVDs, discussed in Section VII below.

¹¹⁹ Compass Lexecon Response ¶ 19.

¹²⁰ Sappington Reply Declaration ¶ 49 & n.45.

IV. THE GEOGRAPHIC MARKET IS NATIONAL

The Applicants' continued denial of a national market ignores critical facts and precedent.¹²¹

- ***The national OVDs' need for access.*** The Applicants mischaracterize DISH's discussion of the relevant geographic market in this proceeding. The broadband offerings of Comcast and TWC are alternatives for one another in an OVD's attempt to assemble a mix of broadband ISPs sufficient to reach a critical mass of high-speed broadband subscribers on a national level.
- ***The need for a limiting principle.*** Under the Applicants' view, there is no combination of existing cable operators that could ever be anticompetitive, which can extend all the way to the control of all cable operators in the country. Cable operators would be rewarded because, like a well-disciplined cartel, they have dutifully avoided encroaching on the territories of each other.
- ***The national lens that regulators have employed in stopping similar previous combinations.*** Whether it is Commission precedent in the *AT&T-MediaOne* and *Primestar* cases, or antitrust case law from the *Omnicare* case or the shipping conference cases, the teachings are the same: a national market analysis is necessary alongside a narrower view of the market when the overlords of separate fiefs seek to combine.

A. The Applicants' Rebuttal of a National Market Mistakes the Identity of the Supplier, the Customer, and the Service

The Applicants deny the existence of a "national market for high-speed broadband distribution of edge provider content."¹²² Professor Israel describes the petitioners' argument as follows: "One could posit that Comcast and TWC are both buyers of content from edge providers and thus both participate in a national market for content purchases."¹²³ He proceeds to attack this supposed premise on the ground that "ISPs are not generally buyers of services

¹²¹ Opposition at 116.

¹²² *Id.* at 115 (citations omitted).

¹²³ Israel Reply Declaration ¶ 21.

from edge providers.”¹²⁴ But, he concludes, even if that hypothesis were correct, the fundamental stumbling block of the national market theory is that “content is not a ‘rival’ input in the sense that there are units of content—like widgets—that are sold to a particular buyer in a market.”¹²⁵ In other words, if one were to translate this dense language into more simple terms, TWC and Comcast do not compete with one another today to buy units of content from Netflix or other OVDs. *Ergo*, they are not competitive substitutes, and the market must be local.

This analysis sets up a straw man and gets almost everything wrong, including who is the supplier (or seller), who is the customer (or buyer), and what is the product or service. First of all, the premise of the national geographic market is not that ISPs buy content from OVDs. The correct premise, rather, is that ISPs *supply access* to OVDs. As Professor Sappington explains, access to high-speed broadband access subscribers is “essential for the viability” of a new OVD.¹²⁶ The fact that OVDs usually (but, of late, not always) do not pay the ISP for this access does not matter: in all cases, payment for the supply of access flows to the ISP, whether directly from the OVD itself or indirectly from the ISP’s customers.

This framework in turn makes clear the substitutability of the two companies’ broadband services. While Comcast and TWC operate in different geographic areas, their broadband offerings are alternatives for one another in an OVD’s attempt to assemble a mix of broadband ISPs sufficient to reach a critical mass of high-speed broadband subscribers. It is this complement of ISPs that matters. Today, even without uncompromised access to Comcast’s system, an OVD could likely cobble together enough uncompromised access in a sufficient

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ Sappington Reply Declaration ¶ 54.

number of other broadband access systems to reach critical mass. This is shown in the attached Declaration of Roger Lynch, Executive Vice President, Advanced Technologies and International Group for DISH Network, and Professor Sappington's case study.

Specifically, even without access to Comcast's subscribers, these declarations show that a nascent OVD service could be expected to secure a positive present discounted value ("PDV") of earnings during its first {{ }} years of operation.¹²⁷ Although a positive PDV of earnings in a shorter time span would be preferable, a {{ }} year time frame can be tolerated by a company with long-term objectives and reliable and substantial financing. But if TWC's subscribers are added to those of Comcast's, not even the most stalwart OVD upstart is likely to achieve a positive NPV of earnings returns within a reasonable business timeframe.¹²⁸ In Professor Sappington's words: "without access to the high-speed broadband subscribers of the combined Comcast-TWC, the potential returns from the service would be diminished so severely that [a] new [OVD] service likely would be unviable, and so would not be offered."¹²⁹

More generally, the share of nationwide broadband subscribers that an ISP serves is an informative proxy for the leverage that an ISP can exercise in its interactions with OVDs. Consequently, these national shares are important to consider in assessing the extent to which the proposed merger of Comcast and TWC could harm OVDs (and thereby stifle industry innovation and harm consumers of OTT services) by increasing the combined leverage of Comcast and TWC over OVDs.¹³⁰

¹²⁷ *Id.* ¶ 56, 63; *see also* Lynch Reply Declaration ¶ 34.

¹²⁸ Sappington Reply Declaration ¶ 64.

¹²⁹ *Id.* ¶ 54.

¹³⁰ *Id.* ¶¶ 37, 38.

B. There Is No Limiting Principle to the Applicants' Balkanized View of the Geographic Market

The Applicants' argument that the lack of a geographic overlap means that there can be no competitive harm is fatally flawed for another reason—the lack of a limiting principle.¹³¹ The same justification for this transaction could be used again in two years for a deal giving Comcast-TWC control of Cox, Charter, or Cablevision.¹³² Indeed, it could be used to approve Comcast-TWC's control of Cox, Charter, *and* Cablevision. After swallowing the proposed combination of the two largest cable companies, could the Commission or the DOJ seriously argue that further expansion by the enlarged Comcast must be stopped?¹³³

This transaction is Comcast's effort to cross the Rubicon.¹³⁴ Not only would Comcast-TWC enjoy a subscriber base for its cable and broadband access services never before seen, it would also pass almost 70 percent of the American population, up from 42 percent today.¹³⁵

¹³¹ See Allen Grunes and Maurice Stucke, *Another 'Too Big to Fail' Merger from Comcast's Playbook*, Roll Call (Apr. 17, 2014), http://www.rollcall.com/news/another_too_big_to_fail_merger_from_comcasts_playbook_commentary-232221-1.html; Stucke and Grunes at 2; *Competition in the Video and Broadband Markets: The Proposed Merger of Comcast and Time Warner Cable: Hearing Before the H.R. Comm. on the Judiciary, Subcomm. on Regulatory Reform, Commercial and Antitrust Law*, 113th Cong. 110 (2014) (statement of Allen P. Grunes, Partner, GeyerGorey LLP) (“Grunes Testimony”), available at http://judiciary.house.gov/_cache/files/c75c94f1-c367-4af7-b0dd-0e4605abf880/113-94-87799.pdf.

¹³² Stucke and Grunes at 2.

¹³³ While the combined Comcast-TWC would not be the only broadband provider in the country, it would control access to over 50 percent of high-speed broadband subscribers. DISH Petition at 2.

¹³⁴ Stucke and Grunes at 2; Grunes Testimony at 110.

¹³⁵ Stucke and Grunes at 2; Netflix Petition at 9-10.

And the combined company would have virtually all the prime real estate of the nation's population centers.¹³⁶ The Commission should not let this die be cast.

C. The Commission's Own Analysis Shows that the Combined Company Will Control an Alarming Share of a Properly Constructed Market

In DISH's Petition and Professor Sappington's Second Highly Confidential Supplement to his accompanying declaration, DISH analyzed the combined company's share of a properly constructed market (a national market for households with a 25 Mbps-plus broadband service, *see also* Section V, *infra*). Using publicly available data, DISH showed that the combined company would control access to at least 50 percent of households in this market.¹³⁷ Professor Sappington then showed that, when the companies' highly confidential data from June 2013 were used, the combined company would control in excess of {{ }} percent of this market across the nation.¹³⁸

The Commission's recent analysis of December 2013 data shows that concentration in the market has only gotten worse. Just one year ago, between them Comcast and TWC controlled more than {{ }} percent of the nation's 25 Mbps-plus residential broadband pipes.¹³⁹ If TWC's percentage of 25 Mbps-plus connections had matched Comcast's proportion of such connections at the time, the two companies would have controlled more than {{ }} percent of this market.¹⁴⁰ Indeed, this increasingly looks to be the case as TWC has reportedly made significant investments in its network and the company is set to complete roll-out of its TWC

¹³⁶ Stucke and Grunes at 3-4.

¹³⁷ DISH Petition at 39.

¹³⁸ Letter from Pantelis Michalopoulos and Stephanie Roy, Counsel for DISH Network Corporation, to Marlene Dortch, FCC, MB Docket No. 14-57 at 2 (Aug. 25, 2014).

¹³⁹ FCC Memorandum at Exhibit 1a.

¹⁴⁰ *Id.*

Maxx program in critical markets across the nation (*see* Section X.A, *infra*). Asking the nation's OTT providers to rely on a single behemoth to reach almost {{ }} of their potential market is simply asking too much. The impact of these numbers and their implications for OTT providers might be mitigated were the combined company to face at least a single real competitor to its broadband service in the markets it serves. But again, the Commission's own analysis shows that there is no relief on this front. After the merger, 63 percent of households in the Comcast-TWC footprint will have *no* option for 25 Mbps-plus residential broadband, other than Comcast-TWC.¹⁴¹ Another 29 percent will have only two total choices, and only 3 percent will have three or more choices.¹⁴² But even these choices are largely on paper only, as the churn data show.

D. Legal Precedent Supports Reviewing the Merger's Effect on the National Market

This is not the first time that two companies, each dominant in its own turf, have defended their proposed combination by arguing that their territories are separate, and therefore things could not get much worse in each of them than they are already. Cable operators, including Comcast and TWC, tried this approach in the *Primestar* case; and the same argument has been raised unsuccessfully in industries as diverse as pharmaceuticals and shipping. But the Applicants respond only to one case cited by DISH.

¹⁴¹ FCC Memorandum at Exhibit 3.

¹⁴² *Id.* at Exhibit 3a.

1. AT&T-MediaOne

The only case the Applicants respond to is *AT&T-MediaOne*.¹⁴³ In that transaction, the merger of two cable operators would have resulted in the combination of the Excite@Home and Road Runner broadband access portals. The DOJ required a divestiture of the combined company's interest in one of the two portals, and defined a *national market*¹⁴⁴ for the "aggregation, promotion, and distribution of broadband content and services."¹⁴⁵ Tellingly, the Applicants attempt to distinguish *AT&T-MediaOne* not on the ground that the combination of Excite@Home and Road Runner would have had greater anticompetitive effects than the union of the Applicants' broadband businesses today, but because it would have had *fewer* such effects.¹⁴⁶ In other words, the distinction they are trying to draw suggests that there are stronger reasons to deny this merger than those found compelling by the DOJ in the *AT&T-MediaOne* case. The Applicants also ask the Commission to forget the fact that the combination of AT&T's and MediaOne's ISP services was stopped, and to dwell only on the fact that the combination of their bare pipes survived scrutiny. But that does not help the Applicants. Today, these ISP and bare pipe functions have been amalgamated, and the Commission's partial approval in 2000 was based on reasons that have long disappeared.

The portal service national market is just a subset of today's broadband access national market. Specifically, the Applicants argue that the DOJ "focused on a different, upstream

¹⁴³ Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from MediaOne Group, Inc., Transferor, to AT&T Corp., Transferee, *Memorandum Opinion and Order*, 15 FCC Rcd. 9816 (2000) ("*AT&T-MediaOne Order*").

¹⁴⁴ Complaint, *United States v. AT&T*, No. 1:00-cv-01176, ¶ 28 (D.D.C. May 25, 2000).

¹⁴⁵ *Id.* ¶ 25.

¹⁴⁶ Opposition at 20, 118-121.

market for providing ‘portal service’ to ISPs,”¹⁴⁷ intimating that this market was somehow distinct from today’s broadband access market. But what they miss is that the gateway function then provided by Excite@Home and Road Runner has now been taken over by Comcast and TWC themselves. In 2000, there were two gateways to the broadband pipe: the home page accessed via the software provided by companies like Excite@Home and Road Runner, and the connection to the last mile on the cable system.

The portals traveled hand-in-hand with their cable operator owners, far from being separate businesses as the Applicants suggest. All of Excite@Home’s cable owners used Excite@Home to provide broadband for their customers.¹⁴⁸ All of Road Runners’ cable owners likewise used Road Runner for the same purpose (with the sole and later exception of TWC, which was forced into a multiple ISP model in 2001 under a condition to the approval of the AOL-Time Warner transaction).¹⁴⁹ But, no other Internet access provider operating in the same markets as Excite@Home and Road Runner’s cable owners used either Excite@Home or Road Runner, respectively.¹⁵⁰

Each of the two portals was thus the exclusive gateway to its owner’s broadband access service. It was precisely as a gateway that the DOJ viewed the proposed combination of the two

¹⁴⁷ *Id.* at 118-19 (citing Amended Complaint, *United States v. AT&T Corp.*, No. 1:00-cv-01176, ¶ 25 (D.D.C. May 26, 2000)).

¹⁴⁸ See Competitive Impact Statement, *United States v. AT&T Corp.*, No. 1:00-cv-01176, at 8-10 (D.D.C. May 25, 2000); see also *AT&T-MediaOne Order*, 15 FCC Rcd. at 9819 ¶ 5.

¹⁴⁹ Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee, *Memorandum Opinion and Order*, 16 FCC Rcd. 6547, 6678 ¶¶ 318-19 (2001).

¹⁵⁰ *AT&T-MediaOne Order*, 15 FCC Rcd. at 9819 ¶ 5.

companies, and it was on this gateway function—the portals’ “gatekeeper position”¹⁵¹—that the DOJ’s concerns were focused:

- “By combining AT&T’s controlling interest in Excite@Home with MediaOne’s . . . interest in Road Runner, the proposed transaction threatens to substantially lessen competition by increasing concentration in the market for aggregation, promotion, and distribution of residential broadband content.”¹⁵²
- “AT&T would substantially increase its leverage in dealing with broadband content providers, enabling it to extract more favorable terms for such services.”¹⁵³
- “By exploiting its ‘gatekeeper’ position in the residential broadband content market AT&T could make it less profitable for disfavored content providers to invest in the creation of attractive broadband content, and reduce competition and restrict output in the market.”¹⁵⁴

The DOJ also found that the portal service providers’ gatekeeper role allowed them to drive up prices for their content distribution services,¹⁵⁵ to “substantially enhance or detract from a content provider’s ability to reach large numbers of customers,” and to “confer market power on individual content providers favored by [the provider].”¹⁵⁶ In the same vein, the Commission also noted that “the merged firm will control such a large portion of the broadband customer base that it could gain *de facto* power to dictate what content, products, and services are available to broadband customers generally, and at what price.”¹⁵⁷

¹⁵¹ See Competitive Impact Statement, *United States v. AT&T Corp.*, No. 1:00-cv-01176, at 2 (D.D.C. May 25, 2000).

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id. at 2, 9.*

¹⁵⁷ *AT&T-MediaOne Order*, 15 FCC Rcd. at 9865 ¶ 111.

The gateway function played today by broadband access networks is the direct descendant of the role played by portal services such as Excite@Home and Road Runner. Moreover, the Applicants are wrong when they say that neither Excite@Home nor Road Runner were “an ISP in the current sense of that term.”¹⁵⁸ The Commission referred to them precisely as “cable broadband Internet service providers (ISPs).”¹⁵⁹ The DOJ also referred specifically to Excite@Home and Roadrunner as providing “residential broadband Internet services.”¹⁶⁰ And for good reason. The portals served precisely the same access function that Comcast and TWC do today.

But the amalgamation of portal services and bare pipes does not mean that the portal services bottleneck has somehow become more innocuous than it was in 2000. If anything, the opposite is true. This gatekeeper function is the primary threat that a combined Comcast-TWC would pose to the national market for online video distribution.

The Applicants cannot draw comfort from approval of the remainder of the AT&T-MediaOne merger. The Applicants claim that the Commission and the DOJ approved the *AT&T-MediaOne* merger based on a finding of no competitive harms to the Internet access market.¹⁶¹ But something quite different is true: the Commission’s approval of the merger (minus the divested Road Runner service) was based on substantial mitigating factors that simply are not present today. Throughout the *AT&T-MediaOne Order*, the Commission consistently notes (1) the “nascent” condition of the broadband industry, (2) competition from alternative

¹⁵⁸ Opposition at 119.

¹⁵⁹ *AT&T-MediaOne Order*, 15 FCC Rcd. at 9819 ¶ 5.

¹⁶⁰ See Competitive Impact Statement, *United States v. AT&T Corp.*, No. 1:00-cv-01176, at 8 (D.D.C. May 25, 2000).

¹⁶¹ See Opposition at 118-19.

providers, and (3) the ability of unaffiliated ISPs to obtain passage on the telephone companies' lines as reasons for declining to condition its approval of the transaction.¹⁶²

These conditions are markedly different from those present in the broadband marketplace today. From its humble origins as an emerging market where a majority of subscribers accessed the Internet through dial-up service,¹⁶³ the broadband marketplace has grown into a multi-billion dollar industry that serves nearly every consumer in the United States. Despite this progress, there is now a stark lack of competition among broadband providers that offer speeds adequate to support the needs of consumers today. In fact, barely one third of American consumers have access to even one high-speed broadband alternative to Comcast or TWC today.¹⁶⁴ The Media Bureau memorandum shows that Comcast-TWC would be the *only* choice for 63 percent of 25 Mbps-plus subscribers in its footprint.¹⁶⁵ For content to reach those subscribers, Comcast-TWC would be the only game in town.

There was another reason why the FCC and the DOJ were more tolerant of the combination of AT&T's and MediaOne's bare pipes than they were of the merger of their ISP services. The Commission believed that cable operators (including AT&T and MediaOne, as they had attested in their application to the Commission)¹⁶⁶ were considering a multiple ISP-

¹⁶² See *AT&T-MediaOne Order*, 15 FCC Rcd. at 9867-68, 9871 ¶¶ 117, 123.

¹⁶³ *Id.* at 9862 ¶ 104.

¹⁶⁴ See Netflix Petition at 36. As DISH explained in its Petition and elaborates on below, "true broadband" means high capacity, high speed wireline service over which a consumer can enjoy HD video in a multi-device household. 25 Mbps service is a useful proxy for this market.

¹⁶⁵ FCC Memorandum at Exhibit 3.

¹⁶⁶ *AT&T-MediaOne Order*, 15 FCC Rcd. at 9869 ¶ 120.

approach, offering consumers a choice of broadband providers.¹⁶⁷ Thus, at the time of its review of the *AT&T-MediaOne* transaction, the Commission saw a very real possibility of competition among ISPs over the same lines, with cable operators and telephone companies supporting the development of broadband service by making their facilities available.¹⁶⁸

Unfortunately, the multiple ISP model was never implemented except as a condition in the *AOL-Time Warner* transaction. Not one cable operator willingly allowed multiple ISPs access, and Time Warner terminated the arrangement after its merger condition expired. Today, access providers such as Comcast and TWC are not required to open their platforms to unaffiliated services. In fact, broadband access providers have the incentive and ability to discriminate against unaffiliated ISPs. As the Commission has recognized consistently, “broadband providers”—often the same entities that also provide MVPD services—“have incentives to interfere with the operation of third-party Internet-based services that compete with

¹⁶⁷ Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, *Declaratory Ruling and Notice of Proposed Rulemaking*, 17 FCC Rcd. 4798, 4812-18 ¶¶ 20-30 (2002).

¹⁶⁸ Excite@Home had its own programming services provided by the company’s @Media group that it would likely have had incentive to favor over that of unaffiliated content absent the voluntary commitments by AT&T and MediaOne to open their networks to unaffiliated ISPs and the common practice of doing so at the time. The company described its own programming services as “enhance[ing] the @Home Experience” by offering “Web-based applications designed specifically to take advantage of the @Home broadband network.” At Home Corporation, Quarterly Report (Form 10-Q) at 9 (Apr. 30, 1998). Comcast has its own content service to favor today, but unlike in *AT&T-MediaOne*, unaffiliated ISPs have no safeguards available. Similarly, the fact that MediaOne held a 25 percent interest in Time Warner Entertainment (“TWE”), and TWE had a nearly 58 percent interest in Road Runner would have presented much greater potential harms today than in the marketplace at the time of *AT&T-MediaOne*. *AT&T-MediaOne Order*, 15 FCC Rcd. at 9829 ¶ 26; AOL Time Warner Inc., Quarterly Report (Form 10-Q), at 1 (May 15, 2001).

the providers' revenue-generating . . . pay-television services.”¹⁶⁹ So, while in 2000 it may have been “premature to conclude that the proposed merger poses a sufficient threat to competition and diversity in the provision of broadband Internet services, content, applications or architecture,” that conclusion is by no means premature today.¹⁷⁰ To the contrary, the conclusion is timely and correct. The proposed merger poses a severe threat to competition and diversity in the provision of high-speed broadband Internet content, services, and applications.

2. Primestar

The Applicants' total silence on the *Primestar* case raised by DISH is particularly telling, because both Comcast and TWC were parties to that proposed transaction.¹⁷¹ Sixteen years ago, the Applicants, along with three other large cable operators, sought to acquire the rights to the 110° W.L. orbital slot, one of only three satellite television slots from which a provider could serve the entire United States.¹⁷² The DOJ filed a complaint seeking to block the transaction, contending that it would “substantially lessen competition” and “tend to create a monopoly” in

¹⁶⁹ See *Open Internet Order*, 25 FCC Rcd. at 17916 ¶ 22; see also Applications of Comcast Corporation, General Electric Co. and NBC Universal, Inc. for Consent to Assign Licenses and Transfer Control of Licenses, *Memorandum Opinion and Order*, 26 FCC Rcd. 4238, 4263 ¶ 62 (2011) (“*Comcast-NBCU Order*”) (“We impose a set of measures carefully tailored to safeguard against [Comcast’s incentive and ability to hinder competition from online video distributors].”).

¹⁷⁰ See *AT&T-MediaOne Order*, 15 FCC Rcd. at 9871 ¶ 123. In addition, the Commission also noted the effect of consolidation on the national broadband market, observing that the merger would consolidate the nation’s largest and fourth largest cable operators. *Id.* at 9818 ¶ 2. The instant transaction, of course, is a merger of the nation’s largest and second largest cable operators.

¹⁷¹ See Complaint, *United States v. Primestar, Inc.*, 1:98-cv-01193 (D.D.C. May 12, 1998). Primestar was a joint venture partnership formed in 1990 involving Time Warner, Inc., Tele-Communications, Inc., Comcast Corporation, Cox Communications, Inc., US West/MediaOne, and Primestar’s satellite provider, GE American Communications. *Id.* ¶ 13.

¹⁷² *Id.* ¶¶ 26, 30.

the market for MVPD services.¹⁷³ The DOJ argued that the five cable companies, which served approximately 60 percent of all cable subscribers in the United States, had no economic incentive to utilize the valuable slot and thus lose their cable subscribers.¹⁷⁴ Rather, the partnership's strategy was "to keep this scarce asset out of the hands of any firm that would compete vigorously against their cable operations."¹⁷⁵ Comcast and TWC are seemingly trying to apply the same technique that was stopped in *Primestar*: forestall competition by acquiring a stranglehold over a valuable input—here, the high-speed broadband pipes into consumer's homes.

3. Omnicare

Another legal precedent the Applicants ignore is *Omnicare*.¹⁷⁶ In that transaction, the Federal Trade Commission ("FTC") challenged Omnicare's hostile cash tender offer to acquire all outstanding shares of PharMerica, the second-largest long-term care ("LTC") pharmacy provider in the country (with Omnicare being the largest), even though both Omnicare's and PharMerica's immediate customers, skilled nursing facilities, were locked in exclusive contracts with one or the other company.¹⁷⁷ The pharmacies, in turn, negotiated the rates paid by the nursing facilities for medications directly with the insurers themselves. The FTC reasoned that the merger would give Omnicare too much negotiating leverage over the insurers that footed the bill for the nursing facilities' purchases from their respective LTC pharmacy. The main reason? Insurers were required by law to provide "convenient access" to LTC pharmacy resources for

¹⁷³ *Id.* ¶ 1.

¹⁷⁴ *Id.* ¶ 7.

¹⁷⁵ *Id.*

¹⁷⁶ See Complaint, *In re Omnicare, Inc.*, FTC Docket No. 9352 (Jan. 27, 2012).

¹⁷⁷ *Id.* ¶ 1.

their beneficiaries in the nursing facilities,¹⁷⁸ much like OVDs are required by market forces to be able to reach a large portion of the nation’s broadband subscribers. The FTC reasoned that Omnicare would morph from a “should have” to a “must have” for the insurers seeking to fulfill the “convenient access” requirement.¹⁷⁹ The proposed combination here would similarly create a must-have broadband access provider for every national OVD.

4. Fighting Ships

The Applicants also have no word to challenge the relevance of the “fighting ship” coordination practices from the early 20th century, in which the shipping conferences, each dominant in its *own* route, conspired to thwart competition.¹⁸⁰ Notably, the fighting ships case had a sequel of even greater relevance to this transaction. In 1980, a New York federal court struck down an attempt of the shipping conferences to combine under the antitrust laws, without being swayed by the fact that each conference operated in a different route. In that case, shippers in the United States and European transatlantic shipping trade brought an action against other shipping lines that attempted to establish a “super-conference” among eight conferences covering transatlantic trade.¹⁸¹ The proposed merger would have allowed the shipping lines to avoid regulatory oversight (by sidestepping tariff filing requirements) and to “take joint interconference action” by setting rates, charges, and costs for service and controlling methods of collecting or disseminating information regarding the trade.¹⁸² The plaintiffs asserted violations

¹⁷⁸ *Id.* ¶¶ 3-7.

¹⁷⁹ *Id.* ¶ 7.

¹⁸⁰ DISH Petition at 49-51.

¹⁸¹ *In re Ocean Shipping Antitrust Litig.*, 500 F. Supp. 1235, 1237 (S.D.N.Y. 1980).

¹⁸² *Id.* at 1239 n.4 (“46 U.S.C. § 817 requires ocean carriers to file maximum rates, fares and charges, tariffs showing all rates and charges of such carrier and places between which freight

of the Sherman Act, 15 U.S.C. § 1, alleging that, from 1971 until 1977, the defendants participated in a conspiracy to “fix, raise, maintain and stabilize price levels for the shipment of freight in the United States/Europe trade.”¹⁸³

Had the court focused on each shipping line’s unique geographic scope, plaintiffs’ antitrust action likely would have resulted in dismissal. Instead, the court relied on the broad definition of a “conference” provided in 46 C.F.R. § 522.2(a)(1): “A conference is an association of common carriers which usually provides for fixing of uniform rates and practices *within the specified trade*, the filing of a common tariff, and the appointment of a chairman to conduct the administrative affairs of the parties.”¹⁸⁴ In other words, what defines a conference is not just its service routes or areas, but its common administrative machinery and its ability to act in concert in making decisions that can *potentially affect an entire trade within a defined market*. The courts’ focus on the concerted action within a trade, rather than the geographic market, is instructive.

The proposed transaction here aims to accomplish exactly what the shipping conferences tried to do in the 20th Century—consolidate an industry. Like the shipping conferences, the merged entity here would be able to exercise its control over 50 percent of high-speed broadband connections to determine the future of online video distribution, regardless of the Applicants’ current geographic limitations.¹⁸⁵

will be carried. No change in rates, charges, etc. shall be made except by the filing of a new tariff, and carriers are required to charge the rates and charges specified in the tariff.”).

¹⁸³ *Id.* at 1237.

¹⁸⁴ *Id.* at 1238 n.2. (citing 46 C.F.R. § 522.2(a)(1)) (emphasis added).

¹⁸⁵ See Mark Cooper, *Buyer & Bottleneck Market Power Make Comcast-Time Warner Merger “Unapprovable,”* Consumer Federation of America, at 6 (2014), available at

V. THE APPLICANTS' VIEW OF THE RELEVANT PRODUCT MARKET IS WRONG

There seems to be no disagreement between DISH and the Applicants that the relevant product market for this proceeding is Internet service capable of allowing today's household to watch and enjoy long-form, HD video over the Internet.¹⁸⁶ Where DISH and the Applicants diverge (regarding this advocacy) is on what this means. As DISH explained in its Petition and further expands on below, high-speed, high-capacity Internet offerings capable of supporting uncompromised viewing of long-form, HD video in today's multiple-device households are wireline services capable of providing access at speeds of 25 Mbps or more. Comcast itself agrees in its marketing communications. When it must avoid false claims to consumers, Comcast says only that 6 Mbps is good enough for *audio* and *photos*.¹⁸⁷ To the Commission in this proceeding, however, Comcast says that a lower speed—4 Mbps—is perfectly adequate for a household's HD video needs. The latter claim is untrue.

A. The Product Market is High-Speed Access Suitable for the Long-Form, HD Video Consumed by a Household

The Applicants continue to disagree with a 25 Mbps threshold.¹⁸⁸ They argue that a “4 Mbps connection has been found to be more than ‘sufficient to handle HD video’”¹⁸⁹ and that

<http://consumerfed.org/pdfs/CFA-Comcast-TW-Merger-Analysis.pdf>; *see also* Sappington Declaration ¶ 20. Indeed, once TWC's upgrades are complete, the Applicants will control more than {{ }} percent of the market for 25 Mbps-plus residential broadband connections. *See* FCC Memorandum at Exhibit 1a.

¹⁸⁶ *See, e.g.*, Opposition at 122.

¹⁸⁷ *See* Xfinity Internet Offerings. Comcast's “Performance Starter” Internet package offers speeds of 6 Mbps and is advertised as suited for sharing photos and downloading music—with no mention of the capability to support streaming services. *Id.*

¹⁸⁸ *See* Opposition at 122-25.

¹⁸⁹ *Id.* at 122.

this speed is “within the mainstream of broadband connections in the country.”¹⁹⁰ But notably the Applicants fail to stand firm. Their economist, Professor Israel, looks instead to speeds of 10 Mbps to “provide[] a more reasonable definition of broadband.”¹⁹¹ And Professor Israel similarly looks to 10 Mbps when evaluating the viability of DSL as a competitor to cable broadband, highlighting DSL growth statistics for the 10 Mbps or better category.¹⁹²

DISH and many others have explained that 4 Mbps and even 10 Mbps speeds are inadequate to support the viewing habits of American households both today and in the future.¹⁹³ Indeed, Chairman Wheeler calls 4 Mbps “‘yesterday’s broadband.’ Four megabits per second

¹⁹⁰ *Id.*

¹⁹¹ Israel Reply Declaration ¶ 29.

¹⁹² Opposition at 128; Israel Reply Declaration ¶¶ 76-80.

¹⁹³ See DISH Petition at 27-30 (citing Declaration of Roger Lynch ¶ 36 (Aug. 25, 2014) (attached as Exhibit A to DISH Petition) (“Lynch Declaration”) (“[A] typical household relying on the Internet to deliver all video therefore should optimally have no less than 25 Mbps in broadband connectivity. This means that 25 Mbps would be the minimum *actual* [as opposed to advertised] experienced speed provided to the residence in order to sustain a robust OTT video product capable of supplanting today’s traditional linear pay-TV service.”) (emphasis added); Netflix Petition at 16 (“For these reasons, to properly assess whether the Transaction is in the public interest, the Commission must consider its effect on competition in the market for true high-speed, high-capacity Internet connections capable of supporting multiple streams of rich media and interactive content. In the near term, that market is likely defined as connections capable of sustaining at least 10 Mbps for individuals and at least 25 Mbps for households.”); PK OTI Joint Petition at 8 (“A 25 Mbps threshold ensures that viewers can . . . watch television while still having sufficient leftover capacity for mobile devices, online backup services, and other applications. The Commission has already founds that speeds in excess of 15 Mbps are necessary for ‘[b]asic functions plus more than one high demand application running at the same time’—25 Mbps for three high-demand applications plus basic functions is a reasonable extrapolation of this metric.”) (quoting Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, *Tenth Broadband Progress Notice of Inquiry*, 29 FCC Rcd. 9747, 9753, Table 1 (Aug. 5, 2014)).

isn't adequate when a single HD video delivered to home or classroom requires 5 Mbps of capacity."¹⁹⁴

In recognition of this, the Commission now requires entities seeking support to provide fixed broadband to rural communities from the Commission's Connect America Fund to provide *at least* 10 Mbps download speeds.¹⁹⁵ Of course, minimum speeds to this nation's historically underserved communities are not a proxy for the applicable product market for this transaction, but they *are* evidence that a 4 Mbps threshold is woefully inadequate at best. And even at the minimum 10 Mbps threshold for qualifying for the Connect America Fund, the Applicants' would control 42 percent of the market,¹⁹⁶ a very unhealthy concentration of households in a single broadband provider at best.

In their stubborn adherence to 4 Mbps, the Applicants seem to be saying that everything would be fine if only all of their customers were single and did not have children, and therefore had more modest bandwidth needs than a family. In that vein, Comcast claims that "the majority (61 percent) of households in the United States have only one or two occupants and, therefore, are well below the five to six simultaneous users per household that these commenters postulate."¹⁹⁷ The 4 and 10 Mbps thresholds that Comcast promulgates on that and other bases do not, of course, reflect the needs of larger households.

¹⁹⁴ Wheeler Remarks at 2.

¹⁹⁵ Press Release, FCC, FCC Increases Rural Broadband Speeds Under Connect America Fund (Dec. 11, 2014).

¹⁹⁶ Sappington Declaration ¶ 20 n.29.

¹⁹⁷ Opposition at 123-24 (emphasis omitted).

But the Applicants' position seems to short-change even smaller households with one or two residents.¹⁹⁸ DISH and the other petitioners and commenters do not postulate six simultaneous *users* per household, but six or more simultaneous *uses*. This is a significant difference. A single user can and often does have multiple devices connected to the Internet simultaneously, many of which pull and push data without any active role required by their owner. Thus, Comcast's "high use" household ("one user watching a super high definition (SHD) movie, one user making a HD video call, one user saving files to and from the cloud, and syncing of email, alerts, an weather information taking place in the background")¹⁹⁹ is more likely to reflect the 1 to 2 person households that Comcast argues represent just 61 percent of the country.

Of course, even this scenario assumes that the household gets every bit of its promised 4 or 10 Mbps of bandwidth. And the Commission should certainly be concerned with the remaining 39 percent of U.S. households that have more than two members. Chairman Wheeler has recognized the reality that many American homes utilize multiple Internet-connected devices simultaneously, noting that "[i]t's not uncommon for a U.S. Internet-connected household to have six or more connected devices – including televisions, desktops, laptops, tablets, and smartphones."²⁰⁰ He further explained that "[w]hen these devices are used at the same time, as they often are in the evenings, it's not hard to overwhelm 10 Mbps of bandwidth."²⁰¹

¹⁹⁸ *Id.*

¹⁹⁹ *Id.* at 123 n.369.

²⁰⁰ Wheeler Remarks at 2.

²⁰¹ *Id.*

And even if a speed of 10 Mbps were adequate today, in two years' time consumers' viewing habits are likely to overwhelm it. This is because 4K, or Ultra HD, is increasing in popularity among American households. A 4K video stream needs at least 25 Mbps to flow without interruption.²⁰² Reports indicate that the adoption curve for 4K television today is faster than that of HD television in the mid-2000s.²⁰³ Projections show that "4K TVs will reach mass-market pricing in the next two to three years and surpass 80 percent of households in [] 10-12 years."²⁰⁴ By 2018, estimates predict that 46 million households worldwide will subscribe to a 4K pay-TV service.²⁰⁵ 4K content is likely to be especially popular among younger consumers, who are "more likely to use new pay-TV features, such as TV Everywhere and cloud DVR, but also have slightly lower subscription rates for pay-TV services."²⁰⁶ The growth in 4K is attributed to the increase in 4K programming (for example, Sony movies and television shows are available in 4K, as are Netflix series including House of Cards) and the decrease in the cost

²⁰² See *eSupport: Do Sony 4K Ultra HD TVs Support 4K Streaming Content?*, Sony (Aug. 1, 2014), https://us.en.kb.sony.com/app/answers/detail/a_id/45145 (last visited Nov. 18, 2014) ("4K streaming requires a stable Internet connection with a minimum Internet speed of 25 Mbps."); *Help Center: Internet Connection Speed Recommendations*, Netflix, <https://help.netflix.com/en/node/306> (last visited Nov. 18, 2014) (recommending 25 Mbps for Ultra HD quality); *Help Center: Can I Stream Netflix in Ultra HD?*, Netflix, <https://help.netflix.com/en/node/13444> (last visited Nov. 18, 2014) (listing "[a] steady Internet connection speed of 25 Mbps or higher" as necessary for streaming ultra HD").

²⁰³ Mark Hoelzel, *4K TV Shipments are Ramping Up Much Faster than HD TV Did in the Past*, Business Insider (Sept. 2, 2014), <http://www.businessinsider.com/4k-tv-shipments-are-taking-off-2014-5>.

²⁰⁴ Alex Tretbar, *Study Projects 4K Will Expand Like HD, Only Faster*, Digital Trends (Mar. 28, 2014), <http://www.digitaltrends.com/home-theater/4k-will-follow-path-similar-to-hd-growth-pattern-but-faster/>.

²⁰⁵ *More Than 46 Million Households Worldwide Will Subscribe to a 4K UHD Pay-TV Service by 2018*, Parks Associates (Oct. 14, 2014), <http://www.parksassociates.com/blog/article/pr-oct2014-tvxperience>.

²⁰⁶ *Id.*

of 4K capable televisions—prices for 4K television have dropped by 85 percent worldwide in two years.²⁰⁷ Indeed, in a sign of the growth in popularity of 4K, Netflix began offering a subscription package targeted those who consume 4K video in October 2014,²⁰⁸ and Amazon just announced that its 4K video content is now available to its Prime members at no additional cost.²⁰⁹

In fact, Comcast itself just announced this month that it was launching “Xfinity in UHD, a 4K Ultra High-Definition (UHD) On Demand programming app for 2014 Samsung UHD TVs.”²¹⁰ Comcast MVPD customers will be able to stream, “via the Internet,” 4K content on demand through their Samsung TVs. And next year, Comcast will unveil a new set-top-box to

²⁰⁷ See Molly Wood, *Sharper Image From 4K TVs Is a Gimmick Worth Having*, New York Times (Oct. 8, 2014), <http://www.nytimes.com/2014/10/09/technology/personaltech/sharper-image-4k-tv-gimmick-worth-having.html>. (“More 4K programming is being made, though. Some movie studios are shooting films in 4K. And Sony is pushing video makers to 4K with its devices, selling professional and semiprofessional cameras that shoot in the higher-resolution format. The company has also released a \$700 set-top-box that stores and plays back 70 movie and TV titles to owners of next-generation sets. A start-up, UltraFlix, is scanning older movies from 35 millimeter film and remastering them into 4K digital movies that stream on its app. The UltraFlix app is included on Sony and Vizio ultrahigh-definition TVs. And Netflix streams some of Sony’s movies and TV shows, and it is shooting some of its original series in 4K, including ‘House of Cards’ and coming series like ‘Marco Polo.’”).

²⁰⁸ Brett Molina, *Netflix Charging More for 4K Content*, USA Today (Oct. 13, 2014), <http://www.usatoday.com/story/tech/2014/10/13/netflix-4k/17186909/>.

²⁰⁹ Press Release, Unprecedented Picture Clarity Has Arrived on Amazon Instant Video with Ultra HD Movies and TV Shows Now Available, Amazon (Dec. 9, 2014), *available at* <http://phx.corporate-ir.net/phoenix.zhtml?c=176060&p=irol-newsArticle&ID=1996125>; *see also* Lee Hutchinson, *Amazon Adds 4K Video Streaming to List of Prime Benefits Starting Today*, ArsTechnica (Dec. 9, 2014), <http://omnifeed.com/article/arstechnica.com/gadgets/2014/12/amazon-adds-4k-video-streaming-to-list-of-prime-benefits-starting-today/>.

²¹⁰ Press Release, Comcast, Ultra HD Comes Into Focus With Xfinity in UHD App (Dec. 18, 2014), *available at* <http://corporate.comcast.com/news-information/news-feed/comcast-launches-xfinity-in-uhd-featuring-full-current-seasons-of-hit-series-on-demand-in-4k-ultra-high-definition> (last visited Dec. 19, 2014).

deliver 4K content to an even wider customer base. Comcast's aggressive rollout of 4K content to its customers stands in stark contrast to its claims in this proceeding that 4 Mbps is "more than 'sufficient to handle HD video.'"²¹¹ Comcast knows better.

B. The Applicants Themselves Tout the Need for 25 Mbps–Plus Speeds

In the end, the Commission need not tally up the potential uses of the Internet in a typical American household. Instead, the Commission need only look to how the Applicants advertise their own Internet services. If a speed of 4 Mbps were sufficient to provide uncompromised viewing of today's video services, one would expect Comcast to advertise the fact. Comcast does not. Instead, Comcast tells widely contradictory things to the Commission and to consumers, of which at least one must be false. To the Commission, the Applicants say: "A 4 Mbps connection has been found to be more than 'sufficient to handle HD video,' such as Netflix streaming."²¹² To consumers, Comcast says that a greater speed, 6 Mbps, is suited to "share photos" and "download music."²¹³ The implication of this, of course, is that 6 Mbps is not suited for video at all, let alone 4 Mbps, and let alone HD video. Indeed, the lowest speed of access that Comcast advertises as suitable for video is 25 Mbps.²¹⁴

Comcast's marketing materials also acknowledge the desire of consumers to use two or three devices at once. In November 2014, Comcast's "Performance" package offered speeds of 50 Mbps and was advertised as supporting "2-3 devices online at the same time" and allowing

²¹¹ Opposition at 122.

²¹² *Id.*

²¹³ Xfinity Internet Offerings.

²¹⁴ *Id.*

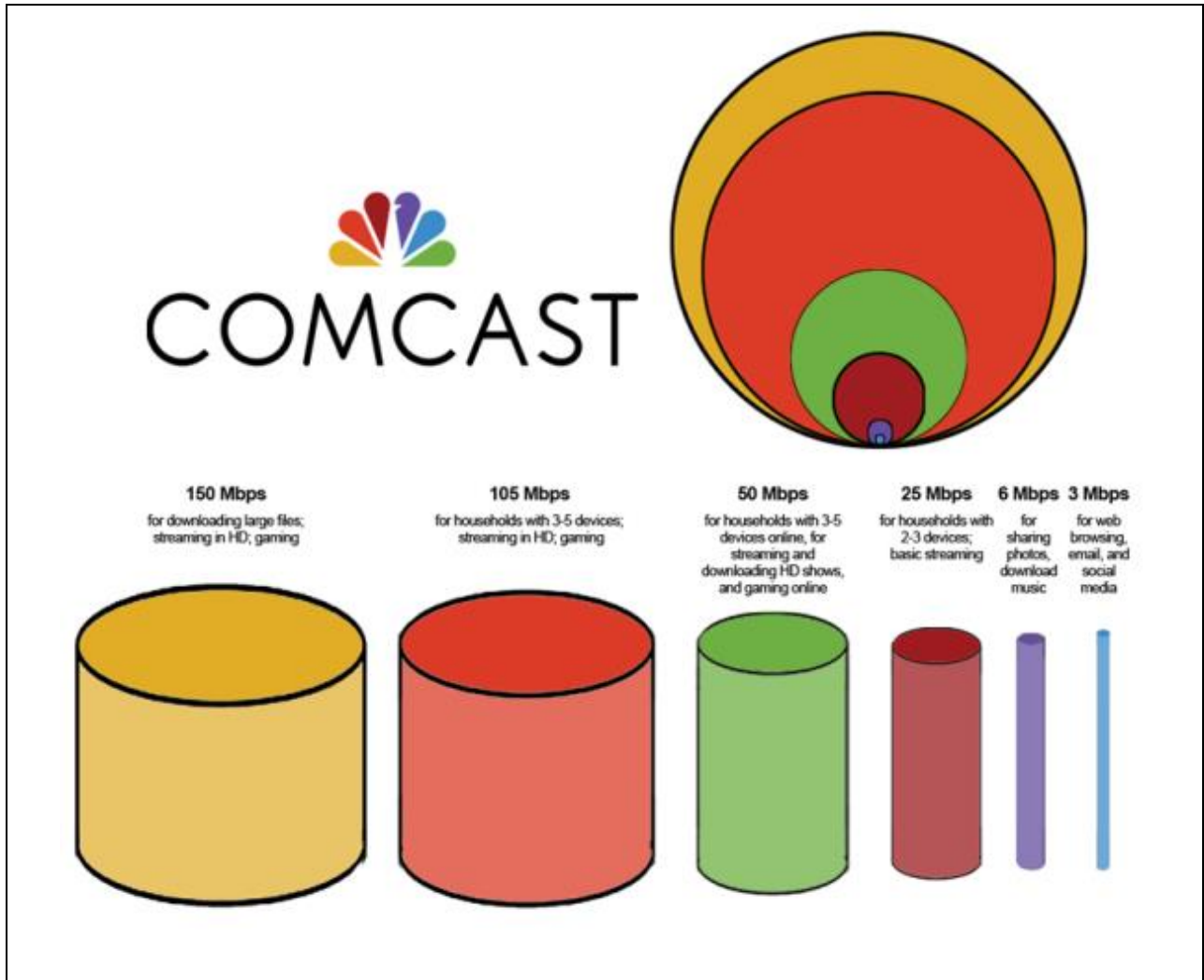
customers to “stream & download TV shows” (with no mention of HD).²¹⁵ If your household has “3-5 devices,” and you want to stream in HD, Comcast encouraged you to purchase its “Blast!” package at 105 Mbps.²¹⁶ Comcast also advertised six different “Triple Play” bundled packages, which ranged widely in price and quality of service. *Every* single bundle, however, including the “Starter” package, featured Internet service of at least 50 Mbps.²¹⁷

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *Xfinity Triple Play*, Comcast, <http://www.comcast.com/Corporate/Learn/Bundles/bundles.html> (last visited Nov. 18, 2014).

Figure 3. Analysis of Comcast's Own Marketing of Xfinity Internet²¹⁸



²¹⁸ See Xfinity Internet Offerings.

Figure 4. Screenshot of Comcast’s Online Description of Xfinity Internet²¹⁹

PACKAGE	DOWNLOAD SPEEDS UP TO	EXTRAS	PRICE
Extreme 150 Learn More	150 Mbps	Access to millions of hotspots nationwide	\$114⁹⁵/mo Add To Cart Pricing & Other Info.
Performance w/ Blast Learn More	105 Mbps	Blast! speeds included for \$5 per month for 12 months! Access to millions of hotspots nationwide	\$44⁹⁹/mo for the first 12 months Add To Cart Pricing & Other Info.
Performance Starter Hide Details	6 Mbps		\$29⁹⁹/mo for the first 12 months Add To Cart Pricing & Other Info.
<p>Get download speeds up to 6 Mbps and upload speeds up to 1 Mbps.</p> <ul style="list-style-type: none"> Reliably fast speeds everywhere Best for 1 device Share photos, download music Backed by Comcast Customer Guarantee™ <p>An XFINITY Internet Data Usage Plan may apply.</p>			
Performance Hide Details	50 Mbps	Access to millions of hotspots nationwide	\$39⁹⁹/mo for the first 12 months Add To Cart Pricing & Other Info.
<p>Get download speeds up to 50 Mbps and upload up to 10 Mbps!</p> <ul style="list-style-type: none"> Fastest, most reliable in-home WiFi Households with 3-5 devices online Stream & download HD shows, game online Access to millions of hotspots nationwide 			

TWC similarly encourages customers to purchase higher speed service if they plan to watch video online. TWC provides an “applet” called the “WiFi-Denti-Fier” to help potential

²¹⁹ *Id.*

customers estimate their data usage.²²⁰ The animated program asks for the user's gender, number of people in the household, and number of internet-connected devices used in the home. As recently as this past month, for example, TWC suggested its 100 Mbps "Ultimate" plan for a couple that uses two computers, two mobile phones, and two video on demand accounts. Even a single-occupant household with a tablet, computer, mobile phone, and one streaming video account was directed to the 30 Mbps "Extreme" plan. TWC recommended its 2 Mbps plans only for "the occasional Internet user" who needs to check email or do a "light amount of web surfing."²²¹ It suggested the 10 Mbps "Basic" plan for social networking and downloading medium size files, and was silent on the capabilities of its 15 Mbps and 20 Mbps offerings.²²² TWC recommended the 50 Mbps "Extreme" plan as the one "ideal for downloading music, streaming videos, and more."²²³

²²⁰ Time Warner Cable, *TWC WiFi-Denti-Fier*, <http://www.twcwifidentifier.com/> (last visited Nov. 18, 2014).

²²¹ *High Speed Internet Plans and Packages*, Time Warner Cable, <http://www.timewarnercable.com/en/plans-packages/internet/internet-service-plans.html> (last visited Nov. 18, 2014).

²²² *Id.*

²²³ *Id.*

Figure 5. Screenshot of TWC’s Description of Internet Speeds²²⁴

Internet Plan	Speed Explained
Ultimate Up to 100 Mbps download Up to 5 Mbps upload	TWC's fastest available speed. Up to 50 Mbps in most locations, but up to 100 Mbps and up to 75 Mbps in some areas*. Great for telecommuters, busy households and multiple users. Order or upgrade >
Extreme Up to 30 Mbps download Up to 5 Mbps upload	For homes with multiple users who upload huge files, stream videos, play games online and need to work from home. Order or upgrade >
Turbo Up to 20 Mbps download Up to 2 Mbps upload	Turbo is for you if you want to download large files, play online games and watch streaming video without buffering. Order or upgrade >
Standard Up to 15 Mbps download Up to 1 Mbps upload	Standard is ideal for everyday use — online shopping, watching videos and more. Order or upgrade >
Basic Up to 3 Mbps download Up to 1 Mbps upload	Surf the web, connect with social media, send email and download medium-sized files. Order or upgrade >
Everyday Low Price Up to 2 Mbps download Up to 1 Mbps upload	This is the best option for budget-conscious customers who don't need the higher speeds. Order or upgrade >

In sum, both Comcast and TWC direct potential customers to higher-speed broadband plans if the user intends to stream video. Neither Comcast nor TWC encourages its subscribers to purchase anything less than 30 Mbps service if they want to enjoy HD movies along with other uses of the Internet on a high quality, interruption free connection. The Applicants should not be heard to say otherwise to suit the exigency of this proceeding.

²²⁴ *Id.*

C. DSL and Wireless Remain Inadequate Substitutes for Cable Broadband

The Applicants once again attempt to expand the relevant product market by inappropriately wrapping in DSL and wireless connections. But in making these arguments, the Applicants either deliberately misstate or ignore the limitations of both DSL and wireless. With respect to DSL, the Applicants appear to conflate traditional DSL services with FTTP solutions such as Verizon FiOS, and fiber-to-the-node (“FTTN”) and fiber-to-the-curb (“FTTC”) solutions capable of delivering MVPD services.²²⁵ The Commission’s own analysis shows that DSL—even ADSL—is no substitute for cable.²²⁶ As DISH has stated, the relevant product market is high-speed, high-capacity broadband suitable for viewing long-form HD video in today’s households. This means wireline services that can offer speeds of no less than 25 Mbps, and includes FTTP solutions like FTTN and FTTC, but “should *exclude* broadband incapable of consistently delivering that download speed—other hybrid fiber/DSL products, standard DSL, and mobile wireless solutions.”²²⁷

1. Traditional DSL Is Not a Substitute for Cable Broadband

In analyzing the potential market in its Petition, DISH used precisely this mix of 25 Mbps-plus competitive products, and did not, as the Applicants incorrectly maintain, exclude all DSL services.²²⁸ The crux of relevant product market analysis is demand-side substitution:

²²⁵ Opposition at 125-28.

²²⁶ FCC Memorandum at Exhibit 5.

²²⁷ DISH Petition at 27 (emphasis in original).

²²⁸ *Id.* at 26-37 (“The relevant product market should include broadband that can and consistently do deliver download speeds no less than 25 Mbps—cable and FTTP solutions such as Verizon FiOS, and FTTN and FTTC solutions capable of delivering MVPD services. The relevant market should *exclude* broadband incapable of consistently delivering that download speed—other hybrid fiber/DSL products, standard DSL, and mobile wireless solutions.”) (emphasis in original).

customers' ability and willingness to substitute away from one product to another in response to a small but significant and non-transitory price increase or a corresponding non-price change such as a reduction in product quality or service.²²⁹ Under this approach, the Commission and the antitrust agencies have employed the hypothetical monopolist test to determine which products should be included in the relevant product market.²³⁰ As DISH points out in its Petition, traditional cable and fiber connections are *40 to 100 percent more expensive* than traditional DSL offerings.²³¹ Despite this price differential, consumers are abandoning traditional DSL connections in droves.²³²

The Applicants do not offer any evidence that their prices are constrained by the presence of DSL in the market. Instead, Dr. Israel makes the anecdotal point that some Comcast subscribers have switched to DSL in the past. But, as Professor Sappington observes, there are several explanations for such switchovers that are more plausible than the proposition that DSL constrains the price of cable. Those subscribers could, for example, have been subscribers to

²²⁹ *Horizontal Merger Guidelines*, U.S. Department of Justice and the Federal Trade Commission § 4 (2010), available at <http://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf> (“*Horizontal Merger Guidelines*”).

²³⁰ See Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, *Memorandum Opinion and Order*, 19 FCC Rcd. 21522, 21557 ¶ 71 (2004) (applying the “hypothetical monopolist test,” which defined the product market by whether “a hypothetical monopolist in a geographic area could profitably impose at least a ‘small but significant and non-transitory price increase,’ presuming no change in the terms of sale of other products.”). Under the hypothetical monopolist test, a set of products representing a candidate market is considered broad enough to constitute a relevant market if a hypothetical monopolist of the products would find it profitable to implement a small but significant and non-transitory increase in price, assuming the terms of sale of all other products are held constant. *Horizontal Merger Guidelines* § 4.

²³¹ DISH Petition at 33-34 (emphasis in original).

²³² *Id.* at 36-37.

Comcast's slower-speed broadband services (sub 25 Mbps),²³³ or they could be part of that increasingly small contingent of the public that does not watch video from online sources.²³⁴ As Professor Sappington concludes, the Applicants' anecdote is insufficient to support a claim that DSL and mobile wireless service belong in the same product market as 25 Mbps wireline broadband service.²³⁵

Comcast's own churn data {{ }} for the theory that DSL is a substitute for cable broadband. If DSL were truly a substitute for cable, then during the Netflix degradation period we would expect a substantial increase in departures from Comcast reflecting flight to DSL products that adequately supported the Netflix stream. {{

}} Comcast's churn {{ }} during this period relative to corresponding earlier periods. The possible reasons for this could include a subscriber's upgrade of their Comcast service to counter what she may have believed to be inadequate bandwidth in her connection; in a related vein, Comcast may have used the calls of irate customers as an opportunity to sell them new services and/or lock them into long-term contracts.²³⁶

Indeed, the Commission's own analysis shows that DSL is not a substitute for cable: as of December 2013, cable commanded 99 percent of the market for 25 Mbps-plus broadband even in areas where more than 90 percent of households had access to "legacy DSL" solutions.²³⁷ Even "upgraded DSL" only made inroads of a further 1 percent: in areas with upgraded DSL

²³³ Sappington Reply Declaration ¶ 42.

²³⁴ *Id.* ¶ 43.

²³⁵ *See* Sappington Declaration ¶¶ 18-19.

²³⁶ *Id.*

²³⁷ FCC Memorandum at Exhibit 5.

service available, the cable percentage of 25 Mbps-plus subscribers was 98% instead of 99%.²³⁸ This anemic presence indicates unquestionably that even upgraded DSL is no constraint for cable, and makes clear that the “rapid growth” in DSL is no evidence of DSL’s general competitiveness. Rather, as DISH points out in its Petition, this growth is due almost entirely to the FTTN and FTTC products that are capable of delivering MVPD service and which DISH *does* include in its relevant product market.²³⁹ In contrast, traditional DSL connections are being abandoned at an average rate of more than a million per year.²⁴⁰ This fact alone should put the final nail in the coffin of any suggestion that consumers view DSL as a reasonable substitute for high-speed cable broadband.

2. Capacity Constraints, Among Other Reasons, Prevent Mobile Wireless from Being a Substitute

The Applicants also attempt to claim that mobile wireless should be included in the relevant product market because wireless is “primed to become a formidable competitor” to fixed broadband.²⁴¹ The Applicants fail to account for the Congressional testimony offered by Comcast Executive Vice President David Cohen that Comcast “do[es] not think wireless is a perfect substitute for wireline.”²⁴² Among other things, while wireless technologies have

²³⁸ *Id.*

²³⁹ DISH Petition at 36-37.

²⁴⁰ *Id.* Chairman Wheeler has recognized the limitations of DSL, noting that “[t]raditional DSL is just not keeping up, and new DSL technologies, while helpful, are limited to short distances. Increasing copper’s capacity may help in clustered business parks and downtown buildings, but the signal’s rapid degradation over distance may limit the improvement’s practical applicability to change the overall competitive landscape.” Wheeler Remarks at 4-5.

²⁴¹ *See* Opposition at 128-30.

²⁴² Tipping Point Hearing (oral statement of David Cohen), *available at* <http://www.c-span.org/video/?91006-1/tipping-point-consumer-choice-consolidation-future-video-marketplace>.

advanced substantially in the speeds they can offer, they remain severely constrained in terms of total capacity; as a result, usage is often limited either explicitly or implicitly by data caps.²⁴³

Once again, Chairman Wheeler has recognized that “today it seems clear that mobile broadband is just not a full substitute for fixed broadband, especially given mobile pricing levels and limited data allowances.”²⁴⁴

Of course, if mobile were an actual substitute for cable broadband, some Comcast subscribers could have been expected to drop Comcast in favor of mobile broadband use during the four-month period in which Netflix services were disrupted on the Comcast network. As explained in Section III, above, very few customers ever voluntarily leave Comcast. Thus, any attempt to include mobile wireless service in the relevant product market for this transaction is inappropriate.

The Applicants also fail to proffer any actual evidence that wireless is a substitute for cable broadband. Instead, they invoke again the results of their commissioned GSG survey. The survey asked respondents whether they watched “[h]igh-bandwidth” feeds such as “YouTube” and “Netflix” on their mobile devices. Not surprisingly, 10 percent of respondents said yes, they do watch such feeds over mobile networks.²⁴⁵ But the survey question and its response are more notable for what they do not reveal. For one thing, the question fails to distinguish between short- and long-form video. Feeds from YouTube are often the former, while ones from Netflix or DISH more often the latter. The question also fails to address when such viewing takes place

²⁴³ See DISH Petition at 37 (“[E]ven where mobile wireless broadband service do achieve speeds of 25 Mbps, the data caps that typically are imposed for such service prevent a residential family from relying on them to meet even a fraction of its video needs.”).

²⁴⁴ Wheeler Remarks at 5.

²⁴⁵ GSG Survey at 2.

and whether the respondent could or would watch a full-screen, 1080p video over her mobile network. Considering that just one Blu-ray quality movie would use up about 10 Gigabytes of data,²⁴⁶ an entire month's data allotment could be consumed in a single viewing session. Nor does the survey follow up with the obvious next questions: is a mobile broadband connection adequate to fill all of your needs? Do you also need a landline broadband connection? Do you have one? What speeds does it allow? What speeds do you need?

The Applicants also attempt to conflate DISH's fixed wireless broadband service with mobile wireless offerings to support the inclusion of mobile wireless service in the relevant product market. Comcast explains that DISH "is already trialing a fixed wireless broadband service in the marketplace that, during initial tests last year, had speeds ranging from 20 Mbps to 50 Mbps."²⁴⁷ The effectiveness of fixed wireless service itself as a substitute for cable broadband access remains to be proven, and will not likely be proven in the time horizon relevant for evaluating the competitive effects of the proposed transaction. DISH's testing of a fixed wireless service is just that—a test; it does not amount to a current competitive alternative to the broadband offerings of Comcast and TWC.²⁴⁸

²⁴⁶ Customers streaming full-length, Blu-ray quality video at 1080p or higher will use at least 4.7 Gb/hour. Leslie Horn, *You Can Burn Through Your Entire Broadband Data Cap in One Long Weekend*, Gizmodo (Feb. 18, 2014), <http://gizmodo.com/you-can-burn-through-your-entire-broadband-data-cap-in-1524579598>.

²⁴⁷ Opposition at 129.

²⁴⁸ Even in the event that inferior technologies such as DSL and mobile wireless were deemed to be in the same relevant product market as cable broadband and fiber, notwithstanding all of the massive evidence to the contrary, the Commission should examine the 25 Mbps-or-more service as a relevant submarket alongside any broader product markets in its review of likely competitive effects of the merger. The concept of submarkets is well established in antitrust jurisprudence. "[W]ithin [a] broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes." *Brown Shoe v. United States*, 370 U.S. 294, 325 (1962). The boundaries of submarkets are determined by examining market realities, including "public

VI. THE APPLICANTS' CLAIM THAT THEY LACK THE ABILITY TO THWART COMPETING OVD SERVICES IS NOT PERSUASIVE

As DISH points out, Comcast's position as a terminating access monopoly allows it to use any of three "choke points" on its network to harm competing OTT video services, including those offered by DISH: the last mile, the interconnection ports, and the specialized services loophole. The Applicants do not dispute that they have the *technical* ability to block or degrade OTT video services. Instead, the Applicants claim that OTT video services are protected by (1) the Open Internet conditions, which, according to them, "prohibit blocking and unreasonable discrimination of lawful network traffic over Comcast's last mile network,"²⁴⁹ and (2) the restraints imposed on Comcast by some 40 settlement-free interconnection agreements that Comcast has with various other ISPs, transit providers, and CDNs.²⁵⁰ According to Comcast,

recognition" of the submarket, the products' "peculiar characteristics and uses," and the existence of "distinct customers, distinct prices [and] sensitivity to price changes," which are handily met here. *Brown Shoe*, 370 U.S. at 325. While the Applicants may deny the existence or relevance of the submarket for high-speed access service, the Commission has repeatedly examined sub-markets in evaluating prior transactions. *See* Matter of Policy & Rules Concerning Rates for Competitive Common Carrier Services & Facilities Authorizations Therefor, *Further Notice of Proposed Rulemaking*, 84 F.C.C.2d 445, 500-02 ¶¶ 149-51 (1981) ("The general approach we take to define telecommunications markets is well-established in antitrust law and scholarly economic literature . . . With this general definitional framework in mind, several broad markets and submarkets readily can be identified in the telecommunications industry . . . we believe we are able to draw boundaries around certain submarkets that will permit us to execute our regulatory policies more effectively"); Application of Gen. Tel. & Electronics Corp. to Acquire Control of Telenet Corp. & Its Wholly-Owned Subsidiary Telenet Communications Corp., *Memorandum Opinion and Order*, 72 F.C.C.2d 111, 152 ¶ 124 (1979) (recognizing the existence of a submarket in augmented data transmission service); Satellite Bus. Sys., *Memorandum Opinion, Order, Authorization, and Certification*, 62 F.C.C.2d 997, 1074 ¶ 219, 1085-86 ¶¶ 256-58 (1977), *aff'd. sub nom. United States v. FCC*, 652 F.2d 72 (D.C. Cir. 1980) (*en banc*) (concluding that "the standards for objective analysis of relevant markets contained therein are *useful* in our determination of the public interest and we shall apply them accordingly," but declining to establish submarkets) (emphasis in original).

²⁴⁹ Opposition at 208.

²⁵⁰ *Id.* at 216-17.

these agreements ensure that edge providers can freely move from one to another interconnection route established under them, and that Comcast is contractually barred from monitoring what data move under each of them.²⁵¹ As for specialized services, Comcast says only that it does not offer such services today, making the loophole of only “theoretical” interest in its view, and that any such offering “already is subject to two stringent conditions” in the *Comcast-NBCU Order*.²⁵²

To begin with, the Open Internet conditions extend at most to the last mile. The 2010 Open Internet rules, on which the conditions are based, explicitly excluded interconnection agreements, leaving that issue for another day.²⁵³

Contrary to Comcast’s claims, Comcast has absolute and exclusive control over the ability of any peer, transit provider, or CDN to transmit traffic onto Comcast’s network—including traffic specifically requested by a Comcast customer. Interconnection with Comcast—either directly through an agreement with Comcast or indirectly through a transit or CDN provider, which itself has an agreement with Comcast—is necessary to provide service to

²⁵¹ Comcast discounts its ability to interfere with these networks as a practical and contractual matter. Specifically, Comcast emphasizes that “there are over 40 settlement-free routes into its network,” *id.* at 217, which allow edge providers to “negotiate [with these] transit providers with no influence by Comcast.” *Id.* at 219. Moreover, according to Comcast, the existence of so many free routes onto its system means that an edge provider can merely jump from one settlement-free route to another. *Id.* at 217. The Applicants also claim that Comcast’s “Standard Peering Agreement” prevents it from {{
}}. *Id.* at 217 n.661.

²⁵² *Id.* at 18-19.

²⁵³ *Open Internet Order*, 25 FCC Rcd. at 17943-44 ¶ 67 n.209.

Comcast's broadband customers. There is no other way to reach Comcast's customers. In the words of a major Internet transit provider, Comcast is simply the "gatekeeper."²⁵⁴

Comcast both overstates the number of settlement-free routes onto its network that are available to third-party services and understates the restraints posed by its agreements to pressure the companies providing those routes. While Comcast has listed some 40 settlement-free agreements,²⁵⁵ {{ }} are with foreign ISPs who generally reserve their settlement-free arrangements with Comcast for foreign traffic and do not generally provide transit services to domestic companies. Others are with other larger terminating access ISPs, who themselves have an incentive to harm or discriminate against competing OVDs. By Comcast's admission, at least nine of the 40 agreements are with entities that "likely do not currently sell wholesale transit services."²⁵⁶

In the end, the list of backbone/transit service providers in the United States that have a settlement-free agreement with Comcast and that are capable of serving the needs of OVD customers is fairly short. According to Cogent, this list consists of Cogent itself, Level 3 Communications, Tata Communications, XO Communications, NTT Communications, and to a lesser extent Sprint, PCCW, Telecom Italia, GTT, and Zayo.²⁵⁷ Netflix reportedly used all of the

²⁵⁴ Cogent Petition at 31; *see also* Letter from Michael Mooney, Level 3, to Marlene Dortch, FCC, WC Docket No. 05-25, RM-10593, GN Docket Nos. 14-28, 09-191, at 2 (Nov. 19, 2014) ("Level 3 Letter").

²⁵⁵ Opposition at 18.

²⁵⁶ *See* Letter from Francis Buono, Counsel for Comcast Corp., to Marlene Dortch, FCC, at 2-3 (Dec. 8, 2014).

²⁵⁷ Letter from Robert Cooper, Counsel for Cogent Communications Group, Inc. to Marlene Dortch, FCC, MB Docket No. 14-57, at 6 (Nov. 18, 2014) ("Cogent Letter").

major providers²⁵⁸ in one way or another during its dispute with Comcast, but to no avail. For instance, Netflix reports that it {{

}}.²⁵⁹

While Netflix’s petition does not discuss its negotiations with the smaller transit providers, Comcast’s internal data show that, under Comcast’s view of unacceptable traffic imbalances, {{ }} capacity was available through those routes. With the exception of {{ }}, all of the “transit” routes were operating above the {{ }} ratio of traffic received by Comcast compared to traffic received by the interconnection partner. While Comcast asserts it generally accepts a less-than-{{ }} ratio of incoming to outgoing traffic,²⁶⁰ the acceptable balance appears to be generally set unilaterally by Comcast,²⁶¹ and Comcast admits imposing a lower {{ }} ratio on Level 3 traffic during the Netflix dispute.²⁶²

²⁵⁸ Netflix reportedly {{ }}.
Netflix Petition at 56-57 (citing Declaration of Ken Florance ¶¶ 48-49 (Aug. 27, 2014)).

²⁵⁹ *Id.* at 56-57 (citing Declaration of Ken Florance ¶¶ 48, 49 (Aug. 27, 2014)).

²⁶⁰ Comcast Responses to Commission, Response to Request No. 69, at 183 (“Balance of traffic is a fluid concept that is reviewed on a monthly basis, and while ratios are not specified, in Comcast’s experience a persistent ratio of {{ }} or more over a prolonged period of time is generally understood as an indication that a settlement-free relationship is no longer in balance.”).

²⁶¹ Comcast is able to do so because it lacks contractual constraints. Comcast, for instance, does not have formal written agreements with {{ }}.
Comcast’s interconnection agreements with {{ }} appears to impose no contractual limitation on Comcast’s ability to unilaterally alter the traffic ratio it requires for that link. Instead, the contract requires {{ }} to abide by Comcast’s Settlement-Free Interconnection (“SFI”) Policy, which requires an interconnection partner to “maintain a traffic scale between its network and Comcast that enables a general balance of inbound versus outbound traffic,” and reserves Comcast’s right to “terminate [SFI] network peering, upon a notice period as determined by the parties’ agreement, with peers who do not meet the criteria described” in the Policy, including a failure to maintain a general balance of traffic. *See*

{{

}}²⁶³

In any event, {{ }} of the settlement-free arrangements are mere “handshake” agreements, meaning that Comcast can “de-peer” them (or threaten to do so) at any time. Specifically, Comcast’s response to the Commission’s Data and Information Request No. 66 reveals that {{ }} of its 40 settlement-free routes are handshake agreements.²⁶⁴ Moreover, the current terms of Comcast’s interconnection agreements offer very little protection for even Comcast’s paid peers. Over time, Comcast’s interconnection agreements {{

Comcast, SFI Policy, <http://www.comcast.com/peering>. Comcast’s agreement with {{ }}, in turn, does not accept a traffic imbalance greater than {{ }}. This means that, if the traffic imbalance exceeds the ratio chosen by Comcast (or, in the case of {{ }}, by contract), Comcast seems free to terminate the interconnection agreements.

²⁶² McElearney Declaration ¶ 35 (“Level 3 instead demanded additional settlement-free peering capacity by an amount that would have exceeded the {{

}}.”); *see also id.* ¶ 41 (“Today, the Cogent-Comcast links are uncongested and the parties’ traffic flows are back in general balance, with a ratio of less than {{ }} over those links, and so now back in compliance with the SFI policy.”).

²⁶³ Comcast Responses to Commission, {{ }}.

²⁶⁴ Comcast Responses to Commission, {{ }}.

}}.²⁶⁵ Unless a transit provider or CDN is willing to forego access to the nation’s largest destination ISP, each interconnection contract is essentially a “lame duck,” with the next contract’s terms always the more important consideration. In any event, for a number of these agreements—some {{ }} of the {{ }}—the initial periods for these amended agreements have {{

}}.²⁶⁶ This allows Comcast to continually apply pressure to transit providers and CDNs without contractual restrictions getting in the way. Comcast’s argument that it is contractually barred from monitoring what data move under each its peering links is belied by the agreements themselves. In addition, in a blow to Comcast’s credibility, only {{

}} to contain a restriction on Comcast’s monitoring of the data passing through the interconnection points. This is directly contrary to Comcast’s contention: “Nor could Comcast selectively block OVD content on its peering links, without deteriorating its relations with its

²⁶⁵ See, e.g., Comcast Responses to Commission, {{

}}.

²⁶⁶ See, e.g., Comcast Responses to Commission, {{

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peers and most likely violating its own and others' peering agreements, which typically preclude monitoring traffic over peering links for any purpose other than basic operations and security.”²⁶⁷

In fact, only {{ }}.

{{ }} of the remaining agreements {{

}}. In its agreement with {{ }}, for example, Comcast is expressly given authority to {{ }}:

{{

}}²⁶⁸

In short, the agreements that Comcast cites provide no comfort. All transit providers and CDNs are at the mercy of Comcast, subject only to the most ephemeral and makeshift of contractual restrictions.²⁶⁹ By extension, an edge provider's supposed ability to move nimbly

²⁶⁷ See Opposition at 217 n.661.

²⁶⁸ Comcast Responses to Commission, {{ }}.

²⁶⁹ Further testimony of this dependency is provided by Level 3. See Level 3 Letter at 2 (“[T]he ISP itself offers the only path for . . . content to reach the end user. And several of the largest ISPs . . . are leveraging that bottleneck control over access to their users, demanding arbitrary tolls from providers like Level 3 who carry the Internet content requested by the ISPs’ end users from the global Internet to the ISPs’ last mile networks. . . . If Level 3 will not pay these arbitrary and discriminatory tolls, these ISPs refuse to augment interconnection capacity that is congested to a degree that any network engineer would agree must be augmented for the Internet to function properly.”).

from one transit provider or CDN to another means next to nothing if the transit providers and CDNs themselves enjoy almost no protection.²⁷⁰

As to the specialized services choke point, the Applicants' claim that Comcast does not offer any²⁷¹ is inexplicable unless Comcast excludes its own cable service. It is precisely the ISP's ability to avail itself of a fast lane that constitutes the most troubling aspect of the choke point identified by DISH. And Comcast does earmark a portion of its pipe for a service that it supplies itself. Specifically, Comcast readily admits that it uses "managed" IP services to provide its cable video service,²⁷² presumably including its on-demand video offering through its X1 platform. There is thus nothing "theoretical" about Comcast's ability to leverage that choke point. As for the *Comcast-NBCU* conditions cited by the Applicants, these conditions merely prevent Comcast from (1) providing specialized services "substantially or entirely comprised of [Comcast or C-NBCU] affiliated content"; and (2) offering third-party content through specialized services without allowing others to be included on a "nondiscriminatory basis."²⁷³ These conditions are designed to protect unaffiliated content providers and are therefore cold comfort to rival OVDs.

²⁷⁰ In any event, negotiating separate agreements with multiple transit providers takes time and money, meaning that switching routes to avoid congestion would require the OVD to reserve capacity on multiple settlement-free routes—significantly expanding the costs of transit to Comcast's network. There are also technical limitations to spreading traffic over multiple transit providers that would likely limit an OVD to only a handful of providers. Lynch Reply Declaration ¶ 9.

²⁷¹ Opposition at 18.

²⁷² *Id.* at 236-37.

²⁷³ *Comcast-NBCU Order*, 26 FCC Rcd. 4276 ¶ 95; Conditions, Article IV.E. The Comcast-NBCU conditions specifically excluded MVPD services from the definition of "specialized service." *Id.* at 4358; Conditions, Article I. They are also set to expire in January 2018. *Id.* at 4381; Conditions, Article XX.

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The *Comcast-NBCU* conditions do not restrict the company's ability to expand its own video service in a way that squeezes Internet capacity otherwise available to OVDs. Comcast certainly does not offer rival OVDs access to the same or similar "managed" IP services that it offers its own content. Neither do the principles of the *2010 Open Internet Order* help rival OVDs even if applied to the merged company's conduct as the Applicants suggest. That order raises concerns about specialized services, but does not prohibit or regulate them.²⁷⁴

In its comments,²⁷⁵ the Tennis Channel cited yet another choke point at Comcast's disposal. Earlier this year, Comcast acquired online advertising company FreeWheel, a company that performs fulfillment services for video ads inserted in online or pay-per-view video services and that dominates the space. The Tennis Channel correctly noted that this acquisition enables Comcast today, and will enable the combined company in the future, to hamper independent networks that compete with its programming services from accessing ad placement services or to make them available on discriminatory terms and conditions.²⁷⁶ This is yet another point to which the Applicants fail to respond.

DISH agrees with The Tennis Channel. As Roger Lynch attests in the attached Declaration, FreeWheel provides yet another choke point for Comcast.²⁷⁷ Online ads are the lifeblood of many OVDs. Unlike a typical, mature cable or satellite network that derives most of its revenue from per-subscriber licensing fees and only a limited portion from advertising, an

²⁷⁴ See *Open Internet Order*, 25 FCC Rcd. at 17908 ¶ 7 ("We will closely monitor specialized services and their effects on broadband service to ensure, through all available mechanisms, that they supplement but do not supplant the open Internet.").

²⁷⁵ The Tennis Channel, Inc., Comments, MB Docket No. 14-57, at 23 & n.60 (Aug. 25, 2014).

²⁷⁶ *Id.*

²⁷⁷ Lynch Reply Declaration ¶¶ 9, 27-29.

OVD typically expects to make a higher percentage of its revenues from advertising sales as it will not receive large per-subscriber fees akin to what traditional linear programmers receive today.²⁷⁸ FreeWheel appears to control at least 80% of the market for online video advertising placement.²⁷⁹ In fact, in its interactions with all major programmers, DISH has found only two programmers that do not use FreeWheel for online video advertising fulfillment. FreeWheel is the *de facto* industry standard.²⁸⁰

Comcast's control of FreeWheel thus places additional strategies for thwarting rival OVDs at Comcast-TWC's disposal. For example, in dealing with "must-have" programming providers, Comcast-TWC could tie the FreeWheel product to exclusive content arrangements that no other OVD could match, such that any Comcast-TWC OVD service would be the only one offering key content.²⁸¹ Of course, this is just one of the many largely unpredictable industry developments that would pose substantial harm to competition if excessive concentration in the provision of high-speed broadband services is permitted. As the owner of FreeWheel, Comcast-TWC could delay implementation of ad-insertion services for OVDs, impose unreasonable terms on OVDs to get access to FreeWheel ad-insertion services, and otherwise interfere with ad insertion by OVDs.

In addition, Comcast-TWC could condition programmers' access to its vast share of residential broadband connections nationwide and its industry-standard online video monetization service on exclusive content offerings on Comcast-TWC's OTT service, rendering

²⁷⁸ *Id.* ¶ 16.

²⁷⁹ *Id.* ¶ 18.

²⁸⁰ *Id.*

²⁸¹ *Id.* ¶ 27.

competing OVD services to second-class status in the market.²⁸² Comcast-TWC could also combine its data sets from FreeWheel and its residential broadband subscribers to offer an unmatched data set available only to advertisers who favor Comcast-TWC's OVD service over the competition.²⁸³ As explained below, the combined company will have significantly greater incentive to thwart competing OVDs. The company's dominance in the dynamic ad-insertion market through its control of Freewheel gives it yet another arrow in its quiver with which to act on this incentive.

VII. CONTRARY TO APPLICANTS' CLAIMS, THE COMBINED COMCAST-TWC WILL HAVE A GREATER INCENTIVE TO THWART COMPETING OVDS

A. Comcast's Supposed Fear of Broadband Subscriber Loss Is Unjustified

To understand the inadequacy of the Applicants' protestations that Comcast-TWC would lack the incentive to harm OVDs, it is useful to survey again briefly DISH's arguments in that regard. DISH asserted that the combined company would have a significantly greater incentive to foreclose independent OVDs for a number of reasons: before the merger, foreclosure tactics engaged in by Comcast may well have been survivable for a nationwide OVD, and were in fact survived by Netflix. But the foreclosure of an OVD from access to the two Applicants' combined broadband-subscriber bases would be much more likely to have debilitating or lethal consequences.²⁸⁴ The heightened chance of destruction means both that the gain to Comcast-

²⁸² *Id.*

²⁸³ *Id.*

²⁸⁴ See Sappington Declaration ¶¶ 33-35 ("The direct gains from OVD sabotage identified above are not the only relevant gains. OVD sabotage, or the credible threat of such sabotage, also can enable Comcast to exact from OVDs more favorable terms and conditions for providing uncompromised access to Comcast's broadband customers.").

TWC is greater (precisely because the demise of a competitor is more likely),²⁸⁵ and that Comcast-TWC can reap a much greater share of the OVD's profits by leveraging the OVD's fear of what now would be an existential threat.²⁸⁶ In addition, as observed by Professor Sappington, many of the costs of foreclosure do not "scale up" with the increase in Comcast-TWC's subscriber base,²⁸⁷ even as the revenues from such conduct increase. Foreclosures of rival OVDs would be vastly more profitable and attractive for the combined company.

The Applicants claim that they will not have the incentive to harm competing OTT services because degrading access to OVDs would harm Comcast-TWC's broadband business more than it would benefit its MVPD business.²⁸⁸ The Applicants specifically rely on their supposed fear that "blocking or degrading OVD service *would* cause Comcast to risk losing broadband customers."²⁸⁹ Characteristically, even the Applicants' economist does not attempt to quantify Comcast's supposedly great subscriber losses, instead giving only an assertion that "it seems far-fetched" that the combined entity would have an incentive to discriminate against

²⁸⁵ See *id.* ¶ 50 ("By substantially expanding Comcast's control over access to high-speed broadband subscribers, the proposed transaction would substantially increase the incremental value of uncompromised access to Comcast's broadband customers. The merger would thereby substantially increase the amount an OVD will pay for uncompromised access if it believes failure to pay the fee will result in compromised access.").

²⁸⁶ See *id.* ¶ 59 ("[I]f Comcast had the ability to deny an OVD access to both Comcast's and TWC's current broadband subscribers, Comcast may well be in a position to preclude profitable operation by the OVD.").

²⁸⁷ See *id.* ¶ 52 n.56 ("[B]ecause many of Comcast's high-speed broadband subscribers have little or no meaningful choice among ISPs, the primary costs that sabotage imposes on Comcast may be costs associated with negative publicity or with explaining its actions to regulators, for example. These costs are unlikely to increase with its expanded scale as rapidly as Comcast's potential financial benefits from sabotage increase with the scale of its operations.").

²⁸⁸ Opposition at 200-07.

²⁸⁹ *Id.* at 203 (emphasis in original).

unaffiliated OVDs.²⁹⁰ While Comcast reiterated its assertions in two subsequent *ex parte* submissions, it adduces no further convincing support for them.²⁹¹

In any event, as seen in detail above, this assertion is thoroughly disposed of by Comcast's churn data.²⁹² Those data show, first, that, despite low consumer satisfaction, Comcast experiences little "voluntary" churn. Even more damning, a comparison of Comcast's churn from before and after the Netflix congestion episode shows that it loses few {{ }} broadband subscribers when it degrades OVD services.

Nor is any comfort available from Comcast's suggestion that it has little reason to discriminate against OVDs because MVPDs and OVDs do not compete with each other today but instead "will 'reinforce each other' in the years to come."²⁹³ First of all, this suggestion has no application at all to offerings such as DISH's combination of linear and OTT services (*e.g.*, DISH World), which is unquestionably today a substitute for Comcast's corresponding package. And, Comcast-TWC would have a clear incentive to stop OVDs in their tracks and discriminate

²⁹⁰ Israel Reply Declaration ¶ 126.

²⁹¹ In both its additional submissions on this issue, Comcast merely restates its well-worn arguments that it does not have the incentive or ability to harm rival OVDs for three central reasons: the Open Internet rules imposed as a condition of the NBCU transaction prevent it from discriminating against OVD traffic on the last mile; foreclosure is not economically rational because consumers can and do switch ISPs and OVDs and thus it would shift business from high-margin broadband to low-margin video; and, foreclosure is implausible due to the "multitude of paths" into its network. *See generally* Comcast November 12 Response; Comcast November 26 Response. Comcast made these arguments throughout its Opposition. *See, e.g.*, Opposition at 3, 125-30, 198, 201-03, 204-05, 236. As for the additional arguments made by Professor Carlton, *see supra* notes 113, 114 and accompanying text.

²⁹² Comcast Responses to Commission, {{

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²⁹³ Opposition at 200.

against them before those providers get to the cusp of becoming full-fledged substitutes for Comcast-TWC's combined MVPD and OVD offerings.

B. The Video Distribution Business Is Still Very Important to Comcast

Comcast's attempt to cast its video distribution business as somehow insignificant when compared to its broadband business is also misleading.²⁹⁴ Although its broadband business is growing faster than video, the fact remains that Comcast's video segment is still the Comcast family's fattest cash cow, and a fattening one at that. Video is the largest source of Comcast's cable communications revenue, and it continues to grow.²⁹⁵ In 2013, Comcast's revenue derived from its video segment was \$20.535 billion, which constituted *twice* the amount Comcast derived from its high-speed Internet segment.²⁹⁶ And as of June 30, 2014, Comcast served 22.5 million video customers compared to 21.3 million high-speed Internet customers.²⁹⁷ It is therefore difficult to agree with the Applicants' suggestion that its incentive to "protect its MVPD service is divorced from reality."

To the extent that Comcast fears losing broadband customers because of their profitability, such fears are what are truly "divorced from reality." As Comcast's own churn data show, few, { { } } Comcast broadband subscribers leave Comcast even when those subscribers lose meaningful access to even highly popular OVDs.²⁹⁸

²⁹⁴ See Opposition at 200-27.

²⁹⁵ Comcast Corporation, Annual Report (Form 10-K), at 53-54 (Feb. 2, 2014). Comcast's video revenue increased 2.5% and 2.9% in 2012 and 2013, respectively.

²⁹⁶ *Id.* at 53. Comcast's revenue from its high-speed Internet segment in 2013 was \$10.334 billion.

²⁹⁷ Comcast Corporation, Quarterly Report (Form 10-Q), at 27 (July 24, 2014).

²⁹⁸ See *supra*, Section III.

C. NBCUniversal Content Provides No Disincentive for Comcast to Harm or Degrade the Performance or Viability of OVDs

In its November 26th Response, Comcast offers a single new argument to refute the proposition that it has an incentive to harm or degrade the performance or viability of OVDs: that OVD purchases of NBCUniversal content create a growing *disincentive* for Comcast to do so, a disincentive that TWC's system will supposedly gain post-transaction.²⁹⁹ But Netflix's purchases of NBCUniversal programming were not enough to keep Comcast from initiating the Netflix dispute. And it is easy to see why not. An OVD's extinction will not mean fewer consumers will want to view NBCUniversal programming. It will mean only that they will be unable to buy it from the eliminated OVD. In other words, consumers will still seek out NBCUniversal programming from whatever distribution method is available and NBCUniversal will lose few, if any, "eyeballs" in the process.

The programmers' own disclosures bear this out. Programmers consistently cite program popularity, attractiveness to advertisers, and consumer behaviors as the key risk factors for their continued revenue generation. Judging from their securities disclosures, they are unconcerned about risks related to the number of OVD distribution channels and to the possible disappearance of an OVD.³⁰⁰

This lack of concern is easy to understand. Programming networks such as those controlled by NBCUniversal, including of course the marquee NBC network itself, have formidable power. By contrast, OVD services are increasingly competitive. In the last few

²⁹⁹ Comcast November 26 Response, Response to Question 1 at 17, Response to Question 3 at 17.

³⁰⁰ *See, e.g.*, The Walt Disney Company, Annual Report (Form 10-K), at 19 (Nov. 14, 2013) (citing hurricanes, typhoons, and tsunamis as risks, but not degradation to streaming video).

months alone, more than six new ventures have been announced. Even Comcast itself has announced a new distribution model, saying that it will leverage its on-demand platform in new ways by premiering certain NBCUniversal content through on-demand services and then airing them on a linear channel like the USA Network.³⁰¹ And as the DOJ recognized in its complaint in the Comcast-NBCU merger, Comcast has an incentive to withhold programming from OVDs in order to benefit Comcast's own distribution platforms.³⁰²

The reason is simple: Comcast can afford to be confident that consumers would still flock to Comcast's programming product, as they do to any product with brand power despite exclusive distribution arrangements or the aggressive elimination of distribution channels.³⁰³ Indeed, the incentive of Comcast to foreclose its programming from OVDs is even more powerful than in the case of MVPDs. OVD customers are less "sticky" than MVPD customers because, among other reasons, they generally do not need to change equipment, and many of them do not even have subscriptions. They are thus more likely to jump ship from an OVD that does not feature programming they favor. Therefore, if the desire to sell its programming to MVPDs is not enough to deter Comcast from foreclosure, as is made abundantly clear below, the desire to sell to OVDs is likely to be even less of a deterrent.

³⁰¹ Joe Flint, *USA Network Experiments with On-Demand*, Wall Street Journal (Dec. 9, 2014), <http://www.wsj.com/articles/usa-networks-experiments-with-on-demand-1418101347>.

³⁰² *See United States v. Comcast Corp.*, Competitive Impact Statement at 26, No. 1:11-cv-00106 (Jan. 18, 2011).

³⁰³ *See, e.g., Hermès*, Wikipedia, <http://en.wikipedia.org/wiki/Herm%C3%A8s> (last visited Dec. 15, 2014). Over the course of the 1990s, the designer luxury goods brand, Hermès, steadily decreased its distribution by third parties and increased distribution by company-owned stores in a successful bid to "increase profits in the long term" despite the short term costs of doing so. *Id.*

To be sure, as with every foreclosure decision, OVD foreclosure is based on a cost/benefit analysis. The decision to foreclose is based on a comparison of the additional revenues that Comcast expects to reap from providing MVPD or OVD services to customers, on the one hand, and the programming services that NBCU may forfeit in the short term, on the other. In that respect, one of the documents produced by Comcast shows that the merger will have an absolutely decisive effect on this comparison, and tilt the balance in favor of greater foreclosure. The document in question is {{

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}}.³⁰⁵ The implication is clear: {{

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³⁰⁴ Comcast Supplemental Responses to Commission, {{

}}. Responses to Commission, {{

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³⁰⁶ Comcast Supplemental Responses to Commission, {{

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{{

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To that, {{

}}³⁰⁸

Again, the dots are easy to connect. {{

}} But the problem is that the proposed merger would turn the questionable into the unacceptable. If the standalone Comcast was oscillating between yes and no in its cost/benefit analysis of a {{ }}, the merger would move the balance decisively towards foreclosure: the benefit to NBCU from selling its programming would not increase with the merger; by contrast, the benefit of additional distribution revenue to Comcast-TWC from such foreclosure would increase with the company's expanded footprint.

³⁰⁷ Comcast Supplemental Responses to Commission, {{ }},

³⁰⁸ Comcast Supplemental Responses to Commission, {{ }},

{{

}}

D. The Applicants Do Not Deny that the Merger Will Greatly Increase the Harm Comcast Can Inflict on OVDs

The Applicants’ denial of a greater incentive is confined to one side of the ledger—the pain that Comcast-TWC will supposedly inflict on itself by foreclosure of an OVD. As shown above, past experience demonstrates conclusively that Comcast-TWC need not fear this pain. The ledger’s other side is, of course, the pain inflicted on the foreclosed OVD. The greater that pain, the greater Comcast-TWC’s incentive to inflict it, and the more Comcast-TWC can extract from the OVD for not imposing the pain on the OVD. The Applicants are silent on this.

Even in the best of cases, an unaffiliated OVD service is more likely to suffer subscriber losses with degradation than a broadband provider. An {{ }} conducted by Netflix {{ }} confirms that {{ }}. ³⁰⁹ As Netflix puts it: {{

}}³¹⁰

This cold fact was confirmed by a number of chat logs complaining to Netflix during the Comcast degradation incident. Here is the testimony of one angry customer: {{

³⁰⁹ {{

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³¹⁰ {{ }}

}}³¹¹ Here are other examples of complaints showing that customers blame their OVD, not their ISP, for degradation:³¹²

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DISH’s Roger Lynch and Professor Sappington also provide additional support for the portion of DISH’s showing that the Applicants never rebutted in the first place—the fact that the merger would substantially increase the chances of a debilitating or mortal blow to a nationwide OVD. This fact is illustrated by the detailed business case for an OTT service. Simply put, DISH expects that such a service will become profitable even if choked or throttled by a standalone Comcast. By contrast, DISH does not expect that an OTT service can break even if this behavior is undertaken by a Comcast augmented through this transaction. The business case has also been analyzed by Professor Sappington. He concludes that an otherwise promising OTT

³¹¹ {{ }}

³¹² {{ }}

service could become unviable without uncompromised access to the high speed broadband subscribers of the combined Comcast-TWC.³¹³

VIII. THE TRANSACTION WILL ELIMINATE EXISTING CABLE COMPETITION AND POTENTIAL OUT-OF-AREA OVD COMPETITION BETWEEN COMCAST AND TWC

A merger of Comcast and TWC would also eliminate any potential future OVD competition between Comcast and TWC in each other's turf. Indeed, it has now become evident that it may even suppress some current competition between the two companies, if their turfs turn out not to be totally separate after all. Although Comcast has gone to great lengths to emphasize that there is no geographic overlap between the two cable companies, Comcast itself is evidently uncertain of the veracity of its claim. Comcast is apparently "still working with a vendor to analyze [the situation] . . . but in case it shows that there are any consumers in census blocks that may lose a broadband choice," the Applicants will need to "nuance" their response to the Commission."³¹⁴ These statements appear to belie Comcast's central argument in support of the merger—the unequivocal assertion that the two companies do not compete at all today.³¹⁵

³¹³ Sappington Reply Declaration ¶ 54.

³¹⁴ Kate Cox, *Comcast Forgets to Delete Revealing Note from Blog Post*, Consumerist (Dec. 3, 2014), <http://consumerist.com/2014/12/03/comcast-forgets-to-delete-revealing-note-from-blog-post/>.

³¹⁵ See, e.g., Opposition at 20 ("[B]roadband is a *local* market in which Comcast and TWC do not compete.") (emphasis in original); see also *id.* at 46 ("In all events, as the record here makes clear, Applicants do not compete with one another for broadband customers *anywhere.*") (emphasis added). While Comcast admitted to some overlap in a June letter filing with the Commission, Comcast characterized it as "*de minimis*" and has refused to acknowledge the loss in competition for such subscribers in its core filings in this proceeding. See Letter from Kathryn Zachem, Comcast Corporation, and Steven Teplitz, Time Warner Cable Inc., to Marlene Dortch, FCC, MB Docket No. 14-57, at 4-5 (June 5, 2014); see also Jon Brodtkin, *Comcast Publicly Doubts Its Own Claim That Merger Won't Reduce Competition*, ArsTechnica (Dec. 3, 2014), <http://arstechnica.com/business/2014/12/comcast-publicly-doubts-its-own-claim-that-merger-wont-reduce-competition/>.

The Applicants call any claims of such potential competition outside their current footprint “entirely speculative.”³¹⁶ Comcast argued that it had “no plans” to build out its own OVD service,³¹⁷ and TWC deferred to Comcast in this regard.³¹⁸ As DISH explained in its Petition to Deny, both Comcast and TWC independently developed or are developing Internet-delivered service offerings that are or will become available.³¹⁹ And as DISH’s Roger Lynch explains, it is only a small leap from the investment in such a service to the incremental relatively minor investment needed to export it outside each cable operator’s footprint.³²⁰

To support these assertions from just two months ago Comcast cites an internal document expressing {{ }} from several years prior to the filing of this Reply.³²¹ While a {{ }} did not {{ }} in {{ }}, and Comcast found that {{ }} in {{ }}), these conclusions and the evidence supporting them are already stale.³²² Even more

³¹⁶ Opposition at 177.

³¹⁷ Israel Reply Declaration ¶¶ 14, 127.

³¹⁸ See Response of Time Warner Cable Inc. to the Commission’s Information and Data Request, Response to Specification 61, at 107 (Sept. 11, 2014) (“TWC refers the Commission to Comcast’s response to this inquiry, as Comcast will be responsible following the consummation of the transaction for determining policies regarding edge providers and the economics of its broadband service.”).

³¹⁹ See DISH Petition at 76-80 (citing Lynch Declaration ¶¶ 57-60).

³²⁰ Lynch Reply Declaration ¶ 31.

³²¹ {{ }} }

³²² {{ }}); see also Comcast-TWC-Charter June 27 Letter, {{ }}.

important, it is unknown who wrote this document, how high up in Comcast's chain of command the author was, and whether the views were accepted, rejected, or ignored.

In fact, the document {{

}}. The Applicants are well positioned to enter the OVD market. *First*, due to their tenure in the industry, Comcast and TWC have substantial industry expertise and knowledge, including a deep understanding of consumers' viewing habits and preferences.³²³ *Second*, the service's fixed costs are already sunk. Each of the two applicants has already developed, or is developing, an OVD service.³²⁴ Incumbent MVPDs like Comcast and TWC that provide high-speed broadband service have in place the infrastructure required to deliver OTT services to their subscribers and even potential subscribers outside their footprints.³²⁵ As for the incremental costs of exporting the service outside of the footprint of each, they are limited.³²⁶ This stands in stark contrast to unaffiliated OVDs.³²⁷

Third, Comcast and TWC have well-established relationships with content suppliers. These relationships and the incumbents' status as major content buyers can help them secure

³²³ Sappington Reply Declaration ¶ 48.

³²⁴ Lynch Reply Declaration ¶ 31.

³²⁵ Sappington Reply Declaration ¶¶ 50 & n.46, 51.

³²⁶ Lynch Reply Declaration ¶ 31.

³²⁷ Cf. Erin Griffith, *Exclusive: HBO to Outsource Streaming Technology in Blow to 'Backstabbing' CTO*, Fortune (Dec. 9, 2014), <http://fortune.com/2014/12/09/hbo-streaming/> (stating the decision "was not a judgment of the team's work quality or deliverables but rather a bet that an existing streaming service could deliver the needed product faster and at a lower risk than Maui.").

reliable and relatively low-cost access to valuable content for OTT services.³²⁸ Furthermore, Comcast's ownership of NBCUniversal ensures that Comcast typically will have access to NBCUniversal programming at lower cost than OTT rivals, which provides Comcast-TWC with an important competitive advantage.³²⁹ While the Applicants make the claim that "[s]ignificant real-world factors," including high subscriber acquisition costs for out-of-footprint customers, have hindered outside-the footprint OVD deployment,³³⁰ subscriber acquisition costs are lower for OVD services than for MVPD services.

The Applicants then claim that "significant entry . . . by national brands" like Netflix, Amazon, Hulu, and Google are a deterrent or impediment to launching their own services.³³¹ This makes little sense for two reasons. First, there is no doubt that OVD services face competition, and that Comcast or TWC service outside each Applicant's footprint would not be endowed with the tremendous incumbency advantages of the inside-the-footprint service. But the criterion for future entry into the market cannot possibly be that Comcast and TWC must be assured of the oligopolistic advantages that they enjoy in their current markets. The correct question, rather, is whether the entry would be profitable. Professor Sappington believes that it would be.³³²

³²⁸ Sappington Reply Declaration ¶ 49.

³²⁹ *Id.*

³³⁰ Opposition at 177.

³³¹ *Id.*; see also Todd Spangler, *How HBO, CBS Seek Upper Hand in Pay-TV Deals with OTT Moves*, Variety (Oct. 17, 2014), <http://variety.com/2014/digital/news/how-hbo-cbs-seek-upper-hand-in-pay-tv-deals-with-ott-moves-1201332667/>.

³³² Sappington Reply Declaration ¶¶ 47-52.

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Second, as national OVDs become more of a threat to Comcast and TWC, it is reasonable to expect that the two cable operators will try to undermine that threat outside their own cable footprint and not only inside it. This would be, moreover, in line with industry trends. For example, DISH plans to launch, in the next few months, a new, domestic, live-streaming OTT service that will run entirely over separately provisioned high-speed broadband connections, with no satellite dish required.³³³ Sony and Lion's Gate Entertainment have also announced that they plan to offer an OVD product that could debut as early as the end of this year.³³⁴ Both Verizon and AT&T are planning digital video services.³³⁵ And, this Fall, HBO and CBS both

³³³ See Michael Grotticelli, *DISH Considers National IPTV Service*, TVTechnology (June 6, 2014), <http://www.tvtechnology.com/article/dish-considers-national-iptv-service/270758> (reporting DISH's plan to launch an OTT service delivering content through IP-enabled devices and broadband like the DISH World IPTV service).

³³⁴ See Daniel Frankel, *Sony Says It's Still 'On Track' to Launch OTT Pay-TV Service By Year's End*, FierceCable (June 11, 2014), <http://www.fiercecable.com/story/sony-says-its-still-track-launch-ott-pay-tv-service-years-end/2014-06-11>; Leon Lazaroff, *Lions Gate Joins Online Video party in Deal With Tribeca*, The Street (Oct. 20, 2014), <http://www.thestreet.com/story/12919911/1/lions-gate-joins-the-online-video-party-in-deal-with-tribeca.html> ("Lions Gate Entertainment . . . joined on Monday with Tribeca Enterprises . . . to announce plans to begin an online film subscription service sometime in the first half of 2015.").

³³⁵ Ryan Knutson, *Verizon Eyes Digital Video Service by Mid-2015*, Wall Street Journal (Sept. 14, 2014), <http://online.wsj.com/articles/verizon-ceo-eyes-digital-video-service-by-mid-2015-1410467151> ("Verizon is envisioning a service that would be akin to Netflix, Amazon and Hulu but also would likely stream some live channels."); Sarah Buhr, *AT&T and Chernin to Buy Majority Stake in Fullscreen, Valued Between \$200-\$300 Million Deal*, TechCrunch (Sept. 22, 2014), <http://techcrunch.com/2014/09/22/att-and-chernin-to-buy-fullscreen-in-200-300-million-deal/> (describing a move by AT&T and the Chernin Group to buy a controlling stake in Fullscreen, a multichannel YouTube network "founded in January 2011, [that] works with more than 50,000 content creators who engage 450 million subscribers.").

independently announced plans to provide OTT-only services that will be accessible without a traditional pay-TV subscription.³³⁶

If the merger is approved, however, the combined companies would offer, at most, only a single OVD service, thus suppressing the competition between the two Applicants and the services offered to consumers that could exist without the merger.³³⁷ The Commission has long recognized similar merger-specific, anticompetitive harms in other transactions. In *Bell Atlantic-NYNEX*, for example, the Commission's analysis was driven by its focus on lowering barriers to entry in the local exchange and exchange access marketplace. The Commission found that the merger would prevent each of the applicants from individually entering new geographic and service markets. The Commission determined that the applicants were "significant market participants," each having the capability necessary to have an effect on a market it entered, and thus were "precluded competitors."³³⁸ The Commission found that eliminating this potential entry by each applicant would "limit or retard the development of competition."³³⁹

³³⁶ See Todd Spangler, *How HBO, CBS Seek Upper Hand in Pay-TV Deals with OTT Moves*, Variety (Oct. 17, 2014), <http://variety.com/2014/digital/news/how-hbo-cbs-seek-upper-hand-in-pay-tv-deals-with-ott-moves-1201332667/>.

³³⁷ As Professor Sappington explains, by blocking DISH's access to the combined Comcast-TWC's high-speed broadband subscribers, the merged entity could diminish any potential returns from DISH's service so severely that DISH would not launch the service at all. Sappington Reply Declaration ¶ 72. Further, this broadband dominance would make it unnecessary for Comcast-TWC to even offer an OVD service at all. *Id.*

³³⁸ Applications of NYNEX Corporation, Transferor, and Bell Atlantic Corporation, Transferee, for Consent to Transfer Control of NYNEX Corporation and Its Subsidiaries, *Memorandum Opinion and Order*, 12 FCC Rcd. 19985, 20025-26 ¶¶ 72-73 (1997) ("*Bell Atlantic-NYNEX Order*").

³³⁹ The Commission approved the merger, but concluded that the commitments made by Bell Atlantic, and made a condition of its approval of the merger, mitigated but did not fully offset, the potential adverse effects of the merger on consumers in the relevant markets. *Id.* at 20037-38 ¶ 100 & n.205.

In *SBC-Ameritech*, the Commission observed that Ameritech did have plans to enter new markets prior to the merger announcement, and found that the elimination of Ameritech as a market participant would result in “a significant public interest harm.”³⁴⁰ And, in *GTE-Bell Atlantic*, the Commission similarly concluded that the proposed merger likely would have “result[ed] in a public interest harm by eliminating GTE as among the most significant potential participants in the mass market for local exchange and exchange access services in Bell Atlantic’s operating areas.”³⁴¹ The elimination of potential OVD competition between the two Applicants should thus be recognized by the Commission as a direct horizontal harm to competition.

IX. THE COMBINED COMCAST-TWC WILL HAVE A GREATER INCENTIVE TO FORECLOSE ACCESS TO NBCUNIVERSAL PROGRAMMING

In *Comcast-NBCU*, the Commission found that the permanent or temporary withholding of Comcast-affiliated programming from an MVPD that competes with Comcast in various geographic markets would be profitable for Comcast, and that a combined Comcast-NBCU would have the power to implement such an exclusionary strategy.³⁴² A mitigating factor in

³⁴⁰ Applications of Ameritech Corp., Transferor, and SBC Communications Inc., Transferee, for Consent to Transfer of Control of Corporations Holding Commission Licenses and Lines, *Memorandum Opinion and Order*, 14 FCC Rcd. 14712, 14758 ¶¶ 95-96 (1999) (“*SBC-Ameritech Order*”) (determining that elimination of “one of a very limited number of most significant market participants” would “delay the future development of competition or lessen its eventual impact.”).

³⁴¹ Application of GTE Corporation, Transferor, and Bell Atlantic Corporation, Transferee, for Consent to Transfer Control of Domestic and International Sections 214 and 310 Authorizations and Application to Transfer Control of a Submarine Cable Landing License, *Memorandum Opinion and Order*, 15 FCC Rcd. 14032, 14088 ¶ 100 (2000); *see id.* at 14098 ¶ 125 (“Accordingly, we conclude that the merger of Bell Atlantic and GTE results in the loss of a most significant potential competitor in the provision of mass market local exchange services in portions of Bell Atlantic’s region, resulting in a potential public interest harm.”).

³⁴² *Comcast-NBCU Order*, 26 FCC Rcd. at 4250-59 ¶¶ 29-47.

Comcast's favor, however, was the argument by Professors Katz and Israel that the presence of third-party cable operators in many key Designated Market Areas ("DMAs"), including primarily TWC in New York City, Los Angeles, and Dallas, would limit Comcast's subscriber gains to only a small fraction of the subscribers diverted from the foreclosed competitor.³⁴³ As DISH noted in its Petition to Deny, the proposed merger would eliminate those prior restraints on Comcast and greatly increase the attractiveness of foreclosure.³⁴⁴

Neither the Applicants nor their economists contend with the reliance of Katz and Israel on the standalone presence of TWC. They do not answer obvious questions such as: Why did Professors Katz and Israel believe that the presence of TWC in markets such as New York City, Los Angeles, and Dallas made foreclosure of the NBC stations in those markets unprofitable for Comcast? What were the calculations and analysis that were the basis for that view? Why is that view no longer valid? Do Professors Katz and Israel themselves believe now that their past view is no longer valid, and why?

Professor Israel, who has provided expert testimony for the Applicants on broadband issues, remains silent on the programming foreclosure questions despite the invitation issued by DISH to the Applicants. Instead, the Applicants have asked two different economists, Professors Rosston and Topper, to conduct a fresh foreclosure analysis. That analysis supposedly uses the Commission's foreclosure methodology as its basis, but undertakes so many deviations from that method that it amounts to nothing less than its denunciation.³⁴⁵ As the Commission itself correctly observed, Rosston and Topper's declaration was "contrary to the Commission's

³⁴³ See Israel and Katz Comcast-NBCU Declaration ¶¶ 49-55.

³⁴⁴ DISH Petition at 82.

³⁴⁵ See Rosston-Topper Reply Declaration ¶¶ 128-34, 143.

analysis in the order approving the Comcast-NBCU transaction.”³⁴⁶ In any event, notwithstanding its glaring flaws, the Rosston-Topper analysis can ill-conceal the eye-popping gains that Comcast-TWC would stand to reap from NBCU foreclosure after the merger. Among other things:

- The conclusion that foreclosure would be unprofitable could be forced out of the data only thanks to a sleight-of-hand. Rosston and Topper simply replace the six-month time horizon of temporary foreclosure used by the Commission as well as Comcast’s prior economists themselves in favor of one month.³⁴⁷ Why? Rosston and Topper offer the most conclusory of explanations: “Because of rapid changes in the video marketplace in recent years, the 2008-2009 Fisher-DISH event (which lasted six months) that the Commission relied upon last time may not provide a reliable benchmark for departure rates in 2015 and beyond.”³⁴⁸ Rosston and Topper do not explain how those “rapid changes” justify a shift in the window period. Even the two more recent foreclosure events that they cite (as if these events could somehow consign the six-month term of Fisher to obsolescence) lasted longer than one month themselves—46 days and 32 days for the Media General-DISH and CBS-TWC incidents respectively.
- In reality, of course, the Fisher incident is not obsolete at all. It happened in 2008-09. Rosston and Topper do not explain why it is not likely to happen again. Contrary to their claims of unidentified “rapid changes,” the essential facts undergirding the power of the networks in general, and NBC in particular, have remained the same since 2009. In fact, the “must have” nature of the NBC programming may have increased. NBC network programming frequently ranks first in primetime, and both the NBC network and the local NBC stations owned by Comcast are enjoying significant profitability.³⁴⁹

³⁴⁶ Letter from William Lake, FCC, to Kathryn Zachem, Comcast Corporation, Steven Teplitz, Time Warner Cable Inc., and Catherine Bohigian, Charter Communications, Inc., MB Docket No. 14-57, at 1 (Oct. 3, 2014).

³⁴⁷ Rosston-Topper Reply Declaration ¶ 143.

³⁴⁸ *Id.*

³⁴⁹ TV News Desk, *NBC Wins Primetime of 12/8 in Key Demos for 6th Straight Week*, TVWorld.com (Dec. 16, 2014), <http://www.broadwayworld.com/bwwtv/article/NBC-Wins-Primetime-of-128-in-Key-Demos-for-6th-Straight-Week-20141216#>; *see also* Letter from Brian Roberts, Comcast Corporation, to Comcast Shareholders at 3 (Apr. 11, 2014), *available at* <http://corporate.comcast.com/news-information/news-feed/2013annualreview> (reporting NBCU ended the fall season of 2013 first in primetime).

- Perhaps most fundamental, Rosston and Topper do not explain why Comcast-TWC would check its watch and stop at one month if a six-month foreclosure is more profitable for it. As the Fisher event illustrated, foreclosure-related churn is not limited to the first month of a dispute. In fact, departures { {
 } } as subscribers may lose hope that the programming is coming back.³⁵⁰ In addition, a one-month window with only a single data point is not a useful analytical tool as there are too many variables to determine if a trend was established during the foreclosure. The six-month window allows for measured analysis. Conversely, use of the unexplained and inexplicable one-month assumption infects both the calculation of critical departure rates and that of actual departure rates.
- Even the Rosston-Topper analysis cannot help showing that, in most cases, the merger would { {
 } } the critical departure rate (“CDR”)—the rate of departure of subscribers from rival MVPDs beyond which foreclosure is profitable. Even without more, this { {
 } } means that the merger would make it much easier for the combined company to profit from withholding NBC stations.
 { {

{ }³⁵¹ For all DMAs, Rosston and Topper show the { {
 } }³⁵² The prospects for implementing a temporary foreclosure strategy would be even more improved. { {
 } }³⁵³ { {
 } }³⁵⁴ { {
 } }³⁵⁵ { {
 } }³⁵⁶ And, of course, these CDRs are, again, for a one-month window. For a six-month window, the CDRs { {
 } }³⁵⁷ { {

³⁵⁰ See Declaration of Vincent Kunz, DISH Network, L.L.C., MB Docket No. 10-56, Exhibit C (June 7, 2010) (attached to Letter from Pantelis Michalopoulos and Christopher Bjornson, Counsel for DISH Network L.L.C., to Marlene Dortch, FCC, MB Docket No. 10-56 (June 7, 2010)) (“Kunz Declaration”) (attached as Exhibit B to Zarakas Declaration).

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- Not only would foreclosure become vastly more profitable than before, it would become profitable in absolute terms. Even if the CDRs were calculated under the flawed Rosston and Topper methodology, they would be handily exceeded by the actual departure rate experienced by DISH in the Fisher incident as well as the rate used by the Commission (based on Fisher), and indeed the actual departure rate used by Comcast’s previous economists, Professors Katz and Israel.

- Notably, the departure rate experienced by DISH in the Fisher incident was {{ }}.³⁵⁸ Interestingly, if the {{ }} actual departure rate estimated by Rosston and Topper is simply multiplied by the six months used in the Commission model and Katz and Israel analysis, it would be {{ }}, which is, as noted above, the {{ }} Rosston and Topper indicate is necessary for a successful foreclosure strategy. This means that, even in the best case for Comcast-TWC under Rosston’s and Topper’s analysis, Comcast-TWC will be indifferent as to whether to embark on foreclosure. {{

}} In fact, of course, the one-month actual departure number should be multiplied by a number greater than six: {{
 {{
 }}.³⁵⁹

- Analysis conducted by DISH’s expert, William Zarakas, sheds light on another reason why Rosston and Topper likely favor the {{ }} actual departure rate. If the actual departure rate were any higher, it would mean that there would be at least one NBC O&O market where competing MVPDs would experience, as a direct result of the transaction, a price increase in fees paid in excess of 5% for the privilege of retransmitting NBC network programming, the threshold used by the Commission to determine whether such an increase is significant.³⁶⁰ {{

}}³⁶¹ As the actual departure rate increases, the number of markets with price increases exceeding 5% {{ }}.³⁶² If the {{ }} actual departure rate from the Fisher incident is applied, {{ }} of markets would see a price increase over the “significant” 5% threshold, with one market experiencing a {{ }}.³⁶³

³⁵⁸ *Id.* ¶¶ 30, 49.

³⁵⁹ {{ }}

³⁶⁰ Zarakas Declaration ¶ 32.

³⁶¹ {{ }}

³⁶² {{ }}

³⁶³ {{ }}

- Therefore, it is very likely that, if the Commission analyzes the data independently and uses six months for the temporary foreclosure period, it will find that the actual estimated departure rate is much higher than the CDR, and price increases for NBC O&O stations in key markets for competing MVPDs {{ }}.³⁶⁴ demonstrating that the merger would make the foreclosure of rivals from NBCU programming very lucrative for Comcast-TWC.
- Rosston and Topper make flatly incorrect assumptions about the effects of the Media General-DISH incident. In an effort to assert that the dispute had no effect on DISH, Rosston and Topper note that “the difference between Dish’s subscriber growth rate in the treatment DMA and that in the control DMAs [[]] during the dispute (4Q2013) relative to the quarter before the dispute (3Q2013), from [[]]% to [[]]%, and continued to [[]] after the dispute ended (to [[]]% in 1Q2014).”³⁶⁵ But the subscriber gains and losses cited by Rosston and Topper were for a full fiscal quarter, of which DISH had more than half of the quarter to recover. And the Third Quarter Rosston and Topper compare the dispute quarter to is typically the worst quarter for an MVPD, as Comcast’s and TWC’s 4Q results for 2013 demonstrate. If the dispute quarter is compared to the following quarter (Q12014), one can conclude that, but for the dispute, DISH’s subscriber gains in the dispute quarter would have been [[]].³⁶⁶

X. THE MERGER’S CLAIMED BENEFITS SHOULD BE DISCOUNTED

In the face of significant increases in both the combined entity’s ability and incentive to thwart rival OTT providers and foreclose access to NBCU programming, among many other things, the Applicants must present significant, transaction-specific benefits that inure not just to Comcast-TWC and its shareholders, but to the broader public as well. “Transaction-specific” means just that—the benefits must flow from the merger. If they are likely to arise regardless of the merger, they cannot be counted. They must also be both measurable and of such value that they more than counterbalance the harms to competition that DISH and other petitioners and

³⁶⁴ {{ }}

³⁶⁵ [[]]

³⁶⁶ [[]]

commenters have identified.³⁶⁷ The Applicants fail this task on all fronts. Almost all of the purportedly “significant” benefits cited by the Applicants (accelerated broadband deployment, expanded broadband access for low income consumers, and scale efficiencies) suffer from some defect—they would be produced without the merger, they are speculative, or they will not inure to the public. Past experience with incumbent mergers of this sort and the type of promises made shows that discounting benefit claims is frequently prudent even when they do not suffer from the flaws identified here.

A. TWC Will Likely Upgrade Absent the Merger

The Applicants lead their litany of purported public interest benefits with an exposition on how, as a result of the merger, Comcast’s faster broadband access speeds and more extensive WiFi deployments will be brought to TWC’s footprint.³⁶⁸ The Applicants go so far as to estimate that the value of these upgrades is in the “hundreds of millions of dollars.”³⁶⁹ In addition to its vagueness, this estimate suffers from another key defect: it fails to account for

³⁶⁷ See *Comcast-NBCU Order*, 26 FCC Rcd. at 4330-31 ¶ 226 (“The Applicants . . . are required to provide sufficient supporting evidence to permit us to verify the likelihood and magnitude of each claimed benefit. Benefits expected to occur only in the distant future are inherently more speculative than more immediate benefits. . . . [T]he benefits must flow through to consumers, and not inure solely to the benefit of the company.”); Applications of Western Wireless Corp. and ALLTEL Corp. for Consent to Transfer Control of Licenses and Authorizations, *Memorandum Opinion and Order*, 20 FCC Rcd. 13053, 13100 ¶ 132 (2005) (“[W]e ask whether the combined entity would be able, and would be likely, to pursue business strategies resulting in demonstrable and verifiable benefits to consumers that could not be pursued but for the combination.”); see also News Corp. and DIRECTV Group, Inc., Transferors, and Liberty Media Corporation, Transferee, for Authority to Transfer Control, *Memorandum Opinion and Order*, 23 FCC Rcd. 3265, 3330-31 ¶ 140 (2008).

³⁶⁸ See Opposition at 36-43.

³⁶⁹ *Id.* at 2, 38.

TWC's pre-existing plans to upgrade its network in how this value is calculated.³⁷⁰ And while the Applicants claim that these network improvements will spur competitive investments by competing broadband access providers, they fail to either quantify this benefit or present any compelling evidence that it will actually happen.

The Applicants would have the Commission believe that TWC lacks the resources, will, or skill to provide its customers with a service offering comparable to Comcast's. This is not so. Like Comcast, "TWC too has invested significantly in advanced broadband technologies like DOCSIS 3.0, and has upgraded its network to bring faster speeds."³⁷¹ In fact, from 2007 to 2009, TWC invested an average of approximately \$268 million each year in network upgrades and rebuilds and \$352 million on line extensions.³⁷² In 2010 and 2011, TWC continued its investments, spending approximately \$500 million and \$420 million respectively, extending TWC distribution networks, upgrading or replacing components of those networks, and installing new fiber optic or coaxial cable and electronic equipment.³⁷³ And for 2012, TWC reported that it spent \$529 million on line extensions, upgrades and rebuilds.³⁷⁴ TWC kept this investment

³⁷⁰ See *id.* at 38; Israel Reply Declaration ¶ 221.

³⁷¹ See Applications of Comcast Corp. and Time Warner Cable Inc. for Consent to Transfer Control of Licenses and Authorizations, Applications and Public Interest Statement, MB Docket No. 14-57, at 32 (Apr. 8, 2014) ("Application").

³⁷² Time Warner Cable, 2009 Annual Report (Form 10-K), at 48 (Apr. 2010), *available at* http://ir.timewarnercable.com/files/doc_financials/Annual%20Reports/TWC_Revised_Annual_Report_4_14_2010.pdf.

³⁷³ Time Warner Cable, 2011 Annual Report (Form 10-K), at 60 (Mar. 2012), *available at* http://ir.timewarnercable.com/files/doc_financials/Annual%20Reports/TWC_2011_Annual_Report.pdf.

³⁷⁴ Time Warner Cable, 2012 Annual Report (Form 10-K), at 60 (Mar. 2013), *available at* http://ir.timewarnercable.com/files/doc_financials/Annual%20Reports/468244_010.pdf.

apace into 2013, spending \$716 million last year in continued upgrades.³⁷⁵ The company also started providing upgraded modems for its “Turbo” customers and rolled out its “Ultimate 100” Service across several markets, providing 100 Mbps upload speeds to both residential and business customers.³⁷⁶ Plus, TWC has continued making “aggressive investments” in customer premises equipment to support the ongoing roll out of its TWC Maxx product, connecting over five million new set-top-boxes this year alone.³⁷⁷ These are not the investments of a complacent operator.

TWC has also made good on its promises to upgrade the entire Austin, Texas market to speeds six times faster than speeds available through customers’ current subscriptions, all at no additional cost to the customer.³⁷⁸ By early October, TWC had already delivered these substantial increases in Internet speed to more than 1.5 million customers, in just the first three markets targeted for upgrades this year.³⁷⁹

Moreover, TWC has substantially accelerated the pace of its investment over the course of 2014. In its financial plan for 2014, TWC reported on its continued roll-out of next generation

³⁷⁵ Time Warner Cable, 2013 Annual Report (Form 10-K), at 50 (Feb. 2014), *available at* http://ir.timewarnercable.com/files/doc_financials/Annual%20Reports/twc%20ar%202013.pdf.

³⁷⁶ Chris Monfette, *Time Warner Cable: A Year in Review*, Time Warner Cable Untangled (Dec. 27, 2013), <http://www.twcableuntangled.com/2013/12/time-warner-cable-a-year-in-review/>.

³⁷⁷ Time Warner Cable, Third-Quarter 2014 Earnings Summary, at 3 (Oct. 30, 2014), *available at* http://ir.timewarnercable.com/files/2014%20Earnings/3Q14/Earnings-Summary-Presentation-3Q14-FINAL_v001_m4dpa9.pdf.

³⁷⁸ Ryan Kelly, *TWC Maxx Hits Austin Milestone; LA & NYC Upgrades Continue*, Time Warner Cable Untangled (Oct. 7, 2014), <http://www.twcableuntangled.com/2014/10/twc-maxx-hits-austin-milestone-la-nyc-upgrades-continue/>.

³⁷⁹ *Id.*

products, including the launch of its TWC Maxx initiative.³⁸⁰ In July of 2014, the company responded to the City of Los Angeles' request for input on how to develop a community-wide fiber network by announcing its intention to "roll-out gigabit speeds to all of Los Angeles,"³⁸¹ expanding on its TWC Maxx initiative for the region. TWC promised that the new TWC Maxx experience will "triple Internet speeds" and "set a high bar in our industry for differentiated exceptional customer service."³⁸² The company has explained that "customers in New York City and Los Angeles will be the first to benefit from major enhancements that will transform their service as they know it," with the deployment of TWC Maxx in those areas.³⁸³ That roll-out will upgrade "Standard" customers' current 15 Mbps service to 50 Mbps, "Turbo" customers' 20 Mbps service to 100 Mbps, "Extreme" customers' 30 Mbps service to 200 Mbps, and "Ultimate"

³⁸⁰ Time Warner Cable, TWC Operational and Financial Plan, at 11. (Jan. 30, 2014), *available at* http://ir.timewarnercable.com/files/4Q13/TWC_Operational%20and_Financial%20Plan_vFINA_L.pdf. ("TWC Plan"). Notably, TWC's Plan characterized 2014 as "A Year of Stabilization and Growth." *Id.* at 22.

³⁸¹ Press Release, Time Warner Cable, Time Warner Cable's All-Digital Transformation in 2014 Sets Foundation for 'Gigasphere'—Bringing One Gigabit-Per-Second Internet Speeds to Los Angeles Residents (July 18, 2014), *available at* <http://www.timewarnercable.com/en/about-us/press/twc-all-digital-transformation.html> (citing TWC's Response to City of Los Angeles' Request for Information and noting that investments in TWC Maxx have allowed TWC to deliver up to 300 Mbps Internet connections to "hundreds of thousands of LA region customers already . . .").

³⁸² Financial Release, Time Warner Cable, Time Warner Cable to Transform TV and Internet Experience in New York City and Los Angeles (Jan. 30, 2014), *available at* <http://ir.timewarnercable.com/investor-relations/investor-news/financial-release-details/2014/Time-Warner-Cable-to-Transform-TV-and-Internet-Experience-in-New-York-City-and-Los-Angeles/default.aspx>.

³⁸³ Press Release, Time Warner Cable, Time Warner Cable to Transform TV and Internet Experience in New York City and Los Angeles (Jan. 30, 2014), *available at* <http://www.timewarnercable.com/en/about-us/press/twc-to-transform-tv-internet-in-nyc-la.html>.

customers' 50 Mbps service to 300 Mbps.³⁸⁴ These plans push the companies' speeds even further in the opposite direction than that claimed by the Applicants.

And, at the end of October 2014, TWC announced that it had already met several of its year-end goals: TWC completed its "all digital" conversion in New York City and Los Angeles, resulting in speeds of up to 300 Mbps being available to roughly *seven million* households in those cities and Austin.³⁸⁵

TWC's 2014 financial results show more growth and continued investment. Reporting TWC's results for the first quarter of 2014, TWC CEO Rob Marcus said: "Our residential subscriber growth was the best in five years."³⁸⁶ For the second quarter, TWC reported that the company "accelerated its pace of investment" in "cable modems capable of supporting TWC Maxx speeds."³⁸⁷ TWC also posted a strong second quarter even as it has been expanding and upgrading its networks. It reported 12.8% growth in residential high-speed data revenue, and the best second quarter in five years regarding customer retention.³⁸⁸ For its third quarter results, TWC reported 108,000 high-speed data net additions, marking its best third-quarter performance

³⁸⁴ *Id.*

³⁸⁵ Time Warner Cable, Third-Quarter 2014 Earnings Summary, at 3 (Oct. 30, 2014), *available at* http://ir.timewarnercable.com/files/2014%20Earnings/3Q14/Earnings-Summary-Presentation-3Q14-FINAL_v001_m4dpa9.pdf; *see also* *Time Warner Cable Completes 'TWC Maxx Rollout in Los Angeles and New York City*, Yahoo! Finance (Nov. 13, 2014), <http://finance.yahoo.com/news/time-warner-cable-completes-twc-170000355.html>.

³⁸⁶ Press Release, Time Warner Cable, Time Warner Cable Reports 2014 First-Quarter Results (Apr. 24, 2014), *available at* http://ir.timewarnercable.com/files/2014%20Earnings/1Q14/Q1%202014%20TWC%20Earnings%20Release%20FINAL_v001_x9479y.pdf.

³⁸⁷ Press Release, Time Warner Cable, Time Warner Cable Reports 2014 Second-Quarter Results (July 31, 2014), *available at* <http://www.timewarnercable.com/content/twc/en/about-us/press/twc-reports-2014-second-quarter-results.html>.

³⁸⁸ *Id.*

in five years.³⁸⁹ TWC also reported that it has already spent approximately \$624 million in 2014 upgrading and expanding its network into previously unserved areas.³⁹⁰ Further, TWC stated that it “expects [total] capital expenditures to be approximately \$4.0 billion in 2014 as [it] invests to improve network reliability, upgrade older customer premises equipment and expand its network to additional residences, commercial buildings and cell towers.”³⁹¹ In the five years since the completion of its separation from Time Warner Inc., TWC experienced 24 percent revenue growth, and dedicated over \$15 billion to capital expenditures.³⁹²

In perhaps the most stark example of the Applicants’ highly exaggerated exposition on the benefits of bringing Comcast’s brand of network technology, operation, and service to TWC’s customers, Comcast lauds itself for having “already upgraded its entire network to be compliant with IPv6, a critical new standard that is essential to the future growth and enhanced functionality of the Internet,” and promises that “[t]hese same upgrades will be made to the acquired systems.”³⁹³ But, “TWC has [already] rolled out IPv6 to over 90% of its residential network,”³⁹⁴ and will likely complete its IPv6 upgrades well before any merger with Comcast can be consummated.³⁹⁵

³⁸⁹ Time Warner Cable, Third-Quarter 2014 Earnings Summary, at 3 (Oct. 30, 2014), *available at* http://ir.timewarnercable.com/files/2014%20Earnings/3Q14/Earnings-Summary-Presentation-3Q14-FINAL_v001_m4dpa9.pdf.

³⁹⁰ Time Warner Cable, 2014 Quarterly Report (Form 10-Q), at 20 (Oct. 30, 2014), *available at* <http://timewarnercable.q4cdn.com/610eb1c5-83fc-4dd7-9742-fa84a05d0059.pdf>.

³⁹¹ *Id.*

³⁹² TWC Plan at 4.

³⁹³ Opposition at 40.

³⁹⁴ *The Internet is Evolving: Find Out About the IPv6 Transition, Time Warner Cable is Prepared*, Time Warner Cable,

TWC's aggressive broadband upgrades throw into question the Applicants' claim that, on average, TWC subscribers have to make do with lower broadband speeds than those of Comcast.³⁹⁶ Many TWC subscribers seem to enjoy higher speeds and lower prices than Comcast offers.³⁹⁷ As of November 2014, TWC's "Extreme" plan for \$34.99 per month offered high-speed service that was more affordable than Comcast's most similar plan, and for \$64.99 the "Ultimate" plan delivers speeds that double those offered in Comcast's fastest plan: through Comcast, customers could choose from 50 Mbps at \$39.99 per month, 105 Mbps for \$44.99 per month, or 150 Mbps at \$114.95 per month.³⁹⁸

And these investments are not just in the past. The company ranked "Revitalize Residential Services" at the top of the key investment elements of its plans for 2014-2016.³⁹⁹ This revitalization includes plans to extend the TWC Maxx program across the company footprint, with the aim to complete the TWC Maxx upgrade for all customers by {{ }}.⁴⁰⁰ In the words of TWC Chairman and CEO Rob Marcus, the company is "committed to

<http://www.timewarnercable.com/en/support/internet/topics/ipv6.html> (last visited Dec. 16, 2014).

³⁹⁵ *Cf. id.*

³⁹⁶ Opposition at 37-38.

³⁹⁷ See Time Warner Cable, *Faster Internet Speeds are Coming*, <http://www.timewarnercable.com/en/enjoy/better-twc/speed-increase/internet-speed.html> (last visited Nov. 18, 2014).

³⁹⁸ Compare Xfinity Internet Offerings, *with High Speed Internet Plans and Packages*, Time Warner Cable, <http://www.timewarnercable.com/en/internet/internet-service-plans.html> (last visited Nov. 18, 2014).

³⁹⁹ TWC Plan at 17.

⁴⁰⁰ See Time Warner Cable, Inc., Responses to the Commission's Information and Data Request, MB Docket No. 14-57 (Oct. 22, 2014) ("TWC Supplemental Responses"), {{

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reinventing the TWC service experience market-by-market.”⁴⁰¹ As the company promises, TWC Maxx is “for all our customers, not just selected neighborhoods.”⁴⁰²

With over two million TWC subscribers in the greater Los Angeles area, TWC’s commitment to the city means that TWC has promised to make gigabyte connections available to nearly 20 percent of its consumer base. It is hard to see how Comcast can improve on this investment. The company also announced this year that it will accelerate its TWC Maxx rollouts for the Austin, Charlotte, Dallas, Hawaii, Kansas City, San Antonio, and San Diego markets.⁴⁰³ Together with the Los Angeles and New York City markets, TWC has already committed to providing minimum 50 Mbps broadband access download speeds across over 25 percent of its subscriber base by the end of 2014.⁴⁰⁴ After executing its planned upgrades in seven new markets in 2015, TWC will have upgraded {{ }} more of its customers, for a total of nearly {{ }} of its subscriber base—all without Comcast.⁴⁰⁵

⁴⁰¹ Jay Gormley, *Taking Eight More Markets to the “TWC Maxx,”* Time Warner Cable Untangled (July 31, 2014), <http://www.twcableuntangled.com/2014/07/taking-eight-more-markets-to-the-twc-maxx/>.

⁴⁰² Mike Freeman, *Time Warner Cable to Boost Internet Speeds*, U-T San Diego (July 31, 2014), <http://www.utsandiego.com/news/2014/jul/31/Time-Warner-Cable-fast-Internet-upgrades/>.

⁴⁰³ Press Release, Time Warner Cable, *Time Warner Cable Announces Commitment to Transform Customer Experience in Seven Markets* (Jan. 31, 2014), <http://www.timewarnercable.com/en/about-us/press/time-warner-cable-announces-commitment-to-transform-customer-exp.html>.

⁴⁰⁴ Ryan Kelly, *TWC Maxx Hits Austin Milestone; LA & NYC Upgrades Continue*, Time Warner Cable Untangled (Oct. 7, 2014), <http://www.twcableuntangled.com/2014/10/twc-maxx-hits-austin-milestone-la-nyc-upgrades-continue/> (“With Austin complete, and New York and Los Angeles more than halfway done, we are on track to reach our goal of over 3 million customers by the end of 2014.”).

⁴⁰⁵ See TWC Supplemental Responses, {{ }}; see also Time Warner Cable, Responses to the Commission’s Information and Data Request, MB Docket No. 14-57 (Sep. 11, 2014), {{ }}.

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These upgrade plans would push the disparity between the two companies' speeds even further in the opposite direction than that claimed by the Applicants. According to TWC, its upgraded customers will enjoy the high speeds offered by TWC Maxx—up to six times their current speed, and up to 300 Mbps—for the same price they pay for their current service.⁴⁰⁶ As of November 2014, the highest speed available from Comcast's Xfinity Internet offerings was 150 Mbps, and the price was \$114.95 per month. While Comcast does offer speeds up to 505 Mbps, this service requires a special installation to the customer's home, and costs a whopping \$399.95 per month.⁴⁰⁷ The service also requires customers to sign a three-year contract that includes startup costs of \$500 and an early termination fee of more than \$1,000.⁴⁰⁸

In light of TWC's standalone achievements and plans, Comcast's intimations that TWC needs a savior and will find one in Comcast are not credible. TWC does not appear to need Comcast's help to "accelerate existing TWC deployment plans and to upgrade the *entire* TWC service footprint . . . faster and more efficiently."⁴⁰⁹ There is instead every indication that TWC was, is, and will continue investing in its infrastructure to bring consumers within its footprint broadband access service on par with the best available from Comcast. TWC is nowhere near a failing firm. These upgrades are not transaction specific benefits and should be dismissed from the Commission's calculus.

⁴⁰⁶ Press Release, Time Warner Cable, Time Warner Cable Begins 'TWC Maxx' Transformation in Austin Area to Enhance Customer Experience (Jul. 31, 2014), *available at* <http://www.timewarnercable.com/en/about-us/press/time-warner-cable-begins-twc-maxx-transformation-in-austin-area-.html>.

⁴⁰⁷ *Speed Wins*, Comcast, <http://www.comcast.com/505> (last visited Dec. 20, 2014) ("Get the fastest Internet in your house for \$399.95 a month.").

⁴⁰⁸ See National Hispanic Media Coalition, Comments, MB Docket No. 14-57, at 8 (Aug. 25, 2014).

⁴⁰⁹ Opposition at 39 (emphasis in original).

B. The Touted Success of Internet Essentials is Illusory at Best

Comcast touts its Internet Essentials (“IE”) program as a significant public benefit, since the instant transaction may extend the program to new territories previously served by TWC.⁴¹⁰ But, as a threshold matter, the IE program is not a public interest benefit. It is a mandated condition of the Comcast-NBCU transaction imposed on Comcast due to a concern that the enlarged Comcast would harm broadband consumers, including the most vulnerable. Those concerns were well-founded, and are true even more so here. And, while Comcast may, if required, extend IE to TWC territories, the program will be discontinued in SpinCo—officially named GreatLand Connections Inc.⁴¹¹— territories and the territories where Charter acquires subscribers from Comcast.⁴¹²

The program has been far from the success story Comcast depicts. There have been many problems with its administration. The sign-up process has been arduous.⁴¹³ Consistent

⁴¹⁰ Application at 59-66, 109; Opposition at 50-59.

⁴¹¹ Tess Stynes, *Charter-Comcast Cable Venture to Be Named GreatLand Connections*, Wall Street Journal (Sept. 3, 2014), <http://www.wsj.com/articles/charter-comcast-cable-venture-to-be-named-greatland-connections-1409762150>.

⁴¹² *Competition in the Video and Broadband Markets: The Proposed Merger of Comcast and Time Warner Cable: Hearing before the Regulatory Reform, Commercial and Antitrust Law Subcomm. of the H. Judiciary Comm.* 113th Cong. 19 n.38 (May 8, 2014) (joint written statement of David Cohen, Comcast Corporation, and Robert Marcus, Time Warner Cable Inc.), available at <http://corporate.comcast.com/images/comcast-twc-joint-written-statement-may-8.pdf>.

⁴¹³ Letter from California Emerging Technology Fund to Chairman Wheeler, FCC, MB Docket No. 14-57, at Exhibit 1: Summary of Challenges to Signing Up Eligible Families for Comcast Internet Essentials (July 11, 2014) (“CETF Letter”); see also Jon Brodtkin, *Comcast’s Internet for the Poor Too Hard to Sign Up For, Advocates Say*, ArsTechnica (July 23, 2014), <http://arstechnica.com/business/2014/07/comcasts-internet-for-the-poor-too-hard-to-sign-up-for-advocates-say/>; Cecilia Kang, *Comcast Is Trying to Improve Its Image With A Program For Low-Income Consumers*, Washington Post (May 9, 2014), <http://www.washingtonpost.com/business/technology/comcast-is-trying-to-improve-its-image->

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with Comcast's customer service reputation, customer service representatives do not seem to know important details regarding the program.⁴¹⁴ Many poor people are excluded from the program, including childless couples, the elderly, and single people.⁴¹⁵ The performance is five times slower than Comcast's standard service.⁴¹⁶ And the program is aimed solely at new subscribers; the poor among Comcast's existing subscriber base are ineligible.⁴¹⁷

Worse, the subscriber sign-up totals are not very impressive. Comcast brags that IE is responsible for "approximately one-quarter of the overall broadband adoption growth for low-income families with children since 2009."⁴¹⁸ But given that Comcast currently passes 42 percent of the nation's population, that total should be at least 42 percent even without the program.⁴¹⁹ That 25% figure properly belongs to a critique of, not a source of pride for, Comcast's administration of IE.

Given the problems with IE and Comcast's performance generally, the Commission should not permit Comcast to claim IE as a merger benefit. Nor are the problems with IE converted into benefits by means of more extensive oversight of IE as part of the Commission's

with-a-program-for-low-income-consumers/2014/05/09/cab489cc-d231-11e3-937f-d3026234b51c_story.html.

⁴¹⁴ CETF Letter at Exhibit 1.

⁴¹⁵ Susan Crawford, *Water, Internet Access and Swagger: These Guys Are Good*, *Wired* (Mar. 9, 2012), <http://www.wired.com/2012/03/opinion-crawford-comcast-internet/>.

⁴¹⁶ Comcast advertised service speeds are available at <http://www.comcast.com/>. The Performance service speed is 25 Mbps, while Internet Essentials service speed is just 5 Mbps.

⁴¹⁷ Art Brodsky, *Merger 'Conditions' Can't Fail as Big Deals are on the Line*, *Public Knowledge* (Mar. 16, 2012), <https://www.publicknowledge.org/news-blog/blogs/merger-conditions-cant-fail-as-big-deals-are-on-the-line>.

⁴¹⁸ Opposition at 56.

⁴¹⁹ Stucke and Grunes at 2. Post-transaction, Comcast will pass approximately 70 percent of the American population. *Id.*

ongoing enforcement of the *Comcast-NBCU* merger conditions. The recommendations by the California Emerging Technology Fund that IE include all low-income households, set performance goals, capitalize an independent fund and coordinate with states, and establish an advisory oversight committee with real powers seem like a good start to correcting the problems with IE.⁴²⁰ They should be adopted within the context of the *Comcast-NBCU Order*; they should certainly not be parlayed into a justification for approving an unprecedented enlargement of Comcast.

C. The Purported Scale Efficiencies Would Inure Solely to the Applicants' Benefit

The Applicants continue to claim that the proposed merger would create economies of scale at the national and regional levels, which will in turn generate key efficiencies.⁴²¹ To begin with, as shown by the DISH Petition and the filings of so many others in this proceeding, any efficiencies afforded by the combined company's scale are more than offset by the harm that this very same scale will wreak in the national market for OTT video distribution and programming, among other things. In any event, the claimed efficiencies appear largely fabricated.

In order to claim efficiencies as a public interest benefit, the Applicants need to show that the supposed efficiencies will enhance social welfare, not just the Applicants' bottom line.⁴²² This showing does not appear possible here. Comcast's David Cohen was honest about the fact

⁴²⁰ CETF Letter at 2.

⁴²¹ Opposition at 80-83.

⁴²² EchoStar Communications Corp., General Motors Corp., and Hughes Electronics Corp., Transferors, and EchoStar Communication Corporation, Transferee, *Hearing Designation Order*, 17 FCC Rcd. 20559, 20637 ¶ 211 (2002).

that consumers would not be the recipients of any benefits of the merger's purported efficiencies:

*"We're certainly not promising that consumer bills will go down or increase less rapidly."*⁴²³

Not surprisingly, the Applicants cite no specific efficiencies that will be enjoyed by consumers as a result of the merger. They simply contend greater scale means Comcast can "increase its investments" and "spread the costs across a larger customer base."⁴²⁴ The Applicants contend that the April Declaration of Rosston and Topper provides "concrete examples of investments and projects that Comcast failed to undertake, or undertake as quickly, due to lack of sufficient scale."⁴²⁵ Yet nowhere does Comcast commit to undertake these investments in a concrete way if the proposed merger is approved or show that the merger is either necessary or sufficient to achieve the necessary scale. Rosston and Topper present a list of concepts, not projects actually defined.

In fact, Comcast appears to have all the advantages it needs from scale today, as Comcast's CFO Michael Angelakis told investors just last year. In contrast to the Applicants' assertions here, he expressed the view that additional subscribers would not create additional benefits. Here is his statement:

We're already at 22 million video customers. We actually think we have meaningful scale on the distribution side and we also think we have meaningful scale on the content side. We don't particularly believe that having a couple million more customers to our footprint is going to change

⁴²³ Jon Brodtkin, *Comcast: No Promise that Prices "Will Go Down or Even Increase Less Rapidly,"* ArsTechnica (Feb. 13, 2014), <http://arstechnica.com/tech-policy/2014/02/comcast-no-promise-that-prices-will-go-down-or-even-increase-less-rapidly/>; *see also* Edward Wyatt, *As Services Expand, Cable Bills Keep Rising*, New York Times (Feb. 14, 2014), <http://www.nytimes.com/2014/02/15/business/media/as-services-expand-cable-bills-keep-rising.html>.

⁴²⁴ Opposition at 80.

⁴²⁵ *Id.* at 82.

dynamics around content costs I think people who are talking about it are looking for the benefits of scale whether it be on the programming side or the technology side, I think we've already executed on that.⁴²⁶

In sum, supposed efficiencies from scale cannot be considered public interest benefits because they will not enhance consumer welfare, are not merger-specific, and have already been achieved by Comcast pre-merger.

D. Incumbent Merger Applicants Often Make Promises They Do Not Keep

Experience with the mergers of incumbents teaches that their merger promises should often be discounted, even when they do not necessarily raise the problems identified here. This is not a surprise. When incumbents merge, the discipline that would normally be imposed by competition is often absent. Yet this discipline is necessary to translate private efficiencies into public benefits through lower prices or better service quality.

Take, for example, the Regional Bell Operating Company ("RBOC") mergers. Like Comcast and TWC today, the applicants in these cases specifically touted expanded and upgraded network infrastructure investment as a benefit to their transactions.⁴²⁷ In evaluating the RBOC mergers, the Commission recognized the many consumer harms that consolidation would cause, but approved the transactions in light of the promised investments and depended on

⁴²⁶ Transcript, Comcast's Management Presents at Goldman Sachs 22nd Annual Communacopia Conference (Sept. 24, 2014), *available at* <http://seekingalpha.com/article/1711582-comcasts-management-presents-at-goldman-sachs-22nd-annual-communicopia-conference-transcript?part=single>.

⁴²⁷ *See, e.g., SBC-Ameritech Order* 14 FCC Rcd. at 14735-36 n.106 ¶ 45 (promising to comply with commitments "to assuage concerns that the merger's benefits will not materialize and to address any remote, speculative possibility that competition in some markets may be threatened"); *AT&T Inc. and BellSouth Corp. Application for Transfer of Control, Memorandum Opinion and Order*, 22 FCC Rcd. 5662, 5762 ¶ 204 (2007) ("*AT&T-BellSouth Order*") ("By virtue of the voluntary commitments that the Applicants have offered, we are persuaded that consumers will benefit from the deployment of broadband in the merged entity's territory more rapidly than might otherwise have occurred absent the merger.").

voluntary commitments and “significant and enforceable conditions designed to mitigate the potential public interest harms.”⁴²⁸ Yet, despite their promises and the existence of conditions designed to hold the applicants to them, the post-merger companies seem to have under-delivered.

In the Bell Atlantic-NYNEX merger, for example, the combined entity promised to spend \$11 billion and rewire 8.75 million households by 2000.⁴²⁹ Yet, after the merger, the company halted its fiber optic deployment plans in every state.⁴³⁰ In the SBC-Ameritech merger, too, the applicants made an aggressive pledge to spend \$6 billion⁴³¹ to deploy service to approximately 80 percent of SBC’s customers over three years as part of “Project Pronto,” and claimed “[w]ithin the next 10 years, the 30 out-of-region markets will have 30 million households and 10 million small businesses.”⁴³² The Commission hoped the merger would promote competitive

⁴²⁸ *SBC-Ameritech Order*, 14 FCC Rcd. at 14716 ¶ 2; *see also Bell Atlantic-NYNEX Order*, 12 FCC Rcd. at 19993 ¶ 15.

⁴²⁹ Bell Atlantic Corp., 1993 Annual Report at 4, (attached as Exhibit 13 to Bell Atlantic Corp., Annual Report (Form 10-K) (Mar. 1994)) (“We will spend \$11 billion over the next five years to rapidly build full-service networks. . . . We expect Bell Atlantic's enhanced network will be ready to serve 8.75 million homes by the end of the year 2000.”).

⁴³⁰ *See* Bruce Kushnick and Alexander Goldman, *The History, Financial Commitments and Outcomes of Fiber Optic Broadband Deployment in America: 1990-2004* at 15 (Dec. 4, 2009), *available at* <http://www.newnetworks.com/FCCCITIfiberbroadband.pdf> (“[T]here should have been approximately 46 million households upgraded with fiber optic upgraded lines by 2000. Based on annual reports, there were no fiber optic residential services.”).

⁴³¹ SBC Communications Inc., 2000 Annual Report (Form 10-K) (filed Mar. 12, 2001), *available at* <http://www.sec.gov/Archives/edgar/data/732717/000073271701000019/0000732717-01-000019-0001.htm>.

⁴³² TeleTruth, *The SBC-Pacific Telesis-SNET-Ameritech Mergers Were the Death of State Fiber Optic Deployments*, at 25, *available at* <http://www.teletruth.org/docs/SBCMergersharms.pdf> (citing SBC Communications Inc., 2001 Annual Report (Form 10-K), at 23 (2002)); *see also SBC-Ameritech Order*, 14 FCC Rcd. at 14999-15001 ¶¶ 23-24 (requiring the merged company to compete in 30 cities outside its region by 2002 in states including Illinois, Indiana, Ohio, Wisconsin, and Michigan).

entry into new markets.⁴³³ But after the merger, SBC shut down its existing fiber optic deployments, including work in California, Connecticut, and Ameritech's five states, and failed to enter any new market.⁴³⁴ The 1999 merger promise has yet to be fulfilled for much of the AT&T footprint today, some 15 years later.⁴³⁵

Similarly, the AT&T-Bell South transaction brought a commitment to provide "Internet access service at speeds in excess of 200 kbps in at least one direction to 100 percent of the residential living units in the AT&T-BellSouth territory" and a promise to offer DSL service to new customers for just \$10.00 per month.⁴³⁶ Again, both promises have gone unfulfilled.⁴³⁷

E. The Transition Period Would Disrupt SpinCo Customers

The benefits claimed by the Applicants should also be discounted by another significant negative visited on consumers: the maze of divestiture transactions supposedly aimed at

⁴³³ *SBC-Ameritech Order*, 14 FCC Rcd. at 14877 ¶ 398.

⁴³⁴ See Bruce Kushnick, Press Release, TeleTruth: Break Up SBC Ameritech (Mar. 12, 2002), available at <http://www.teletruth.org/TakeAction/Breakupsbcameritech/PR-SBCAmeritech.html>. SBC released a statement promising that it was providing service to at least three unaffiliated customers in just 10 markets by 2002, but there was scarce evidence that SBC was offering service in any of those markets. See Bruce Kushnick, *The Book of Broken Promises: \$400 Billion Broadband Scandal & Free the Net*, Huffington Post (Sept. 17, 2014), http://www.huffingtonpost.com/bruce-kushnick/the-book-of-broken-promis_b_5839394.html; Bruce Kushnick, *AT&T's Top 13 Broken Promises. DIRECTV Merger? 'Giga'-Me-a-Break!*, Huffington Post (Oct. 1, 2014), http://www.huffingtonpost.com/bruce-kushnick/atts-top-13-broken-promis_b_5917694.html.

⁴³⁵ See Bruce Kushnick, *Are You in a Verizon or AT&T Shut Off Zone? Will You Be One of the Disconnected?*, Huffington Post (Aug. 13, 2013), http://www.huffingtonpost.com/bruce-kushnick/are-you-in-a-verizon-or-a_b_3737177.html.

⁴³⁶ *AT&T-BellSouth Order* 22 FCC Rcd. at 5807-08 ¶¶ 1, 3 (internal parentheses omitted).

⁴³⁷ See Mike Masnick, *Everytime AT&T Wants Federal Approval of Merger or Policy, It Promises to Deliver 100% Broadband... Then Doesn't Deliver*, Techdirt (June 24, 2014), <https://www.techdirt.com/articles/20140620/17592427642/everytime-att-wants-federal-approval-merger-policy-it-promises-its-necessary-to-deliver-100-broadband-then-doesnt-deliver.shtml>.

mitigating the merger's anticompetitive effects by limiting the number of the Comcast-TWC's cable subscribers to below the 30 percent threshold for MVPD market share (notably, the Applicants have shown no similar concern about their share of the high-speed broadband market). Among other things, these transactions would create a new company, SpinCo, of complicated ownership and governance. A majority of this company, supposedly independent from Comcast, will be owned by Comcast's current shareholders.⁴³⁸ Even so, the company and the service it provides will be controlled by a board dominated by Charter.⁴³⁹ This is hardly a formula for success.

Approximately 2.5 million subscribers will be carted off to SpinCo, casualties of the Applicants' efforts to make their merger seem smaller and to gain tax benefits.⁴⁴⁰ These 2.5 million subscribers will have the unique honor of being the beneficiaries of Comcast-TWC-Charter's "tax efficient agreements" to "spin" them off from Comcast's systems onto their own, independent system.

The disruption from this transition has the potential to be significant. Consider the concerns raised by David M. Osberg, speaking as City Administrator for the City of Eagan, Minnesota, which typify the worries of consumers and municipalities across the country.⁴⁴¹ Eagan, a technology hub in the state, relies on high-speed Internet and would be served by

⁴³⁸ See Comcast Corporation, Divestiture Transaction Fact Sheet at 1 (Apr. 27, 2014), corporate.comcast.com/images/Comcast-Charter-FactSheet-4_27_14_FINAL.pdf (reporting that the 9 members of the SpinCo board of directors will include 3 Charter designated members and 6 independent members).

⁴³⁹ *Id.*

⁴⁴⁰ See Letter from Kathryn Zachem, Comcast Corporation, to Marlene Dortch, FCC, MB Docket No. 14-57, at 2 (June 5, 2014).

⁴⁴¹ City of Eagan, Minnesota, Comments, MB Docket No. 14-57 (Aug. 25, 2014).

SpinCo under the Applicants' plan. The city has legitimate concerns about the ability of an "unknown, untested, spin off company" to provide reliable service, and correctly argues that it is currently "unable to assess the wherewithal and ability of [SpinCo] to serve the needs and interests" of the city.⁴⁴² Eagan's questions are simple. It wants to know more about "routine operational issues, customer service matters and the financial qualifications for the proposed transferee,"⁴⁴³ and its concerns are shared by millions across the country. It's not as if Comcast has an existing culture for excellent customer service that it can be expected to leverage to help make the transition as "seamless" as Comcast claims.⁴⁴⁴

The Applicants cannot answer these questions, in part because the answers are unknowable. Applicants may point to promises and contractual agreements between the parties, but history shows that these guarantees do not always protect customers. During the MCI-WorldCom merger, for example, MCI spun off its Internet business under conditions required by the Commission, the DOJ, and the European Commission.⁴⁴⁵ Cable & Wireless purchased the spun-off property, but later alleged that MCI WorldCom had failed to provide the necessary personnel to run the spin off, failed to provide contract documentation and customer information,

⁴⁴² *Id.* at 5.

⁴⁴³ *Id.*

⁴⁴⁴ Comcast Vice President for Corporate Affairs Mary Beth Schubert says the company is committed to a "seamless transition." Don Jacobson, *What Comcast-Charter Switch Means for Subscribers, and Why Fiber is Stymied*, MinnPost, May 5, 2014, <http://www.minnpost.com/business/2014/05/what-comcast-charter-switch-means-subscribers-and-why-fiber-stymied>.

⁴⁴⁵ Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc., *Memorandum Opinion and Order*, 13 FCC Rcd. 18025 (1998).

and failed to conduct business in the ordinary course before closing.⁴⁴⁶ Cable & Wireless brought suit in federal court and MCI WorldCom settled for \$200 million, but not before “more than 100 companies . . . lost their Internet service when MCI WorldCom neglected to transfer their accounts.”⁴⁴⁷ Similar incentives are at play here.

Over the long term, how are these subscribers expected to fare as beholden to a system that will be amongst the smaller players in the industry? How will they benefit from the touted “economies of scale” that the Applicants’ claim will flow from the merger? How will their networks evolve over time to stay abreast of advancements in the industry? After some period of time, legacy agreements from the old Comcast days will pass into the history books, and SpinCo—and its 2.5 million subscribers—will be left to fend for themselves. For these 2.5 million subscribers, the proposed transaction portends nothing but disruption and problems, and no benefits.

F. Comcast Has Repeatedly Broken its Promises

The Applicants’ claims that the transaction will result in the accelerated deployment of broadband to low-income, unserved, or rural communities, affordable broadband services, and expedited upgrades for acquired systems are familiar and, coming from an incumbent, should be taken with a grain of salt in the best of circumstances. But they are particularly problematic where, as here, the one making the promise has as poor a track record as does Comcast.

⁴⁴⁶ *Mergers and Consolidation in the Communications Industry: Hearing Before the S. Comm. on Commerce*, 106th Cong. 55-57 (Nov. 8, 1999) (testimony of Mike McTighe, Chief Executive Officer, Cable & Wireless), available at <http://www.gpo.gov/fdsys/pkg/CHRG-106shrg77325/html/CHRG-106shrg77325.htm>.

⁴⁴⁷ Rebecca Blumenstein, *WorldCom to Pay Cable & Wireless \$200 Million to Settle Internet Dispute*, Wall Street Journal (Mar. 2, 2000), <http://online.wsj.com/articles/SB951922751787792103>; see also, *Complaint, Cable & Wireless USA, Inc. v. MCI WorldCom, Inc.*, No. cv-99-204 (D. Del. Mar. 31, 1999).

Comcast has claimed before that it would deliver “concrete public interest benefits,”⁴⁴⁸ just as it claims today. But the list of promises unkept and conditions defied is almost as long as the list of the promises themselves. DISH addressed several of these broken promises in its Petition, only one of which the Applicants addressed substantively: the dispute with Project Concord.

There Comcast used its massive resources to fight Project Concord’s efforts to enforce the *Comcast-NBCU* condition designed to ensure nascent OVDs like Project Concord access to NBCU programming, resulting in a costly proceeding that “only a multi-billion dollar conglomerate can mount.”⁴⁴⁹ Comcast attempts to diminish the importance of the dispute by characterizing it as a disagreement over the scope of programming merited by the OVD, suggesting that the entire dispute “centered on parsing through these [licensing] contract issues,”⁴⁵⁰ and casts the resolution as a vindication of Comcast’s position.⁴⁵¹ But this is not so.

While it is true that the parties disagreed as to the scope of programming that fell under the *Comcast-NBCU* merger condition, the fact of the case was that Comcast resisted licensing *any* programming to Concord in advance of enforcement measures. Although Comcast ultimately prevailed in its scope argument, it is Project Concord that prevailed in its *central* claim that it was entitled to programming in the first instance.⁴⁵² And Comcast is silent on the

⁴⁴⁸ See Letter from Kathryn Zachem, Comcast Corporation, to Marlene Dortch, FCC, MB Docket No. 10-56, at 1 (Dec. 23, 2010).

⁴⁴⁹ Project Concord, Inc. Partial Appeal—Cost Shifting Reply to NBCUniversal Media, LLC Opposition, MB Docket No. 10-56, at 1 (Aug. 30, 2012).

⁴⁵⁰ Opposition at 90 n.255.

⁴⁵¹ *Id.* at 247.

⁴⁵² Project Concord, Inc. v. NBCUniversal Media, LLC, *Order on Review*, 27 FCC Rcd.15109, 15115-16 ¶ 11 (2012).

dénouement of the dispute: Concord's vindication was illusory, as Concord had ceased to exist by the time it came.

Project Concord is just one example in a long line of disputes that shows Comcast as a particularly bad risk in the already risky arena of merger promises and conditions. Other examples include:

- ***Failing to fulfill promises to significantly expand service to low-income, rural and unserved areas.*** Comcast committed to expand broadband deployment to unserved areas, including rural communities, and to promote broadband adoption in low-income communities in *Comcast-NBCU*.⁴⁵³ As discussed above, Internet Essentials, Comcast's banner program for promoting the low-income broadband adoption and availability that Comcast promised in *Comcast-NBCU*, has been a disappointment, not the success Comcast alleges.⁴⁵⁴ And worse, it has been an effective tool for diverting the debate from the real problem—lack of competition for affordable, high-speed broadband Internet service.⁴⁵⁵
- ***Failing to fulfill net neutrality commitments.*** Comcast promised that it would not engage in unfair acts or practices that would hinder the ability of other MVPDs or OVDs to provide video programming online.⁴⁵⁶ Comcast even committed to abide by the Commission's net neutrality rules, including rules prohibiting unreasonable discrimination and a rule prohibiting discriminatory data caps.⁴⁵⁷ In practice, however, Comcast has exempted its own services from data caps while imposing them on other rival streaming services.⁴⁵⁸ Specifically, Comcast has applied data

⁴⁵³ *Comcast-NBCU Order*, 26 FCC Rcd. at 4333 ¶ 233.

⁴⁵⁴ *See supra* Section X.B.

⁴⁵⁵ *See* John Randall, *Comcast Profits from the Poor with Internet Essentials Deal*, Next New Deal: The Blog of the Roosevelt Institute (July 9, 2013), <http://www.nextnewdeal.net/comcast-profits-poor-internet-essentials-deal>.

⁴⁵⁶ *Comcast-NBCU Order*, 26 FCC Rcd. at 4275-76 ¶¶ 94-95, 4363.

⁴⁵⁷ *See id.* at 4275 ¶ 94; *see also* Final Judgment, *United States v. Comcast Corp.*, No. 1:11-cv-00106 (Sept. 1, 2011); Opposition at 85.

⁴⁵⁸ *See* Free Press, *Kneecapping the Future: Comcast's Unjustified Internet Caps and the Plan to Kill Video Competition*, https://www.freepress.net/sites/default/files/resources/Comcast%20New%20Caps%20Factsheet_FINAL.pdf.

caps to competitor OVD services including Netflix and Amazon, while allowing customers of its own streaming services to access content freely.⁴⁵⁹

- ***Failing to promote reasonably priced standalone broadband.*** Comcast committed to promote reasonably priced standalone broadband service as a condition of *Comcast-NBCU*.⁴⁶⁰ After a year-long investigation and the expenditure of taxpayer dollars and agency resources, the Commission found that Comcast had failed to even mention its standalone broadband service in mailings to many customers, did not make the service easy to find on its website, and did not offer the service at retail locations.⁴⁶¹
- ***Discriminating against unaffiliated programmers.*** Comcast specifically promised to ensure that NBC's news and public affairs programming was not influenced by the non-media interests of General Electric, and it more broadly assured the Commission that the new venture would "expand the amount, quality, variety and availability of content better than either Comcast or NBCU could do on its own."⁴⁶² Comcast has failed to increase local news and public affairs programming as promised; some reports even find that Comcast inflated its statistics to feign adherence to its promise.⁴⁶³
- ***Failing to honor the news neighborhooding condition.*** As DISH explained in its Petition, Comcast did everything it could to circumvent implementation of the simple and clear news neighborhooding condition for *more than three years*. Bloomberg's three-year ordeal ended only after Comcast decided to acquire TWC.⁴⁶⁴

This history demonstrates vividly that the Commission should not be persuaded by Comcast's now-familiar refrain.

⁴⁵⁹ John Eggerton, *Public Knowledge Officially Complains to FCC About Comcast/Xbox*, *Broadcast & Cable* (Aug. 1, 2012), <http://www.broadcastingcable.com/news/washington/public-knowledge-officially-complains-fcc-about-comcastxbox/60468?rssid=20065>.

⁴⁶⁰ *Comcast-NBCU Order*, 26 FCC Rcd. at 4362.

⁴⁶¹ Public Notice, Federal Communications Commission Resolves Investigation of Comcast-NBCU Broadband-Related Merger Conditions; Ensures Consumer Access to Reasonably Priced Broadband Service, MB Docket No. 10-56 (rel. Jun. 27, 2012) ("*NBCU Settlement Notice*").

⁴⁶² *Comcast-NBCU Order*, 26 FCC Rcd. at 4313-15 ¶¶ 181-184.

⁴⁶³ Corie Wright, *No News is Bad News: An Analysis of Comcast-NBCU Compliance with FCC Localism Conditions*, *Free Press* (May 2, 2011), <http://www.freepress.net/resource/88647/no-news-bad-news-analysis-comcast-nbcu-compliance-fcc-localism-conditions>.

⁴⁶⁴ See DISH Petition at 88-91.

XI. CONDUCT CONDITIONS WOULD BE INADEQUATE TO AMELIORATE THE MERGER'S HARMS

Even if Comcast had a record of perfect compliance with the *Comcast-NBCU* conditions, conduct conditions cannot come close to alleviating this merger's harms. The gatekeeper role that Comcast-TWC would perform thanks to its broadband access service would be complex. OVD sabotage can be achieved in many opaque and subtle ways. Comcast-TWC will have a choice of choke point and of technique: for example, discrimination against an OVD could easily elude scrutiny by attaching the label "interconnection" to it (or by actually using the interconnection choke point) and thus arguing that the net neutrality condition does not apply.

What is more, the blame for sabotage of an OVD can be disputed with relative ease due to the technical complexity of the gatekeeping function. Perhaps nothing shows this more than the Netflix degradation incident—the Opposition devotes many pages to showing that Netflix could have acted to avoid the congestion,⁴⁶⁵ and these pages are rife with phrases such as "traffic capacity augmentation," "alteration of the balance of mutual network value," and "route[] around the congestion point."⁴⁶⁶ Comcast attempts to further distract attention from itself to Netflix by accusing Netflix of using a "well-known 'Peering Playbook'" setting out aggressive tactics such as "Traffic Manipulation" and "Aggressive Traffic Buildup."⁴⁶⁷ But neither Comcast, nor the Peering Playbook it cites, provides any concrete definition or threshold for these subjective

⁴⁶⁵ Netflix did indeed form agreements with the five of the six primary providers of transit services to high-bandwidth customers in the United States in order to efficiently deliver requested traffic to its subscribers. *See supra* Section VI.

⁴⁶⁶ *See* Opposition at 208-23; McElearney Declaration ¶¶ 3-43.

⁴⁶⁷ Opposition at 222; McElearney Declaration ¶ 30.

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terms.⁴⁶⁸ Is it even possible to define these terms in a way that would bring closure to a dispute over the enforcement of a condition? And even if the regulators can anticipate and detect today's playbook and tactics, can they possibly envision and identify all possible future tricks that inevitably arise? And can they be confident of detecting such tricks? Can there be any serious doubt that a similar explanation will be offered by Comcast-TWC if there is another degradation episode after the merger, making for a long proceeding before responsibility is enforced? And can there be any serious doubt that, if Comcast-TWC violates a condition, the harm will have been done long before a finding that the condition was indeed violated?

The futility of conditions easily can be shown by listing the ways that Comcast-TWC can sabotage competing OVDs and MVPDs (most of which are subtle, complex, difficult to detect, and prone to litigation/protracted delays). The list is long. Among other things, a combined Comcast-TWC could:

- 1) Block OVD content at the last mile;
- 2) Slow down OVD content at the last mile;
- 3) Degrade the quality of OVD content at the last mile;
- 4) Increase specialized services lanes to curtail the speed of the public Internet;
- 5) Create fast lanes for Comcast-TWC services;
- 6) Artificially route OVD content through congested middle-mile facilities;
- 7) Create slow lanes for OVD content;

⁴⁶⁸ See DrPeering International, *The Art of Peering: The Peering Playbook*, <http://drpeering.net/white-papers/Art-Of-Peering-The-Peering-Playbook.html#13> (last visited Dec. 16, 2014).

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- 8) Refuse to open sufficient ports for OVD content at the point of interconnection;
- 9) Restrict the ability of OVD applications/services to work on Comcast-TWC's network;
- 10) Close ports to slow down OVD content at the point of interconnection;
- 11) Impose unreasonable terms on transport providers to gain sufficient access to Comcast-TWC's network;
- 12) Impose unreasonable terms on CDN providers to gain sufficient access to Comcast-TWC's network;
- 13) Demand unreasonably high rates on transport providers to gain sufficient access to Comcast-TWC's network;
- 14) Demand unreasonably high rates on CDN providers to gain sufficient access to Comcast-TWC's network;
- 15) Require OVDs to directly connect to Comcast-TWC's network;
- 16) Refuse to directly connect with an OVD while at the same time refusing to expand connections to transit providers and CDNs;
- 17) Impose less favorable terms of interconnection on transit providers that serve the most successful OVDs;
- 18) Impose data caps on OVD content;
- 19) Create data caps at a sufficiently low level to discourage OVD content usage by consumers;
- 20) Charge unreasonably high rates for customers who exceed data caps;
- 21) Exclude Comcast-TWC content from data caps, while subjecting competing services to the caps;
- 22) Exclude from the data caps OVDs who pay Comcast-TWC;
- 23) Restrict the ability of OVD applications/services to work on Comcast-TWC's set-top-boxes;
- 24) Demand unreasonably high rates for the ability of OVD applications/services to work on Comcast-TWC set-top-boxes;

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- 25) Favor or promote NBCU applications/services on Comcast-TWC set-top-boxes, to the detriment of competing applications/services;
- 26) Require competing OVD programming to be distributed through Comcast-TWC's cable MVPD service at below-market rates;
- 27) Refuse to provide third-party consumer devices access to linear content through a CableCard or non-CableCard security solution;
- 28) Refuse to allow third-party consumer devices to access the X1 VOD platform through a CableCard or non-CableCard security solution;
- 29) Use their dominance in broadband to subsidize video through bundled discounts to discourage customers from buying OVD services;
- 30) Use their dominance in broadband to subsidize video through bundled discounts to discourage customers from buying other competing video services;
- 31) Impose contractual restrictions on third-party content providers to limit OVD access to content;
- 32) Impose contractual restrictions that limit the ability of OVDs to gain preferential/equal "windowing" of content;
- 33) Impose contractual restrictions on third-party content providers to limit OVD access to "must-have" or marquee programming;
- 34) Impose contractual channel/bundling restrictions on third-party content providers to require OVDs to carry more channels than they otherwise would be required to;
- 35) Impose contractual restrictions on MVPDs seeking to provide OVD content that require these MVPDs to negotiate OVD and linear MVPD channel content at once;
- 36) Impose contractual restrictions on MVPDs seeking to provide OVD content that require these MVPDs to re-open existing linear contractual arrangements to negotiate for OVD content rights;
- 37) Refuse to offer long-term programming contracts, so that OVDs will persistently face uncertainty and be subject to the changing whims of Comcast-TWC;
- 38) Require favorable channel placement for Comcast-NBCU content on OVD platforms;

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- 39) Restrict the ability of third-party hardware providers to offer OVD applications/services;
- 40) Restrict the ability of third-party hardware providers to offer Comcast-NBCU content;
- 41) Refuse to allow Comcast-TWC video customers to authenticate on programmer video applications (for example, HBO Go);
- 42) Refuse to allow Comcast-TWC video customers to authenticate on programmer video applications (for example, Watch ESPN) on devices (for example, Roku) that also offer OVD applications/services;
- 43) Refuse to license Comcast-NBCU content to OVDs;
- 44) Impose unreasonable terms to license Comcast-NBCU content to OVDs;
- 45) Refuse to allow OVDs to advertise their products on NBCU channels;
- 46) Require the transit providers of major OVDs to “reserve” (and pay for) excess capacity on Comcast-TWC’s network;
- 47) Demand unreasonably high rates for carriage by OTT products in return for uncompromised access to Comcast-TWC’s subscribers;
- 48) Discriminate against online advertisers by either favoring certain online advertisers or blocking other online advertisers;
- 49) With deep packet inspection, identify users of competitive MVPD online services, such as on-demand services from satellite providers, and interfere or slow access to that content;
- 50) As the owner of FreeWheel, delay implementation of ad-insertion services for OVDs;
- 51) As the owner of FreeWheel, impose unreasonable terms on OVDs to get access to FreeWheel ad-insertion services;
- 52) As the owner of FreeWheel, interfere with ad insertion by OVDs; and
- 53) As the owner of FreeWheel, tie the FreeWheel product to exclusive Comcast-NBCU content arrangements.

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In short, neither the Applicants' commitments nor Commission-imposed conditions will be adequate to mitigate the harm to consumers, competition, and innovation that would result from the merger.

XII. CONCLUSION

This proposed merger threatens serious harms, and the Applicants' benefits cannot begin to offset them. It will leave the video and broadband marketplace with a monstrously large entity that has the ability and incentive to hurt consumers and competitors at will. The harms of the transaction cannot be remedied by conditions. The transaction must therefore be denied.

Respectfully submitted,

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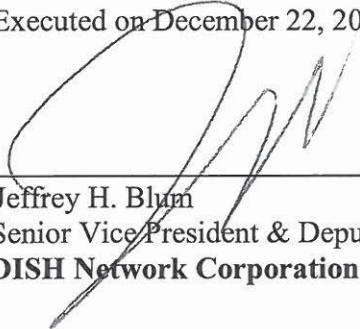
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December 22, 2014

DECLARATION

The foregoing has been prepared using facts of which I have personal knowledge or upon information provided to me. I declare under penalty of perjury that the foregoing, except for those facts for which official notice may be taken and those that other parties have submitted to the Federal Communications Commission confidentially under the protection of the *Protective Orders* in MB Docket No. 14-57, is true and correct to the best of my information, knowledge and belief.

Executed on December 22, 2014.



Jeffrey H. Blum
Senior Vice President & Deputy General Counsel
DISH Network Corporation

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EXHIBIT A:

REPLY DECLARATION OF ROGER LYNCH

Roger J. Lynch

DECEMBER 22, 2014

REDACTED FOR PUBLIC INSPECTION

DECLARATION OF ROGER J. LYNCH

1. I, Roger J. Lynch, being over 18 years of age, swear and affirm as follows:

2. I make this declaration based upon personal knowledge, information, and belief, and in support of the submission of DISH Network Corporation (“DISH”) to the Federal Communications Commission (“FCC”) in connection with the FCC’s review of Comcast Corporation’s (“Comcast’s”) proposed acquisition of Time Warner Cable (“TWC”).

3. I am currently Executive Vice President, Advanced Technologies and International Group for DISH. Prior to joining DISH, I served as Chairman and CEO of Video Networks International, Ltd., an IPTV company in the United Kingdom that delivered live and on demand television over its own DSL network. Prior to that, I was President and CEO of Chello Broadband, a cable broadband ISP with operations in ten countries across Europe.

4. In my role at DISH, I am overseeing the rollout of our digital products, including DISH’s stand-alone over-the-top (“OTT”) service for foreign language consumers, called DISH World; and DISH’s new, forthcoming domestic standalone OTT service. In this role, I regularly review key data points for all of DISH’s products and services, including our churn rates. I have also come to understand the difficulties associated with the choke point that occurs at the point of interconnection with large Internet access providers, such as Comcast and Time Warner Cable, the importance of digital advertising services to the economic success of an OTT video product, and the emerging state of competition among online video distributors (“OVDs”). The proposed merger between Comcast and Time Warner Cable will undermine the public interest in each of these three areas.

DISH Churn Rates

5. For the years 2011-2014, the voluntary churn rates for DISH’s subscription Direct Broadcast Satellite (“DBS”) television service ranged from a low of {{ }} on a monthly basis. Annually, the monthly churn rate for those years averaged between {{ }}.

Interconnection

6. Based on my experience, Comcast has absolute and exclusive control over the ability of any peer, transit provider, or content delivery network (“CDN”) to transmit traffic onto Comcast’s network—including traffic specifically requested by a Comcast customer.

7. Interconnection with Comcast—either directly through an agreement with Comcast or indirectly through a transit or CDN provider, which itself must have an agreement with Comcast—is necessary to provide a high-quality video service to Comcast’s broadband customers.

8. Further, negotiating separate agreements with multiple transit providers takes time and money, meaning that switching routes to avoid congestion would require an OVD to reserve capacity on multiple settlement-free routes—significantly expanding the costs of transit to Comcast’s network.

Digital Advertising

9. Based on my experience, I believe that a combined Comcast/Time Warner Cable would harm emerging Internet-delivered, OTT video competition through combining its large market share in residential, high-speed broadband with its market dominance in the monetization of OTT video and the fulfillment of online digital advertising. To understand why, one first must understand how digital, online web-based advertising technology and business practices operate

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today. The simplest example is a banner advertisement on a static website, viewed on a PC, mobile phone, tablet, or other electronic device. When a consumer views a website with space for a banner advertisement, the website's host server sends out a signal to a specific advertiser's server. That second server sends back a static, visual banner advertisement (usually a small, 15KB file containing creative graphic art) and the consumer sees the website appear on the screen with the banner advertisement in place. All of this occurs in a fraction of a second, so that the consumer sees no delay between the website appearing on the screen and the banner advertisement placed within that website.

10. The same general process applies to a banner advertisement that uses full-motion video, except that the video advertising file is much bigger and the rights-clearance process is much more complex. In order to make a video banner advertisement appear simultaneously with the opening of the website, advertisers deploy edge servers and other technology to achieve sufficient speed. They also must clear the video rights in the advertisement, which usually means confirming that the content is not subject to territorial, exclusivity, or other content restrictions typical to the traditional television video market, and that any applicable licensing fees have been paid.

11. Simultaneously with the ad-delivery process described above, advertisers and those selling advertising inventory deploy sophisticated targeting algorithms to deliver advertisements to the most valuable audience. "Cookies," or short bits of computer code that show where the consumer previously navigated on the Internet, allow advertisers to determine who might be most interested in a particular product. For example, if I have just visited a website about car prices, I am likely to be in the market for a new car. Automotive advertisers therefore will pay a premium to put their advertisements in front of me at that moment.

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12. Combining the targeting algorithm and ad-serving processes described above, when a website with advertising inventory sends out its signal to deliver an advertisement, rather than ping one server, the call goes to multiple servers at multiple advertisers. The host website will then pick the one willing to pay the highest rate (cost per thousand impressions, or “CPM”). This is the business that companies like Doubleclick have been in for years—optimizing online ad-sales revenues for online vendors of advertising inventory and optimizing targeting for advertisers.

13. Professional-quality OTT video requires a sophisticated application of the technological, targeting, and rights-clearance functions described above. Just as a website can have advertising inventory and fill it with the highest-paying ads, so can a professional-quality OTT video content product. The process of filling the OTT video advertising inventory with full-motion video advertising, however, is many multiples more complex than filling a static website ad space with a static banner ad.

14. With this technological backdrop, we can turn to how FreeWheel, a Comcast-owned ad-decisioning/ad-serving company, dominates the OTT video advertising fulfillment market. Given the technological, targeting, and rights-clearance complexities involved with serving a video advertisement within professional OTT video content, FreeWheel has established itself as the market leader for fulfilling OTT video and banner advertising.

15. As the company’s website explains:

FreeWheel helps the largest players in the television industry generate revenue from their ad-supported content through a robust technology platform for ad management and monetization, a private marketplace for premium television inventory, and advisory services. [Clients] profitably monetize their professional content on desktop, mobile, OTT, and traditional STB devices.

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16. FreeWheel's service is very important to OTT video because advertising revenue in that space plays an even larger role than in traditional pay-TV. Unlike a typical, mature cable network channel that derives roughly half of its revenue from per-subscriber licensing fees and half from advertising, an OTT programming provider will make a higher percentage of its revenues from advertising sales. Unlike cable or satellite, the OTT video market presents fewer technological or capital barriers to entry, which will serve to compress margins on the distribution side of the business. OTT providers do not – and likely will not – receive large per-subscriber subscription fees akin to what traditional linear programmers receive today. Advertising sales therefore are that much more important to OTT video.

17. DISH Digital encounters FreeWheel and its clients regularly. We have developed and are expanding our OTT products. When we stream OTT video programming, we often have the right to insert our own advertising that we have sold against that inventory. This is analogous to what happens in the traditional, linear pay-TV business; a programmer will license its content to us and include advertising inventory (e.g., four 30-second spots per hour) that we can fill with content from advertisers who have paid us. FreeWheel almost always is the ad-decisioning service of choice for fulfilling the online ad insertions.

18. In my opinion, FreeWheel controls at least 80% of the market for OTT video advertising placement, perhaps more. Our experience at DISH Digital supports such a conclusion. We interact with all major television programmers and most niche programmers. To date, only two programmers with whom we do business, {{ }} do not use FreeWheel for Internet-based digital video advertising fulfillment. FreeWheel has become the *de facto* industry standard. In a competitive market, we would ask for bids from multiple

vendors. In this particular market, especially given that the vast majority of programmers already use FreeWheel, we feel compelled to use the FreeWheel service.

19. Given FreeWheel's market dominance, its access to consumer data is unmatched. FreeWheel "sees" almost every piece of relevant consumer data flowing through its servers, and knows which of the ads they facilitate are delivered to which users. It possesses a vast reservoir of data that advertisers want. The owner of such consumer data has tremendous leverage to determine how the data may be used and who may have access to it, particularly if the data is Internet-based. The relatively unrestricted ability of Internet data owners, like FreeWheel, to leverage that database is significant.

20. We were on the cusp of entering a long-term agreement with FreeWheel when the company was acquired by Comcast in March 2014. Given the affiliation with Comcast, combined with the power associated with FreeWheel's *de facto* industry standard status and access to proprietary consumer data, we nearly decided against entering such an agreement, but ultimately had no other attractive choices given its market dominance. Comcast is in the video distribution market today as a traditional, linear pay-TV programming provider. DISH competes with Comcast in that market. Even today, we are concerned about Comcast collecting a vast amount of consumer data, including that of our own customers, and believe it could give Comcast a unique advantage among our competitors to take market share from us in the traditional pay-TV video market.

21. Comcast is also aggressively pursuing the OTT video distribution market, as evidenced by its X1 product, which easily could be transformed into an OTT service available nationwide. DISH similarly is entering the OTT market, as shown by our DISH World product and our recently announced forthcoming domestic OTT service. Here, too, we believe that our

competitive position would be compromised if Comcast were able to deploy its vast collection of consumer data culled from FreeWheel's advertising-fulfillment activities.

22. Moreover, Comcast today controls a significant percentage of the high-speed residential broadband subscriptions (25 Mbps and above) in the U.S., making it uniquely positioned to distribute OTT video. This means several things. First, because only high-speed broadband connections can support OTT video consumption comparable to HD cable or satellite TV today, Comcast's broadband network will deliver a disproportionately large share of total OTT video consumption nationally. Comcast's FreeWheel service, the *de facto* industry standard, therefore will help Comcast to monetize that OTT video volume.

23. Second, any online advertiser seeking a national audience is highly likely to encounter Comcast broadband en route to the consumer. Suppose Kraft Foods introduces a new macaroni and cheese product. It knows that people with children ages 6-11 are likely to buy the product and want to target those consumers. Kraft would want to make a digital advertising buy on the Internet. It would have several options to fulfill that purchase: buy from an ad network, particular site, or specific video programmer, among others. If Comcast controls a significant proportion of broadband households, crossing not just multiple regions but, more important, a wide variety of demographic sub-groups that advertisers want to target, and through FreeWheel controls 80% or more of all digital online ad insertion, Kraft would inevitably have to deal with Comcast. In fact, the digital advertiser nationally probably would be unable to avoid Comcast for a significant percentage of its digital ad purchase.

24. Third, using deep packet inspection ("DPI") and other technology, Comcast's broadband access product could enhance the consumer data available to Comcast and, by extension, users of FreeWheel's service.

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25. Putting all these elements together leads me to conclude that high market share in residential broadband equates to more control over video advertising monetization, and the combination of both broadband and ad-monetization equates to control over the emerging OTT video market. I believe that Comcast realizes, as DISH does, that more and more video will migrate to Internet-based, OTT delivery. I further believe that Comcast wants to be the monetization solution for the majority of that video content, as well as the residential broadband solution of choice—to control the delivery of video via broadband and the monetization of that video.

26. The proposed Comcast/Time Warner Cable merger exacerbates the OTT video market dominance problem. The combination of Comcast's market power in the OTT video advertising fulfillment market and its post-merger market share in high-speed residential broadband access will harm competition in the OTT video market. With at least a 50% market share in high-speed residential broadband post-merger, Comcast-TWC's ability to leverage its gatekeeper position in access to residential broadband households consuming OTT video, and OTT video ad-monetization would enable it to thwart or even destroy DISH's and others' ability to compete in the emerging OTT video space.

27. Comcast-TWC could deploy myriad anti-competitive tactics, leveraging its dominance in residential high-speed broadband and OTT video monetization to diminish or destroy competition from OTT providers. For example, in dealing with "must-have" programming providers, Comcast-TWC could tie the FreeWheel product to exclusive content arrangements that no other OTT provider could match, so that Comcast-TWC's OTT service would be the only one offering key content. Comcast-TWC could condition programmers' access to its vast share of residential broadband connections nationwide and its industry-standard

OTT video monetization service on exclusive content offerings on Comcast-TWC's OTT service, rendering competing OTT services to second class status in the market. Comcast-TWC could combine its data sets from FreeWheel and its residential broadband subscribers to offer an unmatched data set available only to advertisers who favor Comcast-TWC's OTT service over the competition. In all of these instances, the increased leverage from combining Comcast's and TWC's high-speed residential broadband market share with the *de facto* industry standard status of FreeWheel would make OTT competition significantly more difficult post-merger than it is today. In my opinion, it could pose a mortal threat to DISH and others' emerging OTT services.

Competition Between Comcast and TWC

28. Comcast and TWC claim that they have no plans to compete with each other in the OVD market, suggesting such claims are "entirely speculative." Before the merger, however, we believed that both would enter the OTT marketplace on a national level going well beyond their current footprints.

29. Both Comcast and TWC have both independently developed or are developing Internet-delivered service offerings that are or will become available. After the OTT service is developed, it is only a small leap from the initial investment in such a service to the incremental and relatively minor investment needed to export it outside each cable operator's footprint, in large part because there is no substantial additional physical infrastructure to be deployed for an OTT service. This stands in contrast to the substantial physical infrastructure required for a cable system or a satellite network to expand into new territories.

30. Furthermore, subscriber acquisition costs are lower for OVD than for MVPD services.

31. Finally, as national OVDs become more of a threat to Comcast and TWC, it is reasonable to expect that the two cable operators will try to undermine that threat outside their own cable footprint and not only inside it. This would be moreover in line with industry trends.

DISH's Proposed OTT Service

32. DISH plans to launch a new domestic OTT service in the near future. In assessing the likely returns from this new service, we prepared projections of the revenues a new OTT service would generate and the associated costs of supplying the new service. We based these projections on our experience with our foreign language OTT service, DISH World, and the knowledge gained in preparing to launch our domestic OTT service.

33. DISH typically employs its revenue and cost projections to estimate the annual profit the project will generate for at {{ }}. Furthermore, DISH typically will only pursue a project with the risk profile of OTT if the net present value ("NPV") of the profit it is expected to generate during the {{ }} of its operation is positive. The financial projections presented in Table 1 (attached to this declaration) permit an assessment of the {{ }} of the profit DISH anticipates from a new domestic OTT service under different assumptions about access to the nation's high-speed broadband subscribers.

34. Table 1 provides our financial projections for the case where the service has uncompromised access to all U.S. broadband subscribers with downstream speeds of at least 25 Mbps. Our projections for our OTT service include an initial customer base of {{

}} during the year the domestic OTT service is introduced (i.e., at the start of "Year 1"). These customers are individuals who currently subscribe to DISH's international OTT service, DISH World.

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35. DISH estimates that a new OTT service could attract an {{ }} during its {{ }}. This estimate reflects DISH's experience with DISH World and the experience of providers of services with similar financial profiles.

36. DISH estimates that the new OTT service will exhibit {{ }} customer churn, reflecting common industry experience with new services (including DISH World). In particular, DISH estimates that {{ }} will discontinue their subscriptions each year. This customer churn is projected to result in {{ }} subscribers discontinuing their subscriptions ("disconnects") during Year 1. The estimated inflow of {{ }} new subscribers and outflow of {{ }} terminating subscribers results in a net addition of {{ }} subscribers during Year 1. The sum of the {{ }} beginning-of-period subscribers and the net addition of {{ }} subscribers results in {{ }} subscribers at the end of Year 1 (and thus at the beginning of Year 2). The average number of subscribers during Year 1 {{ }} is the average of the number of subscribers at the beginning of Year 1 {{ }} and at the end of the year {{ }}.

37. The revenue a new OTT service could secure in Year 1 is the product of the average number of subscribers during the year {{ }} and the estimated variable contribution margin per subscriber. This margin {{ }} is calculated as follows. DISH estimates an average monthly revenue of {{ }} per subscriber. This revenue includes payments for basic subscriptions and add-on services, as well as revenues from advertisers. Two types of costs are subtracted from this monthly average revenue per subscriber to arrive at an average monthly variable contribution margin per subscriber. The first cost is the cost of programming content, which is estimated to be {{ }} per subscriber per month. The second

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cost reflects monthly service and delivery costs, which include credit card fees, personnel costs for customer call centers, and content delivery (e.g., broadband transport) costs. This second cost is estimated to be {{ }} per customer per month. The resulting estimated monthly variable contribution margin for established customers is {{ }} per subscriber, which translates into an annual variable contribution of {{ }} per subscriber. The associated estimated total variable contribution from all subscribers in Year 1 is {{ }}.

38. Variable contribution is derived from established subscribers. These subscribers are costly to attract. Subscriber acquisition costs are estimated to be {{ }} per subscriber in Year 1. These costs consist of advertising expenses {{ }}, the cost of equipment that is sold to new customers at below-cost prices {{ }}, and the expense associated with promotional discounts afforded to new customers {{ }}. Total subscriber acquisition costs in Year 1 are {{ }}, which is the product of the {{ }} per subscriber cost and the {{ }} new customers in Year 1.

39. Considerable engineering and information technology resources are required to launch, maintain, and continually improve the new OTT service. The resources are required, for example, to ensure that the new service is seamlessly integrated with device and programming partners. The associated personnel, capital, and maintenance costs are estimated to be {{ }} in Year 1. Additional legal and managerial costs are expected to be {{ }}.

40. The pre-tax cash flow identified in the bottom row of Table 1 is the difference between variable contribution and the sum of subscriber acquisition costs and additional operational costs. DISH expects to incur a {{ }} on its new OTT service in Year

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1 even when it enjoys uncompromised access to all relevant broadband subscribers. The estimated {{ }} reflects the relatively small subscriber base, the high subscriber disconnect rate, and the substantial subscriber acquisition costs in Year 1.

41. DISH anticipates {{ }} in Year 2 due in part to pronounced subscriber acquisition costs, a relatively high number of disconnects and an expanding, but still fairly small, subscriber base. As the second column of data in Table 1 indicates, DISH anticipates that {{ }} new customers would subscribe to a new OTT service in Year 2, while {{ }} subscribers will discontinue their subscriptions during Year 2. This inflow of new subscribers and outflow of existing subscribers will leave the new service with {{ }} subscribers on average during Year 2.

42. These subscribers are expected to generate {{ }} in variable contribution in Year 2. This projection assumes the variable contribution margin per subscriber will remain at {{ }} throughout the time period considered in Table 1. A constant margin is assumed as an approximation of the net impact of increasing revenues (due in part to increasing subscription fees) and increasing variable costs (including increasing programming content costs and content delivery costs).

43. For simplicity, subscriber acquisition costs are also assumed to be constant at {{ }} per subscriber during the period considered in Table 1. At {{ }} per subscriber, DISH anticipates total subscriber acquisition costs of {{ }}.

44. DISH projects that additional operational costs will increase by {{ }} annually throughout the period covered in Table 1. This increase reflects anticipated escalation

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of resource costs and the ongoing need to ensure the seamless integration of the new OTT service with an ever-expanding set of device and programming partners. The estimated {{ }} increase implies that additional operational costs in Year 2 will be {{ }}.

45. On balance, DISH anticipates {{ }} on a new OTT service during the second year of its operation.

46. The calculations for the later years in Table 1 parallel the calculations for Years 1 and 2. As Table 1 indicates, DISH anticipates {{ }} year of operations. DISH then anticipates positive and increasing pre-tax cash flows (profits) in subsequent years. Using a {{ }} discount rate, the NPV of the identified {{ }} series of financial losses and financial gains is {{ }}. Because this {{ }} NPV of expected profit is positive, DISH would proceed with the project if it anticipated uncompromised access to all relevant U.S. broadband subscribers.

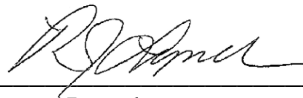
47. The prospects for DISH's new OTT service become less attractive when DISH is unable to secure uncompromised access to a substantial fraction of relevant broadband subscribers and may prevent us from moving forward with the project, especially if the {{ }} NPV of expected profit would turn from positive to negative. Professor David Sappington addresses the effect on the expected {{ }} NPV of expected profit when the service is denied access to either or both Comcast and TWC subscribers.

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* * *

The foregoing declaration has been prepared using facts of which I have personal knowledge or based upon information provided to me. I declare under penalty of perjury that the foregoing is true and correct to the best of my information, knowledge, and belief.

Executed on December 22, 2014.



Roger Lynch
Executive Vice President
Advanced Technologies and International Group
DISH Network Corporation

Table 1

DISH Customer and Financial Projections for OTT Service

Redacted in its entirety.

EXHIBIT B:

REPLY DECLARATION OF PROFESSOR DAVID SAPPINGTON

Professor David Sappington

DECEMBER 22, 2014

REPLY DECLARATION OF PROFESSOR DAVID SAPPINGTON

I, David Sappington, being over 18 years of age, swear and affirm as follows:

I. INTRODUCTION

Qualifications

1. My name is David Sappington. I hold the titles of Eminent Scholar in the Department of Economics and Director of the Robert F. Lanzillotti Public Policy Research Center, both at the University of Florida.
2. Since earning my Ph.D. in economics from Princeton University, I have served on the faculties of the University of Michigan and the University of Pennsylvania and on the technical staff of Bell Communications Research. I have also served as the Chief Economist for the Federal Communications Commission and as the President of the Industrial Organization Society. I presently hold positions on the editorial boards of six major journals, including the *Journal of Regulatory Economics*, the *Rand Journal of Economics*, the *Review of Network Economics*, and the *Journal of Economics and Management Strategy*.
3. My research focuses on the optimal design of incentive structures, with particular emphasis on the design and implementation of regulatory policy. I have published more than one hundred and fifty articles in leading journals in the profession and have coauthored a book on *Designing Incentive Regulation for the Telecommunications Industry*.

Purpose of this reply declaration

4. The primary purpose of this reply declaration is to address five of the major deficiencies in the reports of the economic experts in the Applicants' *Opposition to Petitions to Deny and Response to Comments*.¹ This declaration also provides a case study that reflects the experience of DISH Network Corporation ("DISH") with over-the-top ("OTT") services, including the foreign-language *DISH World* service and the new domestic OTT service that DISH hopes to

¹ Comcast Corporation and Time Warner Cable Inc. ("the Applicants"), *Opposition to Petitions to Deny and Response to Comments*, In the Matter of 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, September 23, 2014 ("Applicants' Response").

launch in the near future. The case study helps to illustrate how the proposed merger of Comcast Corporation (“Comcast”) and Time Warner Cable (“TWC”) would threaten innovation by online video distributors (“OVDs”), and thereby harm consumers of OTT services.

5. The first and most striking deficiency in the reports of the economic experts is the absence of any analysis of the Applicants’ own subscriber churn data. In retrospect, it is not difficult to understand why this analysis was not conducted (or at least not reported). The analysis fatally undermines the Applicants’ repeated claim that they have no incentive to sabotage the operations of OVDs.² The analysis demonstrates that Comcast experienced {{ during or after the period in which Netflix’s traffic was slowed on Comcast’s network. Consequently, the Applicant’s repeated claim that they have no incentive to sabotage OVDs because such sabotage would substantially increase the churn of their broadband subscribers is without merit.

6. The second deficiency in the experts’ reports is the failure to acknowledge the substantial consumer harm that can arise when an internet service provider (“ISP”) secures substantial leverage over OVDs, even if the leverage is not employed to foreclose OVDs.³ The experts assert that there are conditions under which even an ISP that controls access to a large share of the nation’s high-speed broadband subscribers will eventually forge an agreement to provide the access that is vital to an OVD’s success. This observation fails to consider the chilling effect on innovation and the associated consumer harm that can arise when the ISP employs its dominant position to extract the lion’s share of the surplus created by the OVD’s product.

7. The third deficiency in the reports of the economic experts is their narrow view of the relevant geographic market and their associated claim that the high proportion of the nation’s high-speed broadband subscribers that the Applicants serve is irrelevant in this proceeding. This fraction is highly relevant because it provides a useful measure of the leverage that the combined

² Sabotage can be viewed as a deliberate attempt to degrade the quality of an OVD’s video service, as perceived by the broadband subscriber. See David Sappington, “The Anticompetitive Effects of the Proposed Merger of Comcast and Time Warner Cable,” Exhibit B in *Petition to Deny of DISH Network Corporation*, MB Docket No. 14-57, Filed August 25, 2014 (“Sappington Declaration”).

³ The experts also improperly dismiss the possibility that a combined Comcast-TWC might foreclose an OVD and supply an OTT service itself. In addition, the experts assert without proof that the prospect of selling NBCUniversal programming to OVDs will deter Comcast-TWC from foreclosing OVDs.

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Comcast–TWC would hold over OVDs due to the new company’s substantial control over access to broadband subscribers.

8. The fourth deficiency in the experts’ reports is the questionable interpretation of evidence to support an argument that DSL and high-speed cable broadband service belong in the same relevant product market. In fact, the experts have failed to demonstrate that the independent supply of DSL constrains the pricing of high-speed cable broadband service.

9. The fifth deficiency in the experts’ reports is the suggestion that, absent the proposed merger, Comcast and TWC are unlikely to serve as competing suppliers of OTT services in the near future. Basic economic considerations suggest that Comcast and TWC would likely serve as independent, competing suppliers of OTT services if the merger is denied. Consequently, the merger likely would reduce future competition in the supply of OTT services.

10. The case study based on DISH’s OTT experience illustrates the dire economic straits an OVD would face if it were unable to secure access to both Comcast’s and TWC’s high-speed broadband subscribers. The case study thereby helps to demonstrate how the proposed merger would limit innovation by OVDs and so would harm consumers of OTT services. The case study also provides evidence that there is a relevant national geographic market. In particular, access to Comcast’s high-speed broadband subscribers and access to TWC’s high-speed broadband subscribers are substitutes for OVDs that seek to reach viewers nationwide. Consequently, the case study helps to explain why a complete analysis of the potential harms from the proposed merger of Comcast and TWC requires an assessment of the share of the nation’s high-speed broadband subscribers that each of these ISPs serves.

11. The discussion of this case study and the five deficiencies in the reports of the Applicants’ economic experts proceeds as follows. Section II demonstrates that Comcast’s churn data fatally undermine the Applicants’ assertion that they have no incentive to sabotage OVDs. Section III reviews the consumer harm that can arise even if a powerful ISP chooses not to foreclose OVDs. Section IV further explains the value of analyzing the shares of the nation’s broadband subscribers that Comcast, TWC, and other ISPs serve. Section V explains why the experts’ claims that DSL and high-speed cable broadband belong in the same relevant product markets are, at best, not compelling. Section VI explains why the proposed merger likely would reduce future competition in the supply of OTT services. Section VII presents a case study of a

nascent OVD service reflecting DISH's experience with its foreign language service, DISH World, and DISH's planning for its domestic OTT service. Section VIII concludes.

II. Slowed OVD Traffic Has {{ }} Comcast's Customer Churn.

12. Comcast has contended throughout this proceeding that it has no incentive to sabotage OVDs. Comcast argues that such sabotage would cause its high-speed data ("HSD") customers to discontinue their broadband service with Comcast, and thereby reduce Comcast's profit.⁴

13. If Comcast's contention had merit, it would seem that Comcast could readily prove its claim by documenting a substantial increase in the churn of its HSD customers during the period when Netflix's traffic was slowed on Comcast's network. Yet Comcast documents only an increase in customer calls to its service centers during this period. Comcast is strangely silent on the question of whether these angry customers actually terminated their HSD service with Comcast.

14. Comcast's silence on this important question seems surprising, given that Comcast has ready access to the data that can answer this question. Now that these data have been made available to others, though, the reason for Comcast's silence is apparent. The data provide no support whatsoever for Comcast's claim. To the contrary, the data provide strong evidence that Comcast can sabotage OVDs with virtual impunity. The data reveal that Comcast experienced {{ }} during or after the period in which Netflix's traffic was slowed on Comcast's network. Thus, the best available empirical evidence makes it clear that Comcast's persistent claim that it has no incentive to sabotage OVDs is without merit.⁵

⁴ To illustrate, Dr. Israel asserts that "if ... Comcast attempted and managed to degrade edge provider access significantly, customers would react in a wide range of ways that would impose substantial costs on Comcast" (Mark Israel, "Economic Analysis of the Effect of the Comcast-TWC Transaction on Broadband: Reply to Commenters," Exhibit 1 in Applicants' Response ("Israel Reply"), ¶57). The alleged reactions include switching to "alternative high-speed, wireline ISPs" and "downgrad[ing] or even cancel[ing] broadband service altogether" (Israel Reply, ¶62).

⁵ The ensuing discussion of this empirical evidence summarizes extensive analysis performed by the Brattle Group. This analysis employs data that Comcast has provided in response to the Commission's data request.

15. The complete lack of support for Comcast's claim can be demonstrated very simply. Figure 1 presents the churn rates for Comcast's HSD {{ }} customers⁶ between July 2013 and June 2014,⁷ and compares these rates with the corresponding rates one year earlier.⁸ If Comcast truly faced any serious risk that its customers would discontinue their HSD subscriptions in response to its sabotage of OVDs, {{

}}.

16. Thus, Figure 1 indicates that churn rates generally were {{ }} in 2014 than in 2013 {{

⁶ Comcast's HSD {{ }} customers include all of Comcast's {{

}}. As of June 2014, Comcast served approximately {{ }}. {{ }} may often have a greater choice among HSD suppliers than {{ }}, so the ensuing analysis will focus on the churn rates of Comcast's {{ }} customers. However, all of the qualitative conclusions drawn below persist if the churn rates of {{ }} are considered. The appendix provides information on the churn rates of Comcast's {{ }} customers.

⁷ The monthly churn rate is the ratio of the number of relevant customers who disconnect from Comcast (i.e., discontinue their customer relationship with Comcast) in the specified month to the total number of relevant customers that Comcast serves that month.

⁸ Comcast's customer churn data exhibits {{ }} (see Figure A1 in the appendix to this declaration). {{

⁹ The average speed of Netflix's traffic on Comcast's network is presented in Figure A2 in the appendix to this declaration. This data is derived from <http://ispspeedindex.netflix.com/usa>.

}}. During the periods when Netflix's traffic was slowed considerably, the 2014 churn rates were {{ }} to the corresponding 2013 churn rates.¹⁰

{{

}}

17. In summary, Figure 1 provides {{

}}.

¹⁰ Note also that churn rates {{ }}. Thus, there is {{ }} that Comcast's customers discontinued their HSD subscriptions in the months following the slowing of Netflix's traffic on Comcast's network.

18. Econometric analysis similarly provides {{ }}. This more general conclusion is readily illustrated by considering a relatively simple regression. In this regression, the dependent variable is C_t , the rate of churn of Comcast’s HSD {{ }} customers in month t . The explanatory variables are: (i) C_{t-12} , the corresponding churn rate twelve months earlier; (ii) a constant; (iii) a time trend; and (iv) a “sabotage” variable. The time trend, T_t , takes the value 1 in the first month in the sample and increases by 1 in each successive month. This variable is introduced to control for trends in Comcast’s churn rates {{ }}.

19. The sabotage variable, S_t , is a dummy variable that indicates whether Netflix’s average speed on Comcast’s network was less than 2 Mbps during month t . S_t takes on the value 1 in November 2013 through February 2014, and is 0 in all other months in the sample.¹¹ The resulting regression equation is:¹²

$$\{\{ \hspace{15em} \}\}$$
$$\{\{ \hspace{15em} \}\}$$

20. Equation (1) provides {{ }}. In fact, {{ }} indicates that, after accounting for overall trends and {{ }} in the data, the churn of Comcast’s HSD customers {{ }} during the period in which Netflix’s traffic was slowed on Comcast’s network.¹³ Thus, even when “Comcast experienced a surge in Netflix-

¹¹ The sample period{{ }} is the period for which Comcast has supplied customer churn data.

¹² p values appear below the coefficient estimates in equation (1) (and in equations (2) and (3) below). The R^2 for this regression is {{ }}.

¹³ {{ }} the work of Comcast’s customer service representatives may warrant consideration in this regard. When customers called Comcast’s customer service centers to complain about the slow speed of Netflix’s traffic, Comcast’s service representatives may have been able to convince customers that Comcast was not responsible for the slow speed. Conceivably, the representatives might also have employed the customer contact as an opportunity to encourage customers to renew, extend, or upgrade their contracts with Comcast.

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related customer-service calls with customers complaining about Comcast's broadband service,"¹⁴ few{{ }} of these angry customers left Comcast.

21. {{ }} in those geographic regions where many of Comcast's customers can obtain broadband internet access from AT&T or Verizon, two leading alternative suppliers of broadband service.¹⁵ Figure 2 compares the monthly churn rates for Comcast's HSD primary residential customers in: (i) all of the {{ }} zip codes in which Comcast serves HSD customers; (ii) the {{ }} of these zip codes in which AT&T and/or Verizon offer DSL or FTTP broadband service; and (iii) the {{ }} of these zip codes in which AT&T and/or Verizon offer FTTP broadband service.¹⁶ Figure 2 reveals that the churn rates in these "competitive" regions – where many consumers who were dissatisfied with Comcast's service could conceivably secure broadband service from AT&T or Verizon¹⁷ – are {{ }} the churn rates throughout Comcast's operating territory.¹⁸ Most importantly, {{ }} during the period when Netflix traffic was slowed on Comcast's network.

¹⁴ Israel Reply, ¶56.

¹⁵ In its reply to the Commission's data request, Comcast reports customer churn by zip code, and specifies whether AT&T or Verizon supplies DSL or fiber-to-the-premise (FTTP) broadband service in each zip code.

¹⁶ Verizon provides FTTP broadband service in {{ }} of these zip codes. AT&T provides FTTP broadband service in {{ }} of these zip codes.

¹⁷ The fact that a company provides broadband service in a zip code does not imply that the service is available to every household in the zip code.

¹⁸ It is interesting to note that Comcast's customer churn rates typically {{ }} in zip codes where AT&T and/or Verizon offer FTTP broadband service in Comcast's operating territory.

{{

}}

22. Econometric analysis confirms that Comcast {{
}} due to the reduced speed of Netflix traffic on Comcast's network even in those zip codes where AT&T and/or Verizon provide broadband service. Equation (2) is the counterpart to equation (1) when the sample only includes Comcast customers in the {{ }} zip codes where AT&T and/or Verizon supply broadband service in Comcast's operating territory. Equation (3) is the counterpart to equation (1) when the sample only includes Comcast's

customers in the {{ }} zip codes where AT&T and/or Verizon supply FTTP broadband service in Comcast's operating territory.¹⁹

{{

}}

23. Equations (2) and (3) suggest that, even in those regions where many of Comcast's customers can obtain broadband internet access from AT&T and/or Verizon, Comcast {{ }} due to the reduced speed of Netflix traffic on Comcast's network. To the contrary, {{ }} on the coefficient of the sabotage variable, S_t , indicates that, after accounting for overall trends and {{ }} in the data, the churn of Comcast's HSD customers in these competitive regions {{ }} during the period in which Netflix's traffic was slowed on Comcast's network. Thus, the available data fatally undermine Comcast's claim that it would experience a significant increase in customer churn if it sabotaged OVDs, even if attention is restricted to regions in which such increased churn seems particularly likely to arise.

24. The presumed relationship between OVD sabotage and customer churn that underlies equations (1) – (3) is not the only plausible such relationship. Alternative formulations of this relationship are reviewed in the appendix to this declaration. Importantly, none of these formulations support Comcast's contention that it risks a significant increase in customer churn if it sabotages OVDs. Therefore, it is reasonable to conclude that, for the reasons explained in detail in my original declaration, Comcast does indeed have substantial incentive and ability to sabotage OVDs. Furthermore, the proposed merger would increase Comcast's incentive and ability to sabotage OVDs and thereby stifle industry innovation and harm consumers.²⁰

¹⁹ The R^2 for the regression in equation (2) is {{ }}. The R^2 for the regression in equation (3) is {{ }}.

²⁰ Sappington Declaration, ¶¶26-79.

25. This striking empirical evidence also undermines the credibility of the survey information that Comcast cites in an attempt to argue that it has no incentive to sabotage OVDs.²¹ Regardless of the actions that consumers report they might pursue if Comcast sabotages OVDs, the evidence is clear: in fact, few {{ }} customers appear to leave Comcast in response to impaired OVD performance.

III. An Absence of Foreclosure Does Not Imply an Absence of Consumer Harm.

26. Professor Carlton observes that there are conditions under which an “Internet service provider (ISP) and [an] edge provider have an incentive to negotiate terms that split the surplus that their interaction generates in a way that makes both better off.”²² This observation has little relevance for the present proceeding for at least two reasons.

27. First, the conditions in question are highly unlikely to be met in the present instance.²³ Among other things, the conditions require an absence of contracting frictions. Yet such frictions prevail in practice. Contracting frictions include the transactions costs that are associated with virtually all forms of bargaining and negotiation. Contracting frictions also can arise from limited and asymmetric information about how highly consumers value an OVD’s service, for example.

28. Second, even if the conditions noted by Professor Carlton were met, the proposed merger of Comcast and TWC could still impose substantial harm on consumers. The harm would stem from the substantial leverage the merger likely would afford the combined Comcast–TWC in its interactions with OVDs. Comcast–TWC could employ this leverage to systematically secure a

²¹ Dr. Israel refers to the results of a survey conducted for Comcast as “empirical evidence that, faced with a reduction in the quality of broadband service, customers would, in fact, switch to ... alternatives – including lower speed, DSL, and wireless options – in large numbers, thus imposing substantial costs on Comcast” (Israel Reply, ¶66). The actual empirical evidence presented here demonstrates just how unreliable this survey information is.

²² Declaration of Dennis W. Carlton, Exhibit 3 in Applicants’ Response, September 22, 2014 (“Carlton Declaration”), ¶12. Dr. Israel offers related observations (Israel Reply, ¶¶122-124).

²³ Because the conditions noted by Professor Carlton typically will not prevail in practice, Comcast may well find it profitable to foreclose OVDs and supply a substitute OTT service itself. Comcast and its experts dismiss this potential outcome improperly (Compass Lexecon Supplemental Responses on Broadband Prices, Customer Lifetime Value Calculations, and Alternative Theories of Foreclosure, ¶19 (Attachment to Letter from Francis Buono, Comcast Corporation, to Marlene Dortch, FCC, MB Docket No. 14-57 (Dec. 3, 2014)) (“Comcast December 3 Response”). The flaws in the arguments of Comcast and its experts are discussed in Section VI below.

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disproportionate share of the available surplus in its interactions with OVDs. Doing so would limit innovation by OVDs and thereby harm consumers of video services.

29. When it decides how much costly innovative activity to pursue, an OVD will naturally consider the likely financial return to its activity. If the OVD's projected return is minimal because Comcast-TWC is likely to usurp the lion's share of the total return, the OVD will rationally undertake little innovative activity (and may even decide to terminate its operations altogether). Consumers are harmed when industry innovation is stifled in this manner. Thus, even in the absence of a concern about whether a powerful ISP will reach an agreement with an OVD, substantial concern remains regarding the likely terms of the agreement.

30. The concern here is even more pronounced than the long-standing concern with the fraction of the nation's cable subscribers that a single cable company can serve. The concern in the cable industry is that a cable company that controls access to a sufficiently large number of viewers will be able to extract very favorable terms from programmers. In doing so, the cable company will reduce the financial gain a programmer anticipates from creating even particularly innovative, high-quality programming. Consequently, the incentives to create such programming are diminished, to the detriment of viewers.

31. Notice, though, that a cable company must acquire high-quality programming in order to attract subscribers. Therefore, even a cable company that enjoys substantial leverage in its interactions with programmers will tend to offer contract terms that ensure programmers will deliver the programming that is vital to the cable company's success. In contrast, a broadband supplier that is also a cable supplier may have less incentive to negotiate mutually agreeable terms with an OVD. This is the case because the broadband supplier can benefit even when it fails to reach an agreement with the supplier of an OTT video service that competes with the broadband supplier's cable video services. The benefit is the reduced competition the broadband supplier faces for its cable video services.

32. Comcast and TWC have carefully structured their proposed merger to ensure that the combined company will not serve more than 30 percent of cable subscribers nationwide. Yet the parties acknowledge that they will serve 40 percent of subscribers to wireline broadband service with downstream speeds of at least 10 Mbps. The parties will serve an even larger fraction of

subscribers to wireline broadband service with downstream speeds of at least 25 Mbps.²⁴ Because a broadband supplier may have less incentive than a cable company to facilitate access to its subscribers, the large fraction of high-speed broadband subscribers that Comcast-TWC would serve post-merger raises serious concerns.

33. In summary, Professor Carlton has merely asserted that, in theory, there are conditions under which an ISP and an OVD will reach a mutually advantageous agreement. This observation by no means implies that the proposed merger of Comcast and TWC is unlikely to harm OVDs – and therefore is unlikely to harm consumers of video services – for at least two reasons. First, the conditions to which Professor Carlton alludes are highly unlikely to be satisfied in the present instance. Second, even if the combined Comcast–TWC often would reach agreements with OVDs, the substantial leverage that the merger is likely to bestow upon the combined entity could enable it to usurp much of the surplus created by the innovative activities of OVDs.²⁵ When they anticipate limited financial returns from costly innovative activity, OVDs will rationally curtail such activity, to the detriment of consumers of OTT video services.

34. It should also be noted that the Applicants’ experts implausibly dismiss the possibility that Comcast-TWC might foreclose an OVD and supply a corresponding OTT service itself.²⁶

²⁴ See, for example, Sappington Declaration, and Mark Cooper, “Buyer and Bottleneck Market Power Make the Comcast-Time Warner Merger ‘Unapprovable,’” Consumer Federation of America Report, April 8, 2014 (<http://www.consumerfed.org/pdfs/CFA-Comcast-TW-Merger-Analysis.pdf>).

²⁵ Professor Carlton and Dr. Israel both suggest that Comcast’s recent contract with Netflix indicates that Comcast has limited leverage in its interactions with OVDs (Carlton Declaration, ¶¶14-15; Israel Reply, ¶¶118-119). This suggestion ignores at least two relevant facts. First, the merger is likely to endow the combined Comcast–TWC with more leverage than Comcast presently enjoys. Second, Comcast has been well aware for some time that overly-aggressive behavior in its interactions with OVDs could limit the chances that the Commission and the Department of Justice would view the proposed merger of Comcast and TWC favorably. Consequently, the contract terms to which Comcast has agreed pre-merger may be entirely unrepresentative of the terms it would insist upon post-merger.

²⁶ Comcast also reports that “OVDs have also become significant purchasers of NBCUniversal content” and asserts that “[t]his creates a significant and growing *disincentive* for Comcast to harm or degrade the performance or viability of OVDs” (Letter from Kathryn A. Zachem, Comcast Corporation, to Marlene H. Dortch, Federal Communications Commission, 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, November 26, 2014, Response to Question 1, at 17). This argument is unconvincing for the reasons set forth in Section VII of DISH’s Reply.

For the reasons identified in Section VI below, such foreclosure could well be profitable for Comcast-TWC.

IV. Nationwide Shares of Broadband Subscribers Are Highly Relevant for this Proceeding.

35. Dr. Israel asserts that commenters have failed “to establish the existence of a national broadband market in which [national market] shares would be relevant.”²⁷ In his attempt to support this assertion, Dr. Israel focuses on the choices of individual broadband subscribers, noting that the broadband subscriptions offered by Comcast and the broadband subscriptions offered by TWC are not substitutes for consumers because Comcast and TWC serve distinct geographic regions.

36. Dr. Israel’s analysis ignores the fact that access to Comcast’s high-speed broadband subscribers and access to TWC’s high-speed broadband subscribers are substitutes for an OVD attempting to secure nationwide distribution of its OTT service. As the analysis in Section VII below demonstrates, an OTT service may be viable if it can secure access to Comcast’s customers or if it can secure access to TWC’s customers. However, the OTT service may well be unprofitable without access to the high-speed broadband customers of both Comcast and TWC. Consequently, the merger of Comcast and TWC would enable a single entity to control the supply of two services (access to high-speed broadband subscribers) that presently are important substitutes for OVDs.²⁸

37. OVDs require access to broadband subscribers in order to successfully market their products. Comcast, TWC, and other ISPs control this access. An ISP’s refusal to admit uncompromised access to its broadband subscribers will reduce an OVD’s potential earnings, as demonstrated in Section VII below. The reduction in earnings that an OVD suffers when it is unable to secure uncompromised access to an ISP’s broadband subscribers increases as the number of customers the ISP serves increases. Therefore, the number of customers an ISP serves – as proxied by the ISP’s share of nationwide broadband subscribers – is a relevant measure of

²⁷ Israel Reply, ¶17.

²⁸ The fact that OVDs usually (but, of late, not always) do not pay ISPs directly for access to their broadband subscribers does not affect this conclusion. ISPs secure payments from subscribers that defray the costs of supplying access to OVDs.

the ISP's ability to harm an OVD by unilaterally impeding the OVD's access to the ISP's broadband subscribers.

38. Just as market shares are an imperfect measure of market power in any relevant antitrust market, the share of nationwide broadband subscribers that an ISP serves may not provide a perfect measure of the harm that the ISP can impose on an OVD or of the leverage that the ISP can exercise over an OVD. However, national market shares constitute informative proxies for this leverage, and so are useful to consider in assessing the extent to which the proposed merger of Comcast and TWC could harm OVDs (and thereby stifle industry innovation and harm consumers of OTT services) by increasing the combined leverage of Comcast and TWC over OVDs.

39. The Commission has long relied on national market shares to assess whether a particular cable supplier might have excessive leverage in its interaction with programmers. This is the case even though cable suppliers typically have not engaged in direct (horizontal) competition for retail customers with one another. Thus, the consideration of national market shares in the present analysis of vertical concerns raised by the proposed merger of Comcast and TWC has precedent and reflects sound economic principles.²⁹

V. The Experts' Product Market Assertions are Not Compelling.

40. In attempting to argue that DSL belongs in the same product market as high-speed cable broadband service, Dr. Israel downplays the substantial price differences between the two services.³⁰ In doing so, Dr. Israel cites the work of Werden and Froeb ("the Werden-Froeb analysis"),³¹ which reviews the hazards of relying upon any single, simple rule to assess whether two services belong in the same relevant product market.

²⁹ The calculation and the interpretation of the national market shares by merger opponents in the present proceeding avoid the key criticisms of the Commission's corresponding calculations. In particular, the present calculations include subscribers of all relevant broadband services, not simply subscribers to cable broadband services. Furthermore, the national market shares have been employed to assess the potential unilateral (as opposed to coordinated) behavior of relevant industry suppliers.

³⁰ Israel Reply, ¶78.

³¹ Gregory Werden and Luke Froeb, "Correlation, Causality, and All that Jazz: The Inherent Shortcomings of Price Tests for Antitrust Market Delineation," *Review of Industrial Organization*, 8(3), June 1993, 329-353.

41. The Werden-Froeb analysis does not suggest that price differences – such as the substantial differences in the prices of DSL and high-speed cable broadband service that commonly prevail – are irrelevant in delineating the boundaries of relevant antitrust markets. The analysis simply notes that such significant price differences alone do not permit one to conclude with certainty that DSL and high-speed cable broadband service are not in the same relevant product market, and so additional evidence warrants consideration.

42. Dr. Israel's observation that some Comcast subscribers have historically switched to DSL service³² does not constitute compelling additional evidence in this regard. There are many reasons why some former Comcast subscribers might switch to DSL even if DSL and high-speed cable broadband service are not in the same relevant product market. For instance, the customers who switched to DSL might have subscribed to Comcast's slower-speed broadband services. In this event, their observed switch to DSL provides no information whatsoever about the extent to which consumers view DSL and high-speed cable broadband service to be reasonable substitutes.

43. Alternatively, customers may have signed up for Comcast's high-speed broadband service on a trial basis in response to a low introductory price. After trying the service, the customers may have discovered that they seldom consumed the particular internet video products (e.g., streaming video) that are best viewed with high-speed cable broadband service. Consequently, these customers may have concluded that it was uneconomical to pay the substantial premium required to continue to access Comcast's high-speed broadband service. Their switch to DSL provides little information about whether consumers who subscribe to high-speed cable broadband service primarily to view streaming video consider DSL to be a reasonable substitute for their preferred service.

44. Dr. Israel's discussion of survey results³³ similarly provides little, if any, useful information about whether the independent supply of DSL constrains the pricing of high-speed cable broadband service. It is well known that actual customer behavior can differ substantially

³² Israel Reply, ¶81.

³³ *id.*, ¶¶89-93.

from the behavior predicted by surveys.³⁴ Indeed, one should expect actual behavior to diverge from predicted behavior in the present instance. A customer's claim that she will leave Comcast for another broadband supplier if Comcast impedes access to valued websites is a simple, costless way for the customer to express her preference for uncompromised access to these websites. Perhaps the most surprising survey finding is that some customers effectively invited Comcast to selectively slow internet traffic by admitting that they are unlikely to switch suppliers even when Comcast intentionally slows the traffic of "uncooperative" OVDs.³⁵

45. The information that Comcast provides to its customers likely provides more useful information about whether DSL is capable of constraining Comcast's pricing of its high-speed broadband service than does survey data. Comcast informs customers through its *Xfinity* website that only services with downstream speeds of at least 25 Mbps are appropriate for streaming video.³⁶ The services with slower downstream speeds that Comcast advertises are only recommended for email, social networking, surfing the web, sharing photos, and downloading music. Thus, assuming that Comcast provides accurate information to its customers, broadband customers who wish to view streaming video regularly are unlikely to find that broadband services with download speeds considerably below 25 Mbps will satisfy their needs. Consequently, if a large portion of Comcast's high-speed broadband subscribers purchase the service in order to stream video, the independent supply of DSL with relatively slow speeds is unlikely to constrain Comcast's pricing of its high-speed broadband services.

46. Dr. Israel's attempt to place wireless broadband service in the same product market as high-speed cable broadband service³⁷ is also unconvincing. Dr. Israel's call for a "forward-

³⁴ See, for example: (i) Norbert Schwartz, "Self-Reports: How the Questions Shape the Answers," *American Psychologist*, 54(2), February 1999, 93-105; and (ii) Norbert Schwartz and Daphna Oyserman, "Asking Questions About Behavior: Cognition, Communication, and Questionnaire Construction," *American Journal of Evaluation*, 22(2), June 2001, 127-160.

³⁵ In fact, as documented in Section II above, Comcast's HSD customers exhibited {{
}} to discontinue their service with Comcast during or after the period in which Netflix's traffic was slowed on Comcast's network.

³⁶ Comcast, XFINITY Internet (http://www.comcast.com/internet-service.html?CMP=KNC-IQ_ID_64318266-VQ2-g-VQ3--VQ6-40631332186-VQ16-c-pkw-comcast-pmt-e&iq_id=69132979&NUM=3), visited October 15, 2014.

³⁷ Israel Reply, ¶¶82-88.

looking” industry assessment³⁸ is appropriate. However, it is not appropriate to base irreversible policy decisions on speculative forecasts about possible long-term industry developments. The assertions that some industry observers “recognize the growing importance of video over wireless,”³⁹ that “gains in wireless capacity and reductions in cost will make wireless broadband an increasingly relevant alternative over time,”⁴⁰ and that “[n]ew wireless technologies are further increasing their competitive relevance”⁴¹ merit consideration in ongoing studies of future industry developments. However, these assertions do not imply that the independent supply of wireless broadband services presently constrains the pricing of high-speed broadband cable service, particularly in light of the data caps that typically prevail in wireless broadband plans. Dr. Israel’s assertions also do not imply that the independent supply of wireless broadband services is likely to constrain the pricing of high-speed broadband cable service in the near future.

VI. The Merger Likely Would Reduce Future Competition Between Comcast and TWC.

47. The Applicants argue that their merger would not limit future competition between them because neither of them presently plans to provide an out-of-region OTT service.⁴² However, incumbent multi-channel video programming distributors (“MVPDs”) like Comcast and TWC tend to be well positioned to serve as particularly effective OTT competitors. Consequently, the merger of Comcast and TWC could well reduce future competition in the supply of OTT services.

48. Incumbent MVPDs are well-situated to serve as effective OTT competitors for at least four reasons. First, due to their tenure in the industry, incumbent MVPDs have substantial industry expertise and knowledge, including a deep understanding of consumers’ viewing habits

³⁸ *id.*, ¶82.

³⁹ *id.*

⁴⁰ *id.*, ¶85.

⁴¹ *id.*, ¶86.

⁴² Dr. Israel claims that “Comcast has no plans to offer online video offerings outside its footprint” (Israel Reply, ¶127).

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and preferences.⁴³ Incumbent MVPDs can employ their expertise and knowledge to design OTT services that consumers value particularly highly.⁴⁴

49. Second, incumbent MVPDs typically have well-established, well-functioning relationships with content suppliers. These relationships and the incumbents' status as major content buyers can help them secure reliable and relatively low-cost access to valuable content for OTT services.⁴⁵ Furthermore, Comcast's ownership of NBCUniversal ensures that Comcast typically will have access to NBCUniversal programming at lower cost than OTT rivals, which provides Comcast with an important competitive advantage.

50. Third, Comcast's *Infinity* service is an OTT service that Comcast has operated successfully for several years. The incremental cost that Comcast would incur to export this service beyond the boundaries of its current footprint likely would be relatively small.⁴⁶

⁴³ Mr. Roger Lynch, Executive Vice President of the Advanced Technologies and International Group for DISH Network, observes that Comcast's ownership of *FreeWheel* provides Comcast with particularly detailed and comprehensive knowledge of consumers' preferences (Reply Declaration of Roger J. Lynch ("Lynch Reply"), ¶20).

⁴⁴ The ability of incumbent MVPDs to design OTT services that consumers value particularly highly reduces the risk of introducing unpopular, and thus unprofitable, OTT services. Consequently, the rationale for Comcast's claim that "Choosing to self-supply an OVD service ... is both highly costly and risky to Comcast" is not apparent (Comcast December 3 Response, ¶19). The launch of a new service inevitably entails risk. However, the risk associated with a new OTT service may well be less pronounced for incumbent MVPDs with considerable industry expertise than for new, independent OVDs.

⁴⁵ The Applicants suggest that the elimination of OVDs is likely to be undesirable because it would shift to Comcast-TWC the burden of reaching favorable agreements with content providers ("foreclosing a particular OVD would likely just shift Comcast's negotiation from one third party (the OVD) to another (e.g., other OVDs, studios and other programmers). Such a strategy would not likely be profitable, as Comcast would simply find itself more dependent on the remaining, smaller set of third-party content providers") (footnote omitted) (Comcast December 3 Response, ¶19). The rationale for this suggestion is far from apparent in light of the long-standing relationships that Comcast and TWC have with content providers and the increased leverage the combined Comcast-TWC likely would wield in negotiations with content providers.

⁴⁶ Mr. Roger Lynch observes that "Comcast and TWC have both independently developed or are developing Internet-delivered service offerings that are or will become available. After the OTT service is developed, it is only a small leap from the investment in such a service to the incremental relatively minor investment needed to export it outside each cable operator's footprint, in large part because there is no substantial additional physical infrastructure to be deployed for an OTT service" (Lynch Reply, ¶30).

51. Fourth, incumbent MVPDs like Comcast and TWC that provide high-speed broadband service have in place the infrastructure required to deliver OTT services to their subscribers. Consequently, such incumbent MVPDs typically face lower incremental in-region distribution costs than rival OVDs face. This cost advantage can help to make incumbent MVPDs particularly strong OTT competitors.

52. In summary, there are several reasons why Comcast and TWC – the nation’s two largest cable operators – are likely to be particularly effective OTT competitors in the future. The two companies may not offer out-of-region OTT services presently in part because doing so would make more apparent yet another detrimental, anti-competitive effect of the proposed merger. However, once the fate of the proposed merger has been determined, there is every reason to believe that Comcast and TWC will supply out-of-region OTT services. Consequently, by terminating the independent operation of Comcast and TWC, merger approval likely would reduce future competition in the supply of OTT services.

VII. The Merger Could Threaten the Viability of DISH’s New OTT Service.

53. I understand that DISH plans to launch a new domestic OTT service in the near future. In assessing the likely returns from this new service, DISH prepared projections of the revenues a new OTT service would generate and the associated costs of supplying the service.⁴⁷ I understand that these projections were informed by DISH’s experience with its foreign language OTT service, *DISH World*.

54. These projections are employed here to demonstrate that if the proposed merger were to occur, access to the high-speed broadband subscribers of the combined Comcast-TWC is likely to be essential for the viability of a new OTT service. The projections indicate that a new OTT service could be viable without access to TWC’s current subscribers. The service could even be viable without access to Comcast’s current subscribers. However, without access to the high-speed broadband subscribers of the combined Comcast-TWC, the potential returns from the service would be diminished so severely that the new service likely would be unviable, and so would not be offered.

⁴⁷ These projections are set forth and explained in detail in the Lynch Reply. The projections are replicated in Table 1 below.

55. Because the combined Comcast-TWC could unilaterally control the viability of a new OTT service, the combined company would enjoy pronounced leverage in its interaction with OVDs, which it could employ to extract from OVDs much of the surplus generated by their new services. Such surplus extraction would limit the incentives of OVDs to create innovative, high-quality OTT services, and thereby harm consumers of those services.

56. I understand that in order to determine whether to undertake a new project, DISH typically employs its revenue and cost projections to estimate the annual pre-tax cash flow (or “profit”) the project will generate for {{ }}. Furthermore, DISH typically will only pursue a project if the net present value (“NPV”) of the profit it is expected to generate during the {{ }} of its operation is positive.⁴⁸ The financial projections presented in Tables 1 – 3 permit an assessment of the {{ }} NPV of the profit a new domestic OTT service is likely to generate, depending on the access it can secure to the nation’s high-speed broadband subscribers.

57. Table 1 summarizes DISH’s financial projections for the case where the new OTT service has uncompromised access to all U.S. broadband subscribers with downstream speeds of at least 25 Mbps. As explained in the Lynch Reply, the first six rows of data in Table 1 pertain to the projected number of subscribers for the new OTT service. The “total variable contribution” reported in the eighth row of data in Table 1 represents the total revenue the new OTT service is expected to receive from its subscribers. The “total subscriber acquisition costs” that appear in the tenth row of data reflect the estimated total cost of acquiring subscribers. The “total additional operational costs” in the twelfth row of data represent the projected additional costs of serving subscribers. The “pre-tax cash flow” reported in the last row of data in Table 1 is the

⁴⁸ The NPV of a series of future profits is the value today of the future stream of profits. Positive profits that arrive earlier are more valuable than profits that arrive later because the former are received sooner and so can be put to use (e.g., invested) sooner. Thus, in calculating the NPV of a series of profits, more distant profits are “discounted.” Formally, let π_t denote the profit that will arrive at the end of year t , for $t = 1, \dots, T$. Also let r denote the relevant annual discount rate. Then the NPV of this stream of profit is $\sum_{t=1}^T \left(\frac{1}{1+r}\right)^t \pi_t$.

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profit the new service is expected to generate. This profit is the difference between total revenue and the sum of total subscriber acquisition costs and total additional operational costs.⁴⁹

⁴⁹ Costs and negative numbers are denoted by parentheses (“(•)”) in Tables 1 – 3.

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58. As Table 1 indicates, the new OTT service is expected to {{ }} years of operation. The service is expected to produce {{ }} in subsequent years. Using a {{ }},⁵⁰ the NPV of the identified {{ }} series of financial losses and financial gains is {{ }}. Because this {{ }} NPV of expected profit is positive, DISH would proceed with an OTT service of this sort if it anticipated uncompromised access to all relevant U.S. broadband subscribers.

59. The prospects for an OTT service become less attractive when it is unable to secure uncompromised access to a substantial fraction of relevant broadband subscribers. Table 2 estimates the changes that would arise if the OTT service in question were unable to secure access (only) to Comcast's broadband subscribers. Table 3 reports the corresponding changes that would arise if the OTT service were denied access to both Comcast's and TWC's broadband subscribers.

60. The entries in Tables 2 and 3 employ the market share calculations in the Sappington Declaration. These calculations are derived from publicly available data, assuming that the ratio of broadband connections with downstream speeds of at least 25 Mbps ("25M broadband connections") to all broadband connections that a cable company supplies is the same for all cable companies. The calculations reveal that Comcast and TWC together would supply approximately 50% of residential 25M broadband connections in the U.S. after the proposed merger and after the planned divestiture of subscribers. The calculations reported in Tables 2 and 3 further assume that Comcast supplies twice the number of broadband connections that TWC supplies.⁵¹

⁵⁰ The {{ }} discount rate reflects the standard weighted average cost of capital that DISH employs in its financial projections for new services. A higher discount rate (which would reduce the calculated NPV of the identified stream of cash flows) might arguably better capture the risk and uncertainty inherent in many new product offerings.

⁵¹ Comcast served 19.7 million residential broadband customers as of March 31, 2014. TWC served 11.4 million residential broadband customers as of April 17, 2014. (Kathryn A. Zachem et al.'s *Letter to FCC Secretary Marlene H. Dortch*, MB Docket No. 14-57, June 27, 2014, <http://apps.fcc.gov/ecfs/document/view?id=7521351426>).

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61. In this setting, if the new OTT service were unable to reach (only) Comcast’s broadband subscribers, it would lack access to one-third of the customers to whom it is assumed to have access in Table 1. This reduction in the addressable market represents two-thirds (Comcast’s share) of the estimated 50 percent of U.S. residential 25M broadband connections that the combined Comcast-TWC would supply post-merger.

62. Table 2 documents the impact of this diminished access to potential customers. For simplicity, variable per-subscriber contribution margins, per-subscriber acquisition costs, and the annual rate of increase in additional operational costs are assumed to be unaffected by the reduced customer access. The lack of access to one-third of relevant potential customers is assumed only to reduce by one-third the number of new subscribers (“gross additions”) that the service attracts each year.⁵²

63. The resulting decline in the subscriber base for the new domestic OTT service reduces the earnings the service generates. However, the {{ }} NPV of expected profit remains positive {{ }} even when the service is unable to secure access to Comcast’s high-speed broadband subscribers.⁵³

64. In contrast, the {{ }} NPV of profit from the new service is negative when it is unable to access the relevant broadband subscribers of both Comcast and TWC, as would be the case if Comcast-TWC blocked access to its broadband subscribers following the merger. Table 3 presents the financial impact of being unable to access the 50 percent of relevant broadband subscribers that Comcast and TWC together are estimated to supply post- merger.⁵⁴ In this case, the new OTT service would incur substantial losses in each of the {{ }} years of its operation. These pronounced losses cause the {{ }} NPV of expected profit from the

⁵² As explained in the Lynch Reply, {{ }} of initial (“beginning of year”) subscribers and {{ }} of new subscribers (“gross additions”) are projected to discontinue their subscriptions each year. Therefore, the estimated reduction in the number of new subscribers has a corresponding impact on the number of subscribers that are expected to discontinue their subscriptions each year (“disconnects”).

⁵³ The {{ }} NPV of expected profit for the service is also positive {{ }} when the service is denied access (only) to TWC’s high-speed broadband subscribers.

⁵⁴ Again, for simplicity, the calculations in Table 3 assume that the only impact of the inability to reach one-half of relevant viewers is a 50 percent reduction in the number of new subscribers (“gross additions”) the service attracts each year.

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service to be {{ }}. Faced with such a negative {{ }} NPV of profit, DISH typically would decide not to pursue a new OTT service like this one.

65. This case study illustrates the more general conclusion that the proposed merger of Comcast and TWC would endow the combined firm with the ability to unilaterally determine the fate of promising OTT services. The associated leverage that Comcast-TWC would enjoy in its interaction with OVDs would enable the combined company to extract from OVDs much of the surplus generated by their innovative activities. Such surplus extraction would limit the incentives of OVDs to create high-quality OTT services, and thereby harm consumers of those services.

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VIII. Conclusions.

66. The preceding analysis supports the following six conclusions. First, Comcast {{
}} in the churn of its broadband subscribers during or after the period when Netflix's traffic was slowed on Comcast's network. Therefore, the Applicants' repeated claim that they have no incentive to sabotage OVDs because the sabotage would substantially increase customer churn is without merit.

67. Second, substantial customer harm can arise even in (hypothetical) settings where ISPs never foreclose OVDs. The harm arises when powerful ISPs usurp the lion's share of the surplus created by OVDs, thereby limiting incentives for innovation by OVDs.

68. Third, access to the combined subscriber base of Comcast and TWC is essential for the viability of OTT services like DISH's new domestic OTT service. Consequently, the proposed merger would endow Comcast-TWC with leverage over DISH and other OVDs that could seriously diminish industry innovation and thereby harm consumers of OTT services.

69. Fourth, the evidence that has been presented to support the contention that DSL and high-speed cable broadband service belong in the same relevant product market is not compelling. The Applicants have not demonstrated that the independent supply of DSL constrains the pricing of high-speed cable broadband services.

70. Fifth, the merger of Comcast and TWC likely would reduce future competition in the supply of OTT services.

71. Sixth, it is important to consider the relevant national geographic market and assess the nationwide supply of access to high-speed broadband subscribers in order to fully assess the impact of the proposed merger of Comcast and TWC. The access that these ISPs presently supply to OVDs are substitutes, and the merger would allow a single entity to control the supply of these substitute services and thereby harm consumers of OTT services.

APPENDIX

72. This appendix provides additional evidence that Comcast's HSD customers {{
}} during or after the period in which Netflix's traffic was slowed on Comcast's network. Additional graphic evidence is provided in Section A.II. Additional econometric analysis appears in Section A.III. First, though Section A.I presents some preliminary information that underlies the ensuing analysis.

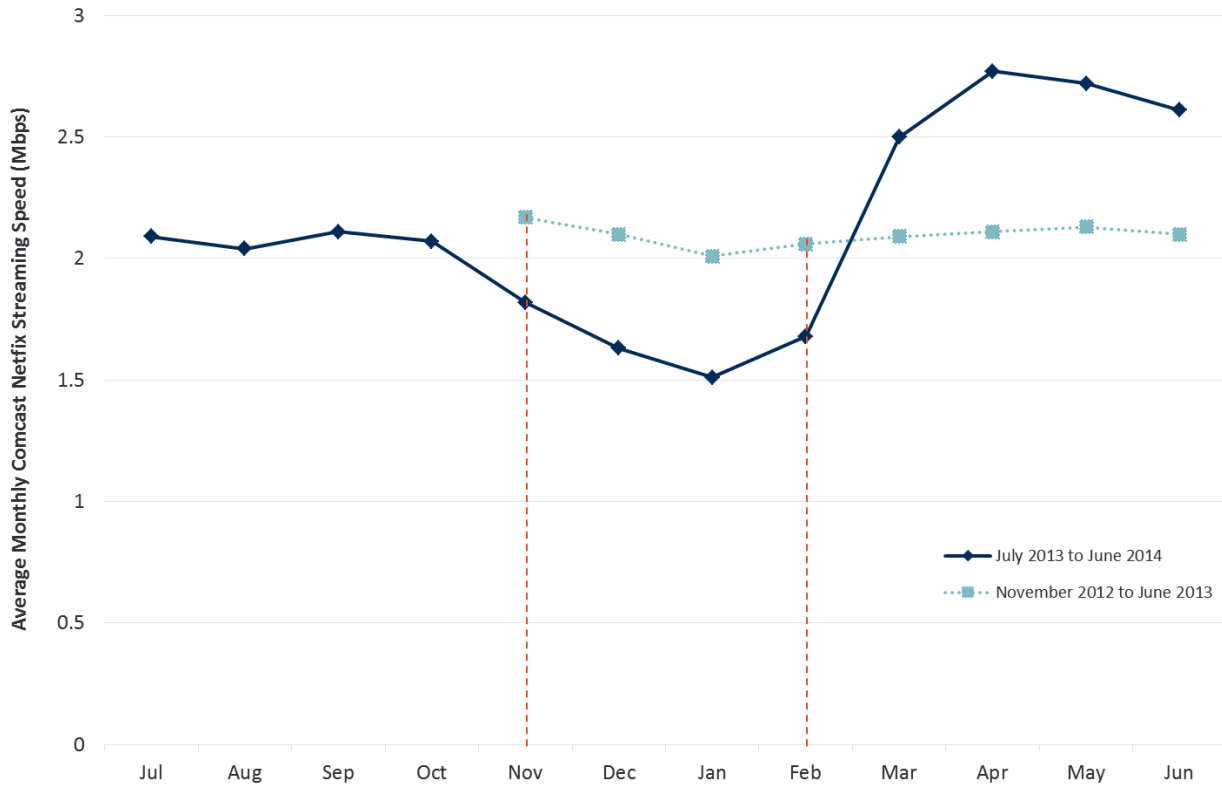
A.I. Preliminary Analysis.

73. Figure A1 illustrates the aforementioned {{
}} in the churn of Comcast's HSD {{
}} customers. This churn tends to be most pronounced during {{
}} and least pronounced during {{
}}.

{{

}}

74. Figure A2 presents the average speed of Netflix’s traffic on Comcast’s network between November 2012 and June 2014.⁵⁵ The solid line represents speeds for July 2013 – June 2014, a year in which Netflix’s traffic was slowed on Comcast’s network. The dashed line presents speeds for the portion of the preceding year in which this data is available.



Source: <http://ispspeedindex.netflix.com/usa>

Figure A2. Average Speed of Netflix’s Traffic on Comcast’s Network.

A.II. Additional Graphic Analysis.

75. Figure A3 adds to Figure 1 the churn rate for Comcast’s HSD {{ }} customers in 2011 – 2012. Figure A3 makes it clear that churn rates in 2012 – 2013 were {{ }}. Therefore, the comparison of churn rates in 2013 – 2014

⁵⁵ This data is derived from <http://ispspeedindex.netflix.com/usa>. November 2012 is the first month for which this data is reported.

with the corresponding churn rates one year earlier {{

}}

{{

}}

76. Figure A4 presents churn rates for Comcast's {{

}}

subscribers. These are {{

}}. Figure A4 makes it clear that, {{

}}, Comcast's {{

}}

during or after the period in which Netflix's traffic was slowed on Comcast's network.

{{

}}

77. Figure A5 presents churn rates for Comcast's {{ }} customers. These are customers who {{ }}. Figure A5 demonstrates that the central churn patterns identified in Figure 1 also prevail for Comcast's {{ }} customers. Therefore, the key qualitative conclusions drawn above are the same whether churn rates are calculated for {{ }} customers or for {{ }} customers.

{{

}}

78. Figure A6 illustrates that the key qualitative features of Figure 1 persist when the definition of “churn” is expanded to include both Comcast subscribers who discontinue their customer relationship with Comcast and Comcast subscribers who {{

}}.⁵⁶

{{

}}

⁵⁶ For two important reasons, the data that Comcast has provided do not permit ready calculation of the most relevant measure of {{ }} for the present purposes. First, the data do not distinguish among {{ }}. Second, the data do not readily distinguish among the different possible types of {{ }}. In particular, the data do not distinguish between {{

}}

Together, Figures A3 – A6 provide additional strong visual evidence that Comcast’s HSD customers {{ }} during or after the period in which Netflix’s traffic was slowed on Comcast’s network.

A.III. Additional Econometric Analysis.

79. Additional econometric analysis provides further evidence that Comcast’s HSD customers {{ }} during or after the period in which Netflix’s traffic was slowed on Comcast’s network. To illustrate, first suppose the regression that underlies equation (1) is modified to incorporate a slightly different measure of OVD sabotage. In particular, suppose the S_t variable is replaced by \hat{S}_t , which is a dummy variable that takes on the value 1 in December 2013 and January 2014 (when the reduction in the speed of Netflix’s traffic was most pronounced) and is 0 in all other months in the sample. The resulting regression equation is:⁵⁷

{{

}} indicates once again that, after controlling for overall trends and {{ }} in the data, the reduced speed of Netflix’s traffic on Comcast’s network is associated with {{ }} in the churn of Comcast’s HSD customers.

80. Equation (A2) considers a related modification of the regression that underlies equation (1). In this modified regression, the dichotomous S_t variable is replaced by the continuous variable, \tilde{S}_t , which reflects the average speed of Netflix’s traffic on Comcast’s network in month t . The resulting regression equation is:⁵⁸

{{

}}

⁵⁷ p values appear below the coefficient estimates in equation (A1) and in all subsequent equations. The R^2 for this regression is {{ }}.

⁵⁸ The sample period for this regression is {{ }}, reflecting the availability of data regarding Netflix’s speed on Comcast’s network. The R^2 for this regression is {{ }}.

The coefficient on the \tilde{S}_t variable in equation (A2) is $\{\{ \quad \quad \quad \}\}$, indicating that the speed of Netflix’s traffic $\{\{ \quad \quad \quad \}\}$.

81. Equation (A3) modifies the regression that underlies equation (1) to account for the possibility that, even though Comcast’s customers do not discontinue their HSD service immediately in response to the slowing of Netflix’s traffic, they might discontinue their service with a lag. To capture this potential lagged reaction, the contemporaneous “sabotage” variable (S_t) is replaced by the corresponding variable in the preceding month (S_{t-1}). The resulting regression equation is:⁵⁹

$\{\{ \quad \quad \quad \}$
 $\quad \quad \quad \}$ shows once again that the data
provide no evidence of $\{\{ \quad \quad \quad \}$
 $\quad \quad \quad \}$

82. Alternative regression formulations support this same conclusion. The conclusion is supported, for example, by formulations in which the dependent variable is the difference in the rate of churn of Comcast’s HSD $\{\{ \quad \quad \quad \}\}$ customers in month t and the corresponding churn rate one year earlier. The same conclusion also arises when the analysis is applied only to Comcast’s $\{\{ \quad \quad \quad \}\}$ subscribers or to $\{\{ \quad \quad \quad \}\}$. The conclusion is also robust to formulations with no explicit time trend variable, to formulations with different measures of “sabotage,” and to different lags of the sabotage variable, for example.

83. The central, consistent message provided by both the graphical and econometric analysis of Comcast’s data is that $\{\{ \quad \quad \quad \}\}$ in response to the slowing of Netflix’s traffic on Comcast’s network. Therefore, Comcast’s own data provide $\{\{ \quad \quad \quad \}$

⁵⁹ The R^2 for this regression is $\{\{ \quad \quad \quad \}\}$. Results very similar to those in equation (A3) arise if a two-month lag in customer reaction is considered (so the S_{t-1} variable in equation (A3) is replaced by S_{t-2}).

}}. Instead,
the data suggest that Comcast can sabotage OVDs with virtual impunity, and so Comcast has substantial incentive to do so.

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* * *

The foregoing declaration has been prepared using facts of which I have personal knowledge or based upon information provided to me. I declare under penalty of perjury that the foregoing is true and correct to the best of my information, knowledge, and belief.

Executed on December 22, 2014.



David Sappington
Eminent Scholar, Department of Economics
Director, Robert F. Lanzillotti Public Policy Research Center
University of Florida

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**EXHIBIT C:
DECLARATION OF WILLIAM P. ZARAKAS**

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**Analysis of the FCC's Vertical Foreclosure and Nash Bargaining Models
Applied To The Proposed Comcast-Time Warner Cable Transaction**

William P. Zarakas
Principal, The Brattle Group

December 22, 2014

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Haven DMA

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I, William P. Zarakas, being over 18 years of age, swear and affirm as follows:

I. Introduction

1. My name is William P. Zarakas. I am a Principal with The Brattle Group, an economics consulting firm, where I work primarily on economic and regulatory matters concerning the communications and energy industries. I have been involved in the economic analysis of issues facing these industries for roughly 30 years. I have provided reports and/or testimony before the Federal Communications Commission, the Federal Energy Regulatory Commission, the Securities and Exchange Commission, the Copyright Royalty Judges (Library of Congress), the U.S. Congress, state regulatory agencies, arbitration panels, foreign governments and courts of law.

2. I have worked extensively on matters concerning: costs, prices and rates for utility and telecommunications services; business and asset valuations, including the valuation of wireless spectrum; the impacts of mergers on markets and upon costs of service; the determination of royalties and the distribution of cable and satellite television retransmission fees to content providers; the value of reliability in utility services; and the impact of disruptive technologies on regulated industries, most recently involving the effect of distributed energy resources on utility costs and rates. Prior to my tenure with The Brattle Group, I held senior positions at other economic and management consulting firms. My curriculum vitae is included as **Attachment A** to this declaration.

3. I have been asked by counsel for DISH Network Corporation (“DISH”) to review and comment on the vertical foreclosure and bargaining model analyses presented by Drs. Rosston and Topper on behalf of Comcast Corporation (“Comcast”) in their report of September 20, 2014.¹ These models were used by the Federal Communications Commission (“FCC” or “Commission”) in its review of the Comcast-NBCUniversal transaction. Drs. Rosston and Topper represent that they were asked to update these models and apply them to the proposed Comcast-Time Warner Cable, Inc. (“TWC”) transaction.²

4. The vertical foreclosure model concerns the possibility that a multichannel video programming distributor (“MVPD”) that is vertically integrated with programming may “exploit

¹ An Economic Analysis of The Proposed Comcast Transaction with TWC and Charter In Response to Comments and Petitions, September 20, 2014, Gregory L. Rosston, Michael D. Topper. (“Rosston-Topper Report”).

² Rosston-Topper Report at paragraph 110.

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its ability to exclude distribution rivals from access to its programming.”³ The foreclosure model analyzes the “profitability of withholding access to programming absent changes in bargaining position that would permit Comcast to raise programming prices.”⁴ This model was initially used by the Commission in its review of the News Corp.-DirecTV transaction,⁵ and then used by the Commission in its review of the Comcast-NBCUniversal transaction.⁶

5. The Commission addressed the potential price impacts resulting from the potential merger of Comcast and NBCUniversal by adopting a Nash bargaining model.⁷ Nash bargaining models estimate likely changes in post-transaction prices based on associated changes in bargaining position and costs that may result from a merger.

6. In Section II and III of this report, I provide an overview of the Commission’s vertical foreclosure and Nash bargaining models and replicate the analyses conducted by Drs. Rosston and Topper. I devote particular attention to analyzing the critical and actual departure rates, which are important components of both models. I demonstrate that the results are highly dependent upon the duration of foreclosure. Drs. Rosston and Topper used relatively short (i.e., one month) durations of foreclosure; using longer durations of foreclosure in the model would completely reverse their conclusions.

7. Drs. Rosston and Topper’s conclusion that the merger of Comcast with TWC “will not increase Comcast’s incentive to foreclose access or raise prices of programming to rival MVPDs” is misleading because it is entirely dependent upon their applying a foreclosure of short duration

³ FCC Memorandum Opinion and Order In the Matter of Application of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licensees, MB Docket No. 10-56, Released: January 20, 2011 (“Comcast-NBCUniversal Order”) at paragraph 34.

⁴ Comcast-NBCUniversal Order, Appendix B at paragraph 3.

⁵ FCC Memorandum Opinion and Order In the Matter of General Motors Corporation and Hughes Electronics Corporation, Transferors, And The News Corporation Limited, Transferee, For Authority to Transfer Control, MB Docket No. 03-124, Released: January 14, 2004 (News Corp-Hughes Order), Appendix D-Technical Appendix.

⁶ Comcast-NBCUniversal Order, Appendix B.

⁷ Comcast-NBCUniversal Order, Appendix B at paragraph 39. The Nash bargaining model was proposed by Professor William Rogerson on behalf of the American Cable Association (ACA) and Professor Kevin Murphy on behalf of DirecTV. Economic Analysis of the Competitive Harms of the Proposed Comcast-NBCU Transaction, June 21, 2010, William P. Rogerson at page 27 (“Rogerson Report”). Economic Analysis of the Impact of the Proposed Comcast/NBCU Transaction on the Cost to MVPDs of Obtaining Access to NBU Programming, June 21, 2010, Kevin M. Murphy.

to their analysis.⁸ Even accepting the assumptions made by Drs. Rosston and Topper on subjects other than duration, it is reasonable to conclude that engaging in a longer term foreclosure strategy would be profitable to Comcast-TWC and would likely lead to price increases to rivals. The combined company would be free to deny competitors its programming for a period long enough to make foreclosure profitable. This conclusion is nearly identical to that reached by the Commission in the Comcast-NBCUniversal Order.

II. Vertical Foreclosure Model

8. The FCC's vertical foreclosure model is based on the understanding that a vertically integrated firm derives profits from two general lines of business: 1) subscription (and other) fees from its MVPD customers, and 2) advertising revenues and retransmission consent fees from rival MVPDs. The model then assumes "that an integrated firm will foreclose a rival from access to an input if the increased profits it earns in the downstream market from foreclosure exceed the losses it incurs from the lost sales of the input to the rival firm."⁹ The profitability of such a foreclosure strategy depends in large part upon whether a sufficient number of customers will abandon their current MVPD because they cannot view the programming being foreclosed and shift over to the vertically integrated one (where such programming is available). Thus, the model solves for the theoretical percentage of rival customers that would need to depart (referred to as the "critical departure rate") in order for the strategy to be profitable to the vertically integrated firm. This (theoretical) critical departure rate can then be compared to estimates of (actual) historic levels of departures that have been experienced when programming was withheld (or blacked-out) from an MVPD.

9. Such a comparison provides an indication of whether or not sufficient incentive exists for the integrated MVPD to withhold programming from its rivals. Per the Commission's model, if the observed or likely (actual) departure rate exceeds the (theoretical) critical departure rate, then a post-transaction foreclosure strategy would be expected to be profitable to the vertically integrated MVPD,¹⁰ and could harm competition.¹¹

⁸ Rosston-Topper Report at paragraph 5.

⁹ Comcast-NBCUniversal Order, Appendix B at paragraph 6, citing Michael H Riordan and Steven C. Salop, Evaluating Vertical Mergers: A Post-Chicago Approach, *Antitrust Law Journal* at 513, 528-531 (1995).

¹⁰ Comcast-NBCUniversal Order, Appendix B at paragraph 28.

¹¹ Comcast-NBCUniversal Order, Appendix B at paragraph 38.

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10. Estimating the critical departure rate requires inputs and assumptions concerning the costs and benefits associated with foreclosing programming from a rival MVPD. The costs of withholding programming mainly involve the loss of advertising revenues and retransmission consent fees from those subscribers that remain customers of the rival MVPD. The benefits from such foreclosure involve the additional profits that the foreclosing MVPD would realize from gaining new customers, with new customers equal to a fraction of the total that depart from the foreclosed MVPD (referred to as the “diversion rate”).

11. The FCC’s vertical foreclosure model estimates critical departure rates for instances of permanent as well as temporary foreclosures. Permanent foreclosure involves a once-and-for-all withholding of programming from a rival MVPD. This means that the foreclosing MVPD will permanently lose advertising revenues and retransmission consent fees from those customers who choose to remain with the rival MVPD. Accordingly, the foreclosing MVPD would need to attract a sizable portion of its rival’s customers in order to make up for such a loss. On the other hand, temporary foreclosure assumes that the foreclosing MVPD will eventually provide programming to its rival, and it will regain lost advertising revenues and retransmission consent fees. Thus, its cost of foreclosure is less than under a permanent foreclosure scenario, and the critical departure rate is also notably lower.

12. The areas of programming provided by the vertically integrated MVPD can be categorized as: programming from owned and operated (O&O) stations; programming from NBCUniversal national cable networks; and programming from regional sports networks (RSNs). NBC has O&O stations in ten designated market areas (DMAs). As part of its review of the Comcast-NBCUniversal transaction, the Commission analyzed the possibilities of vertical foreclosure in six of these ten DMAs; i.e., those where Comcast provided video distribution services.¹² A Comcast-TWC merger would result in three additional DMAs being added to this list (Los Angeles, Dallas-Ft. Worth, and San Diego) and would expand the MVPD market share in two DMAs in which both Comcast and TWC operate (Hartford-New Haven and New York).

13. Comcast has ownership in 12 RSNs,¹³ nine of which (per Drs. Rosston and Topper) carry major league professional sports. TWC has two RSNs that carry the Los Angeles Lakers, carries

¹² These are: Philadelphia, Chicago, San Francisco, Miami, Washington DC, and Hartford-New Haven. Comcast also provides video distribution service in the New York DMA, but the Commission did not include this O&O market from its analysis because it deemed Comcast’s market share in this DMA (9.2%) to be minor. Comcast-NBCUniversal Order at paragraph 130 (footnote 310).

¹³ Comcast and Time Warner Cable Application and Public Interest Statement In the Matter of Applications of Comcast Corp. and Time Warner Cable Inc. For Consent To Transfer Control of Licenses and Authorizations, MB Docket No. 14-57, April 8, 2014, at page 13.

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qualified RSN content over local stations and has minority interests in other RSNs.¹⁴ Drs. Rosston and Topper represent that subscribership in only two of these RSNs would be materially affected by a Comcast-TWC merger (CSN New England and TWC SportsNet) and therefore are the only RSNs for which a foreclosure analysis needs to be conducted.¹⁵ Also, by way of cable networks, Comcast owns the NBCUniversal national cable networks and Telemundo. TWC owns and manages a number of local news channels, local sports channels, and local lifestyle channels.¹⁶

14. The Commission examined the “potential for withholding access to a local NBC owned and operated television broadcast station (“O&O”) from an MVPD service that competes directly with Comcast” in MB Docket No. 10-56.¹⁷ That is, it applied its vertical foreclosure model to the six O&O markets in which Comcast had a material presence. In the current proceeding, the Commission has requested that critical departure rates be calculated for the affected NBC O&O markets, as well as for RSNs and NBCUniversal’s national cable networks.¹⁸ Thus, Drs. Rosston and Topper calculate critical departure rates for the five O&O markets and two RSN markets for which subscribership will be affected by a merger of Comcast and TWC, and for a single national market for NBCUniversal cable networks (which covers all U.S. DMAs.)

15. A critical departure rate refers to the percentage of customers who will leave a rival MVPD as a result of foreclosure. That is, there is a unique critical departure rate for each rival MVPD within each of the eight markets described above (five O&O markets plus two RSN markets plus one national cable network market).¹⁹ In addition, as discussed earlier, critical departure rates are estimated for both permanent and temporary foreclosure cases. The Commission calculated critical departure rates for DirecTV, DISH, Verizon and AT&T in the Comcast-NBCUniversal proceeding. Drs. Rosston and Topper also include RCN as an MVPD in the current proceeding. Thus, the vertical foreclosure analysis includes consideration of up to 40 critical departure rates (i.e., five MVPDs x eight markets). In practice, however, not all MVPDs

¹⁴ Comcast and Time Warner Cable Application and Public Interest Statement, at page 16.

¹⁵ Comcast has a majority ownership interest in CSN New England and TWC owns TWC SportsNet. Rosston-Topper Report at paragraphs 168-170.

¹⁶ Comcast and Time Warner Cable Application and Public Interest Statement, at pages 7-16.

¹⁷ Comcast-NBCUniversal Order, Appendix B at paragraph 2.

¹⁸ Rosston-Topper Report at paragraph 132.

¹⁹ Critical departure rates can also be estimated for all O&Os and/or for all MVPDs. Rosston-Topper Report at paragraphs 138-140.

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carry all of the involved NBCUniversal and/or TWC stations or networks; 33 critical departure rates are calculated by Drs. Rosston and Topper.²⁰

16. The algebra used in the FCC's vertical foreclosure model was initially provided as part of the Commission's proceeding concerning the News Corp.-DirecTV transaction²¹ and has been expanded upon in the Commission's proceeding on the Comcast-NBCUniversal transaction.²² In addition, Drs. Rosston and Topper have replicated and, in a few selected areas, expanded upon the FCC's basic model in the report filed as part of the current proceeding.²³

17. Estimating the critical departure rate under conditions of permanent foreclosure is a relatively straight-forward exercise. However, such estimation is more complex under conditions of temporary foreclosure in order to account for the timing of various effects, notably the timing and churning of customers. Under temporary foreclosure, some rival MVPD customers will both churn away (in response to foreclosure) and churn back (after programming is restored). Thus, the model needs to take account of "the timing of the subscriber acquisition costs as well as the timing of consumers' return to their original MVPD," among other factors.²⁴ This requires that a discounted cash flow (DCF) approach be applied to the temporary foreclosure model. Drs. Rosston and Topper incorporated additional timing assumptions for churn,²⁵ and for profits (segmented to include profits per subscriber during the first year versus subsequent years).²⁶

²⁰ Verizon does not operate as an MVPD in Hartford-New Haven and RCN does not provide service in Hartford-New Haven, Dallas-Ft. Worth, Los Angeles and San Diego. Also, neither DISH nor RCN carry TWC SportsNet.

²¹ News Corp-Hughes Order, Appendix D.

²² Comcast-NBCUniversal Order, Appendix B and Israel-Katz February 2010 Report.

²³ Rosston-Topper Report, Technical Appendix, Section III.

²⁴ News Corp-Hughes Order, Appendix D at paragraph 13, and An Economic Analysis of the News Corp/DirecTV Transaction, Daniel L. Rubinfeld, Duncan Cameron, Federal Communications Commission Presentation, August 19,2003.

²⁵ Specifically by expanding a single churn variable into four parts: 1) churn covering the first month following the end of the foreclosure period; 2) churn covering months two through 12 following the end of the foreclosure period; 3) churn covering months 13 through 24 following the end of the foreclosure period; and 4) churn covering months 24 plus following the ends of the foreclosure period.

²⁶ Rosston-Topper Report, Technical Appendix at paragraphs 29 and 31. Churn is designated as c , with \tilde{c} ("c-tilde") denoting the present discounted value factor on the proportion of consumers that remain with Comcast in months 1 through 12, and \hat{c} ("c-hat") covering the present discounted value factor in

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18. The vertical foreclosure analysis is only conclusive when the theoretical (critical departure rate) calculation is placed into context against likely actual departure rates. Historic experience concerning the impact that programing blackouts had upon MVPD subscribership provides an indication of actual departure rates for associated durations of foreclosure. However, historic levels of blackout duration, or even recent trends, do not necessarily indicate the behavior that a vertically integrated MVPD will pursue.

19. The departure rates associated with foreclosure can be approximated by actual occurrences of programming blackouts that follow disputes between broadcasters and MVPDs over retransmission consent fees. An MVPD may observe a decline in customers during and/or following such a blackout event. However, such departures may reflect a range of factors in addition to dissatisfaction over withheld programming. Thus, the Commission employed a difference-in-differences regression in which a treatment group (i.e., the DMAs in which programming was withheld) is compared to a control group (where programming was provided as usual).²⁷

20. Recall that the calculation of critical departure rates (under temporary foreclosure) involves a discounted cash flow, so the duration of the foreclosure of programming has an impact on results. That is, the calculated critical departure rate is highly dependent upon the assumed duration of foreclosure. Thus, comparing the critical departure rate with an actual departure rate requires symmetry in the foreclosure duration. As will be shown, shorter foreclosure durations produce relatively high critical departure rates and relatively low estimated actual departure rates, while the results for longer durations of foreclosure are largely reversed. Thus, the shorter the duration of a temporary foreclosure, the less profitable it tends to be for a vertically integrated MVPD.

A. CRITICAL DEPARTURE RATES

21. Arithmetically, the critical departure rate is significantly determined by the diversion rate (α) and the duration of foreclosure (through π and c), as is shown in the formulas provided by the Commission and by Drs. Rosston and Topper.²⁸ The diversion ratios represent the percentage of the customers who left the rival MVPD and who then chose to sign onto Comcast

Continued from previous page

subsequent months. Profit is designated as π with π_1 covering average profits from new subscribers during the first year and π_2 covering profits in subsequent periods.

²⁷ Comcast-NBCUniversal Order, Appendix B at paragraphs 30-35.

²⁸ Comcast-NBCUniversal Order, Appendix B at paragraph 10, and Rosston-Topper Report, Technical Appendix at paragraph 30-31.

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as a customer. The Commission's vertical foreclosure model calculated the diversion rate using subscriber market share data.²⁹

22. The rate at which customers departing from a rival MVPD will become Comcast-TWC customers is greater than is the case for stand-alone Comcast in the five O&O markets included in the Rosston-Topper analysis because the combined market shares of Comcast and TWC are greater than that for Comcast by itself. The pre-transaction diversion rates for Comcast and the post-transaction diversion rates for the combined Comcast-TWC are provided in **Table 1**. The table shows the diversion rates for the five rival MVPDs in the five O&O programming markets. (As noted earlier, TWC does not have a presence in the other five NBC O&O markets, so the addition of TWC to Comcast will not have an effect there.) As shown in the table, the diversion rates increase post-transaction in the two O&O markets where Comcast currently operates (Hartford-New Haven and New York), and increase from zero percent to considerably higher levels in the O&O markets where Comcast does not currently operate.

23. Pre- and post-transaction diversion rates are also provided for the NBCUniversal national cable network programming market and for the two RSN markets in **Table 2**.

24. Because it is a theoretical model, critical departure rates can be calculated for a range of foreclosure durations. In its review of the Comcast-NBCUniversal transaction, the Commission relied on evidence from a retransmission consent dispute between Fisher Communications and DISH, which lasted approximately six months.³⁰ Accordingly it calculated critical departure rates using a six month foreclosure duration. Drs. Rosston and Topper used a foreclosure duration equal to one month in their calculations of critical departure rates.³¹ As I indicated earlier, the selection of foreclosure duration has a very significant impact on the calculation of critical departure rates as well as upon estimated actual departure rates.

25. The critical departure rates for the five rival MVPDs in the five NBC O&O programming markets for duration foreclosures of from one month through six months are provided in **Tables 3 A-F**. The critical departure rates calculated for the national average for all 10 NBC O&O

²⁹ The calculation of diversion ratio for a direct broadcast satellite (DBS) MVPD rival is equal to: $Sc / (1 - Sr)$, where Sc denotes the market share of Comcast in a region, and Sr denotes the market share of the rival MVPD. From Rogerson Report at pages 33-34. Also, customers may have preferences toward a specific type of MVPD (i.e., DBS versus other). The Commission made adjustments for this in its analysis of the Comcast-NBCUniversal transaction (Comcast-NBCUniversal Order, Appendix B at paragraphs 13-16). Drs. Rosston and Topper also make allowance for this adjustment (Rosston-Topper Report, Technical Appendix at paragraph 28). Drs. Rosston and Topper calculate diversion ratios based on 2Q2014 subscriber share data as estimated by SNL Kagan.

³⁰ Comcast-NBCUniversal Order, Appendix B at paragraph 31.

³¹ Rosston-Topper Report at paragraph 143.

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programming markets for foreclosures of from one month through six months are shown in **Table 4**. The critical departure rates calculated for the average for NBCUniversals' national cable networks for foreclosures of from one month through six months are shown in **Table 5**, and a similar table for the two RSNs is shown in **Table 6**. Finally, a comparison of the critical departure rates for the five O&O programming markets calculated for a foreclosure duration equal to one months versus that for six months is provided in **Table 7**. In all cases, for purposes of this report, I have adopted the assumptions and inputs used by Drs. Rosston and Topper in their update, such as the profit by subscriber per month and the cost of customer acquisition.

26. As demonstrated in the tables, the calculated values for critical departure rates decline as foreclosure duration increases (e.g., from one month to six months). That is, longer foreclosure durations reduce the threshold value for critical departure that the Commission compares to actual departure rates in its determination of whether or not a foreclosure strategy would be expected to be profitable to the combined Comcast-TWC.

27. It is also informative to examine the pre- and post-transaction critical departure rates for the two O&O programming markets where Comcast currently operates. **Tables 8 and 9** show the pre- and post-transaction critical departure rates for the New York and Hartford-New Haven O&O programming markets. **Figures 1 and 2** provide a graphic representation of the changes in the critical departure rates for DISH in these markets. The tables and figure demonstrate that the calculation of critical departure rates are greatly affected by the addition of TWC subscribers to the base of Comcast's current market, as well as by the duration of foreclosure. The impact of adding TWC customers to the calculation of critical departure rates is particularly noticeable in the New York O&O market, where the critical departure rate for DISH drops from a pre-transaction level of {{ }} (assuming a one month foreclosure duration) to {{ }} on a post-transaction basis, and from {{ }} (pre-transaction assuming a six month foreclosure) to {{ }} (post-transaction).

B. COMPARISON WITH ACTUAL DEPARTURE RATES

28. Regression analysis of the departure rates of customers from affected MVPDs during and following blackouts of programming, specifically difference-in-differences regression, is informative because it seeks to isolate the impact of foreclosure of programming from other factors that affect customer decisions.³²

29. In its review of the Comcast-NBCUniversal transaction, the Commission selected a retransmission consent fee dispute between Fisher Communications and DISH that occurred between December 17, 2008 and June 10, 2009 (a foreclosure duration equal to roughly six months) as its basis for estimating an actual departure rate to compare to theoretical critical departure rates. The regression results and supporting data were redacted in the Commission's

³² Comcast-NBCUniversal Order, Appendix B at paragraph 33.

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Comcast-NBCUniversal Order because of the confidential nature of the data. However, counsel for DISH provided me with the data that DISH submitted to the Commission (concerning its dispute with Fisher Communications) as part of that proceeding. I have appended these data, as included in the Declaration of Mr. Vincent Kunz, DISH's Senior Marketing Manager for Reporting and Analytics submitted to the Commission on June 7, 2010, as **Attachment B**.

30. Prior to the blackout, Fisher provided programming on eight ABC, CBS, and/or Fox affiliates and two Univision affiliates to DISH in seven DMAs (Bakersfield, California; Boise, Idaho; Eugene, Oregon; Idaho Falls, Idaho; Portland, Oregon; Seattle-Tacoma, Washington, and Yakima, Washington). Mr. Kunz's Declaration provides data concerning DISH's subscribership in these DMAs before, during and after the blackout period, as well as similar data for DMAs that he identified as comparable and which can be used as a control group in a difference-in-differences regression.

31. These data can be applied to a difference-in-differences regression, as referenced by the Commission in the Comcast-NBCUniversal Order. I have attached the results of this regression as **Table 10**. The weighted regression results indicate that there was a {{ }} of DISH subscribers in foreclosed DMAs for the second quarter of 2009. The weighted regression coefficient estimate for the interaction between the second quarter of 2009 variable and the affected DMAs is {{ }}, indicating that the loss of subscribers in the affected DMAs during the blackout period was roughly {{ }} higher than that experienced in the control group. I have not seen the results of the Commission's analysis of these data, but expect that it is identical or close to the results provided in **Table 10**.

32. In the Comcast-NBCUniversal proceeding, the Commission found that the estimated actual departure rate was greater than the theoretical threshold (critical) departure rate, and accordingly concluded that foreclosure could be a profitable strategy for Comcast. Specifically, it found that "comparison of the actual departure rate estimated from the DISH data with the critical (departure rate) values for the temporary foreclosure model demonstrates that post-transaction Comcast would almost always profit by temporarily withholding coverage of NBC broadcast stations from MVPD rivals."³³

33. Drs. Rosston and Topper estimated a very different actual departure rate in their September 2014 report. Their regression analysis produced a coefficient estimate for the interaction between the affected time period and the affected DMAs equal to {{ }}, implying that the subscriber loss rate in the affected DMAs was only {{ }} higher than was the case for the control group.³⁴ The significant difference between the two regression results is primarily due to the underlying durations of foreclosure, or blackout periods.

³³ Comcast-NBCUniversal Order, Appendix B at paragraph 35.

³⁴ Rosston-Topper Report at paragraph 158.

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34. As indicated above, the blackout period associated with the Fisher-DISH dispute was roughly six months in duration, while the blackout period used by Drs. Rosston and Topper in their regression analysis (associated with the dispute between CBS and TWC in 2013) was only one month long.³⁵ Drs. Rosston and Topper stated that they used a shorter duration of foreclosure than used by the Commission in its review of the Comcast-NBCUniversal transaction because the Fisher-DISH event no longer provides a reliable benchmark for departure rates as a result of “rapid changes in the video marketplace in recent years.”³⁶ Instead, they set criteria through which they sorted through recent blackout events, ultimately selecting two events occurring in 2013, only one of which yielded statistically significant results. Drs. Rosston and Topper did not explain the specific aspects of the video market that now make the Fisher-DISH dispute irrelevant for consideration in this proceeding, nor do they explain how recent events have changed the incentives for a vertically integrated MVPD to foreclose upon rival MVPDs.

35. As I discussed earlier, the selection of foreclosure duration has a very large impact on the results of a vertical foreclosure analysis. Using shorter foreclosure durations in the vertical foreclosure analysis result in modestly higher critical departure rates and in much lower actual departure rates than is the case when longer foreclosure durations are applied. As is shown in **Table 11A and 11B**, the two approaches (applying shorter vs. longer foreclosure durations) lead to completely different conclusions concerning the profitability of a foreclosure strategy by a vertically integrated MVPD.

36. **Table 11A and 11B** provide the critical departure rates for the five rival MVPDs in NBC’s five O&O programming markets calculated for two cases: one using a foreclosure duration equal to one month and the other using a foreclosure duration equal to six months. The tables also compare the calculated critical departure rates with the associated estimated actual departure rates. (Positive values in the lower portion of the tables indicate that actual departure rates are greater than critical departure rates.) The tables indicate that the critical departure rates are higher than the associated estimated actual departure rates in {{

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when the foreclosure duration is short (**Table 11A**), leading to the conclusion that adding TWC to Comcast “will not increase Comcast’s incentive to foreclose access ... to rival MVPDs.”³⁷ However, quite the opposite conclusion can be drawn when the foreclosure duration is six months long. There, the actual departure rate is higher than the calculated critical departure rates in {{ }} out of 20 instances (**Table 11B**).

³⁵ SNL Kagan data indicates that the CBS blackout of TWC lasted from August through September 2013 for a duration of 31 days.

³⁶ Rosston-Topper Report at paragraph 143.

³⁷ Rosston-Topper Report, at paragraph 5.

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37. The very notable difference across the two results is intuitively understandable. Customers of an MVPD tend not to immediately respond to disruptions in programming because of the time and effort associated with changing providers, the expense associated with breaking contracts and/or acquiring new equipment, and/or the possibility that they may not immediately notice a service disruption. However, customers will respond accordingly when they conclude that a service disruption of valued programming may be prolonged. Thus, it is not surprising that short term programming blackouts result in lower levels of customer departures than do longer term programming blackouts.

38. Actual and critical departure rates can also be compared for the NBCUniversal national cable networks and RSN programming markets. As noted earlier, the Commission did not conduct a vertical foreclosure analysis on these programming markets in its review of the Comcast-NBCUniversal transaction, but had requested that Drs. Rosston and Topper include these in an updated analysis. Drs. Rosston and Topper concluded that the actual departure rate for NBCUniversal national cable networks is probably lower than the estimated departure rates for NBC's O&O programming, so they used a departure rate equal to {{ }} of the value estimated in the difference-in-differences regression analysis {{ }}. They apply this same value as an estimate of actual departure rates for RSN programming.³⁸

39. **Tables 12A and 12B** provide an analysis similar to that shown in **Tables 11A and 11B** above. The tables provide the critical departure rates for the five rival MVPDs in the markets for NBCUniversal's national cable networks and the two RSNs under review, calculated for two cases: one using a foreclosure duration equal to one month and the other using a foreclosure duration equal to six months (again, accepting *arguendo* all assumptions and inputs used by Drs. Rosston and Topper other than foreclosure duration). This analysis yields results similar to those produced with respect to the O&O programming markets. That is, critical departure rates are {{ }} than the associated estimated actual departure rates when the foreclosure duration is short (**Table 12A**), while the results are quite different when a longer duration of foreclosure is applied. There, actual departure rates exceed calculated critical departure rates with respect to {{ }} rival MVPDs in the RSN programming markets as well as for {{ }} rivals {{ }} in the national cable network market.

C. FORECLOSURE DURATION

40. I disagree with the approach taken by Drs. Rosston and Topper in selecting the foreclosure event that they used in estimating the actual departure rate and, by extension, the

³⁸ Rosston-Topper Report, at paragraphs 164-166 and paragraph 172. I am uncertain as to the accuracy of their representations in this regard, but apply this same approach for purposes of this report.

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foreclosure duration that should be applied in calculating the critical departure rates.³⁹ Drs. Rosston and Topper appear to be looking for the latest trend (concerning duration) with respect to blacking out programming and then assume that a vertically integrated MVPD would act along these same lines when negotiating retransmission consent fees with rival MVPDs. The programmers represented in the panel of blackout events (which they consider for purposes of selecting foreclosure events) are not vertically integrated MVPDs to the degree that Comcast-TWC would be vertically integrated with NBCUniversal. CBS, the broadcaster involved in the blackout event that Drs. Rosston and Topper rely upon to estimate an actual departure rate, was not motivated to foreclose its programming from TWC in order to gain customers from a rival MVPD, as may be the case for a vertically integrated MVPD such as Comcast-TWC-NBCUniversal.

41. The results of the difference-in-differences regression analysis provided by Drs. Rosston and Topper provides an indicator of the extent that a MVPD (rival or not) may experience losses of customers following a blackout of programming for a period lasting one month. Similarly, the results of the regression analysis reflecting the Fisher-DISH dispute provides an indication of the extent to which an MVPD may experience losses of customers following a blackout of programming for a period lasting six months. By basing their analysis solely on a recent incident involving a one month blackout period, Drs. Rosston and Topper mistakenly assume that a merged Comcast-TWC MVPD that is vertically integrated with NBCUniversal would behave in this same fashion. As introduced earlier, in conducting a vertical foreclosure analysis in the current proceeding, the Commission is investigating the “possibility that an integrated video firm may exploit its ability to exclude its distribution rivals from access to its programming...to harm competition in video distribution.”⁴⁰ This means that a range of realistic foreclosure durations should be considered, instead of a single comparatively short blackout event. The analysis presented by Drs. Rosston and Topper provides, at most, an indication that a vertically integrated MVPD would need to foreclose programming from its rival for more than one month in order for such a strategy to be profitable. Evidence from the Fisher-DISH dispute indicates that such a foreclosure strategy would certainly pay off after six months, with the likely break-even falling somewhere between one and six months.

³⁹ Rosston-Topper Report, Technical Appendix at paragraph 45. Drs. Rosston and Topper selected programming blackout events based on programming blackouts which: occurred since 2012; involved a broadcaster or O&O programing (carrying one of the Big Four networks) and one of the four major non-cable MVPDs (i.e., DISH, DirecTV, AT&T, or Verizon); affected five or more DMAs (including some of the top 50 DMAs in the U.S.); and, lasted at least 30 days.

⁴⁰ Comcast-NBCUniversal Order at paragraph 34.

III. Bargaining Model

42. The Commission adopted a Nash bargaining model to determine the magnitude of price changes that may have followed the merger of Comcast and NBCUniversal in MB Docket No. 10-56. This analysis was also updated by Drs. Rosston and Topper to reflect the addition of TWC to the Comcast footprint.

43. Nash bargaining models are used to predict the change in price (for a product or service) following a change in its underlying cost and/or the bargaining strengths of the parties involved. The Commission applied a Nash bargaining model to its review of the Comcast-NBCUniversal transaction because retransmission consent fees and cable network affiliation fees are bilaterally negotiated between a programmer and an MVPD, with the combined Comcast-NBCUniversal negotiating these arrangements with Comcast's MVPD rivals. Standard bargaining theory predicts that a firm will charge higher prices if either its bargaining position increases or its negotiating partner's position worsens.⁴¹ The Commission reasoned that a vertically integrated Comcast-NBCUniversal would have an improved bargaining position (i.e., above that of either Comcast or NBCUniversal by themselves) because failure to reach an agreement on retransmission consent fees with a rival MVPD could likely lead to some of the rival's customers to shift their subscribership to Comcast, and Comcast would profit from gaining these additional customers. From this perspective, post-transaction Comcast would face an increase in its opportunity cost, equal to the profits that it would realize from these new customers.

44. The Nash bargaining formulation of price increases is: $\Delta P = (1-\mu)\Delta C$, where P denotes price, C denotes opportunity cost, $1-\mu$ denotes the bargaining skill of the rival MVPD, and μ denotes the bargaining skill of Comcast-NBCUniversal.⁴² The change in price (ΔP) reflects the difference between the current level of retransmission consent fees and the level of fees that are predicted to be in place following a vertically integrating merger. The change in opportunity cost is further defined as $\Delta C = \alpha \times d \times \pi$, where α denotes the diversion rate and d denotes the actual departure rate, as was discussed in Section II above. The variable π denotes Comcast's per subscriber profit for MVPD services. In other words, the change in opportunity cost is equal to the profit that Comcast could expect to realize from the new customers that it would gain ($\alpha \times d$).

45. In its review of the Comcast-NBCUniversal transaction, the Commission calculated the potential post-transaction price impact (ΔP) in percentage terms (i.e., $\Delta P /$ current retransmission

⁴¹ Comcast-NBCUniversal Order, Appendix B at paragraph 36.

⁴² Comcast-NBCUniversal Order, Appendix B at paragraph 39. A more comprehensive discussion and explanation of the bargaining formulas used in this document is provided in the Rogerson Report and in Vertical Mergers in the Video Programming and Distribution Industry: The Case of Comcast-NBCU, William P. Rogerson, mimeo and in The Antitrust Revolution Economics, Competition and Policy, Sixth Edition, 2013, John E. Kwoka, Jr. and Lawrence J. White.

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consent fees per subscriber) in order to consider the materiality of potential price increase against established benchmarks, specifically the U.S. Department of Justice’s Horizontal Merger Guidelines which uses a price increase threshold of five percent.⁴³

46. The updated analysis by Drs. Rosston and Topper was conducted for the affected NBC O&O DMAs, the NBC national cable network programming market and the two RSN programming markets described above. The value for the profit variable (π) in the Nash bargaining model was derived from Comcast’s 2014 regional “profit and loss” statements.⁴⁴ In their update, Drs. Rosston and Topper use a specific average profit per video subscriber for each DMA in the O&O analysis,⁴⁵ and an average profit level for the analysis of national cable networks and RSNs. Drs. Rosston and Topper also applied the values for μ and $1-\mu$ that were used by the Commission in MB Docket No. 10-56.⁴⁶

47. Updating the analysis considered by the Commission in its review of the Comcast-NBCUniversal transaction involves modifying the diversion ratios for Comcast to those that reflect the combined Comcast-TWC. Thus, for the updated analysis, $\Delta P = (1-\mu) \times d \times (\alpha_{post} - \alpha_{pre}) \times \pi$. The difference between post- and pre-diversion rates ($\alpha_{post} - \alpha_{pre}$) reflects the incremental impact that adding TWC customers will have on the market share of a combined Comcast-TWC.

48. As discussed earlier, TWC has no or an immaterial presence in five O&O markets (Chicago, Miami, Philadelphia, San Francisco and Washington DC), so an update to the

⁴³ Horizontal Merger Guidelines, U.S. Department of Justice and the Federal Trade Commission, August 19, 2010. Section 4.1.2: “The Agencies most often use a (small but significant and non-transitory increase in price) SSNIP of five percent.”

⁴⁴ Rosston-Topper Report, Technical Appendix at paragraph 21 and Comcast-NBCUniversal Order, Appendix B at paragraph 22.

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⁴⁶ Comcast-NBCUniversal Order, Appendix B at paragraph 40. The Commission set values for $\mu = 2/3$ for Comcast-NBCUniversal in the O&O programming market and $\mu = 1/2$ for the national cable network and RSN programming markets (although the Nash bargaining model was not applied to these latter markets in MB Docket No. 10-56. These values for μ are used by Drs. Rosston and Topper in their update analysis (Rosston-Topper Report at paragraph 165 and {{
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Commission’s prior analysis is not required.⁴⁷ However, updates are required for the five remaining O&O markets (Hartford-New Haven, New York, Dallas-Ft. Worth, Los Angeles and San Diego) and for the NBCUniversal national cable network and RSN markets.⁴⁸ The impacts upon diversion rates of the addition of TWC to Comcast’s footprint were shown earlier in **Tables 1 and 2**.

49. The remaining variable (d) is the actual departure rate that was discussed at length in the prior section. The linear nature of the above formula means that a change in d will be readily apparent in the resulting ΔP . The percent change in prices calculated applying the Nash bargaining formula and using the actual departure rate used by Drs. Rosston and Topper ({{ }} for the O&O programming market and {{ }} for the NBCUniversal national cable network and RSN programming markets) is shown in **Tables 13 and 14**. The tables indicate that only relatively low levels of prices increases would be expected as a result of a merger between Comcast and TWC, based on the application of these departure rates to the Nash bargaining model. This analysis led Drs. Rosston and Topper to conclude that there is “no basis for the conclusion that the proposed transactions are likely to result in retransmission consent or affiliate fee increases to rival MVPDs.”⁴⁹

50. Not surprisingly, the results of the Nash bargaining analyses are quite different when departure rates based on the Fisher-DISH regression analysis are applied: ({{ }} for the O&O programming market and {{ }} for the NBCUniversal national cable network and RSN programming markets). The results of the Nash bargaining analysis using these departure rates are shown in **Tables 15 and 16**. The results included in Table 15 indicate that price increases of greater than five percent can be expected in {{ }} of 20 instances (i.e., 5 MVPDs x 5 DMAs, less 5 cases in which an MVPD does not carry an NBC O&O signal).

51. The extent to which price increases of greater than five percent (predicted using the Nash bargaining model) vary depending upon the value assigned to d is demonstrated in **Table 17**. As shown in table, the number of instances in which prices are predicted to increase by more than five percent in the O&O programming market rises significantly as the value for the departure rate increases. Prices are predicted to increase above the five percent threshold in roughly {{ }} of cases when the departure rate is equal to 3.0% and in roughly {{ }} of cases when

⁴⁷ Alternatively, for these markets, $\alpha_{pre} = \alpha_{post}$.

⁴⁸ There is no Comcast presence in the Dallas-Ft. Worth, Los Angeles and San Diego DMAs, so $(\alpha_{post} - \alpha_{pre}) = \alpha_{post}$. Comcast has a presence in the Hartford-New Haven and New York DMAs and in the NBCUniversal national cable network and RSN programming markets, so the addition of TWC will mean that $0 < \alpha_{pre} < \alpha_{post}$.

⁴⁹ Rosston-Topper Report at paragraph 180.

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the departure rate is equal to 4.0%. Finally, prices are predicted to increase by more than five percent in {{ }} of the cases analyzed for the O&O programming markets when the departure rate is equal to 5.0%.

52. The findings here are very similar to those associated with the updated vertical foreclosure analysis. As is demonstrated in **Tables 13, 14, 15, 16 and 17**, lesser values used for departure rates result in low levels of predicted price increases. Applying a higher value for the departure rate (of 3%, 4% or 5%) would complete reverse Drs. Rosston and Topper's conclusion that the merger of Comcast with TWC "will not increase Comcast's incentive to ... raise prices of programming to rival MVPDs."⁵⁰

IV. Conclusion

53. The purpose of using vertical foreclosure and Nash bargaining models (as applied to the review of the Comcast-NBCUniversal transaction) was to assist the Commission in determining whether or not vertical integration would provide the combined entity with incentives to engage in strategies that may ultimately harm competition in the MVPD market. Updating these analyses as part of the current proceeding involves examining the incremental effects of adding TWC to Comcast-NBCUniversal. Most of the inputs required of the model are based on directly observable data, such as the number of customers served by an MVPD in a defined DMA. However, considerable judgment is required with respect to incorporating the duration of foreclosure in the models, and model results are highly dependent upon this parameter.

54. Drs. Rosston and Topper's conclusion that the merger of Comcast with TWC "will not increase Comcast's incentive to foreclose access to or raise prices of programming to rival MVPDs" is entirely dependent upon their applying a foreclosure of short duration to their analysis.⁵¹ Because the vertical foreclosure and Nash bargaining models are highly sensitive to the duration of foreclosure, changing this value can completely reverse their conclusion.

55. Drs. Rosston and Topper base their conclusion upon a single point estimate of foreclosure duration, driven by their review of recent data concerning programming blackouts. Observations concerning customer responses to programming blackouts inform the results that MVPDs can expect when programming is withheld, and a review of the blackout dataset may also provide information concerning blackout trends in general. However, the combined Comcast-TWC would face different incentives than most (if not all) of the parties included in the database. Thus, it cannot be assumed that Comcast-TWC would follow these behaviors and act to settle negotiations concerning retransmission consent and affiliate fees quickly.

⁵⁰ Rosston-Topper Report at paragraph 5.

⁵¹ Rosston-Topper Report at paragraph 5.

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56. Basing a conclusion concerning vertical foreclosures and potential price increases exclusively upon the CBS-TWC dispute is also misleading. It suggests that a broad range of foreclosure durations were studied (rather than a single observation) and the duration used somehow represents the behavior expected from a vertically integrated MVPD. Based on the evidence presented, a more reasonable conclusion is that foreclosures longer than one month and less than six months would be profitable to Comcast-TWC and would lead to price increases to rivals. This conclusion is nearly identical to that reached by the Commission in the Comcast-NBCUniversal Order. Therefore, the central conclusion from a more complete consideration of possible foreclosure strategies (using the Commission's own model) is that foreclosure would be profitable for Comcast-TWC.

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The foregoing declaration has been prepared using facts of which I have personal knowledge or based upon information provided to me. I declare under penalty of perjury that the foregoing is true and correct to the best of my information, knowledge, and belief.

Executed on December 22, 2014.



William P. Zarakas
Principal
The Brattle Group

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TABLES AND FIGURES

Redacted in their entirety.

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**ATTACHMENT A:
CURRICULUM VITAE OF
WILLIAM P. ZARAKAS**

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William P. Zarakas is a Principal with The Brattle Group, an economics consulting firm, and an expert on economic and regulatory matters involving the communications and energy industries. He has worked on a wide range of issues concerning the telecommunications and media industries, including cost and pricing analyses in regulated industries, economic feasibility analyses associated with building-out broadband infrastructure, valuation of wireless spectrum, and, analyses rates and the distribution of royalties in the cable and satellite television industries.

Mr. Zarakas also has extensive experience in analyzing the economics and regulation of utility infrastructure and the evolving factors that are affecting utility business models. Recent applications of this focus include the impacts of fuel switching and distributed generation resources on utility business models and cost-benefit analyses relating to utility investments in smart grids and system resiliency. Mr. Zarakas also works on matters pertaining to the valuations of utility assets and businesses, and has examined the impacts of investment levels, operational performance, operating cost levels, and rates on utility equity prices and on customer satisfaction.

Mr. Zarakas has provided testimony and expert reports before the Federal Communications Commission, the Federal Energy Regulatory Commission, the Securities and Exchange Commission, the Copyright Royalty Judges (Library of Congress), the U.S. Congress, state regulatory agencies, arbitration panels, foreign governments and courts of law. He has led (and authored reports concerning) special investigations on behalf of corporate boards of directors and audits of management practices and operational and financial performance on behalf of regulatory commissions. He holds an M.A. in economics from New York University and a B.A., also in economics, from the State University of New York.

Communications Economics and Valuations

- **Cost Modeling:** Developed model that estimated the cost of deploying mobile broadband in rural areas, on behalf of GCI. Authored expert report and presented model and conclusions to the FCC In The Matter Of Connect America Fund and Universal Service Reform – Mobility Fund.
- **Royalty Distribution:** Analyzed costs and value of retransmitted television programming in cable and satellite video markets and determined distribution of copyright royalty fees among content providers. Authored expert report Before The Copyright Royalty Judges, Library of Congress, Washington D.C. In The Matter of Distribution of the 2004 and 2005 Cable Royalty Funds, Docket No. 2007-3 CRB CD 2004-20. June 1, 2009

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- Spectrum Valuation: Directed, authored reports, and/or provided expert testimony in cases involving valuations of wireless spectrum valuation. Cases involved determining market comparable values and performing discounted cash flow (DCF) and econometric-based analyses. Analyses were conducted on behalf of communications carriers, regulatory and governmental agencies in the U.S. and abroad, capital management companies, financial institutions and debtors.
 - Conducted analyses and authored expert report estimating value of Mobile Satellite Service (MSS) spectrum (i.e., the 2 GHz Band from 2000-2020 MHz and 2180-2200 MHz, the Big LEO from 1610-1626.5 MHz and 2483.5-2500 MHz, and the L-band from 1525-1559 MHz and 1626.5-1660.5 MHz) in several matters, including matters involving the Terrestar bankruptcy. Analyses included impact of incorporating FCC authorized ancillary terrestrial component (ATC) into MSS mobile broadband networks.
 - Analyzed spectrum values in the 2.3 and 2.5 GHz bands for the U.S. market.
 - Analyzed value of Advanced Wireless Services (AWS; 1.7 / 2.1 GHz) band for the U.S. market.
 - Analyzed value of unpaired 2.1 GHz spectrum for the U.S. market.
 - Analyzed value of 2.3 GHz (WCS) 3.5 GHz (FWA) spectrum in Canadian market.
 - Authored report concerning market comparable analysis of U.S. PCS market.
 - Provided expert testimony concerning potential value of wireless spectrum in the 700 MHz band.
 - Analyzed value of Specialized Mobile Radio (SMR) and Private Land Mobile Radio Services (PLMRS) spectrum on behalf of utility operating companies in the U.S. market.
 - Analyzed value of narrowband PCS and IVDS spectrum portfolio.
 - Directed, led analysis and authored report concerning valuations of wireless spectrum in the Middle East-North African (MENA) region for an international wireless operator.
 - Directed, led analysis and authored report concerning impact of additional wireless operators on spectrum values for the telecommunications regulator in the Kingdom of Jordan.

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WILLIAM P. ZARAKAS

- International Arbitration (satellite communications): Authored expert report concerning the impact of an alleged breach of contract on lost profits in a 23 country business operation concerning a satellite communications business. Performed detailed financial modeling to determine revenues, net income and net present value using risk adjusted discount rates for a satellite service provider.
- Commercial Litigation (broadband communications): Provided expert testimony concerning the estimate of commercial damages stemming from an alleged breach of contract associated with relocating infrastructure assets. Public Service Company of New Mexico vs. Smith Bagley, Inc. and Lite Wave Communications LLC In The United States District Court For The District of New Mexico. March 2007.
- Commercial Litigation (wireline communications): Developed analysis and supported expert testimony concerning damages associated with cable breaks and disruption of wholesale transport services. Analysis involved estimating lost profits and determining replacement cost of temporarily lost capacity. MCI WorldCom Network Services, Inc. v. MasTec, Inc. before the United States District Court Southern District of Florida, Case No. 01-2059-CIV-GOLD. May 2002.
- Asset Valuations: Directed and led multiple valuation analyses of telecommunications assets and businesses. Projects included valuations of infrastructure assets in multiple markets worldwide. Projects required comprehensive discounted cash flow and net present value analyses, as well as regression and statistical analyses of comparable market transactions. Projects resulted in valuations used in support of negotiations and/or in commercial litigation.

Forensic Analysis and Special Investigations

- Forensic Analysis and Special Investigation: Directed consulting team and authored report for the forensic analysis of the economics, financial reporting and accounting associated with allegation of accounting and financial improprieties by Global Crossing. Worked on behalf of the Special Committee on Accounting Matters composed of a subset of (and reporting to) the Board of Directors of Global Crossing Ltd. Analysis involved determination of basis for revenue recognition for concurrent (i.e., “swap”) transactions. Analysis included in report by

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the Special Committee entitled “The Concurrent Exchange of Fiber Optic Capacity and Services Between Global Crossing and its Carrier Customers.” January 2003.

- Commercial Litigation: Directed expert consulting team in litigation matter concerning the deployment schedule of bandwidth on a major undersea cable project. Case involved allegations of breach of contract. Case work involved modeling of undersea fiber optic bandwidth in major undersea crossings and financial analysis of project viability.
- Forensic Analysis and Securities Litigation: Directed consulting team and led technical analysis concerning accounting and financial disclosure on behalf of the defendant in a class action against corporate officers, directors, controlling shareholders and the company’s outside auditors alleging violations of the Securities Act of 1993 and the Securities Exchange Act of 1934. Scope of case involved accounting and disclosure treatment of complex leases.
- Special Investigations and Audits: Directed project teams, led technical analysis and authored reports in multiple special investigations and audits of management, operations and finance and accounting on behalf of regulatory utility commissions. Special investigations and audits involved allegations of improper cross subsidization and/or transfer pricing practices by regulated utilities (telecommunications, electric and/or natural gas) and their effect on rates charged to consumers. Special investigations and audits were conducted for regulatory commissions in Alabama, Kentucky, Maryland, New York and Pennsylvania.

Rate, Cost, Pricing and Regulatory Analyses

- Cost and Rate Analyses: Conducted for electric utilities concerning deployment of upgraded transmission and distribution infrastructure and smart grid applications.
- Cost and Rate Analyses: Conducted analyses of cost and rates based on cost-of-service and incremental pricing principles for communications services products on behalf of telecommunications and broadband companies in the United States, Europe and Asia.
- Cost and Rate Analyses: For a municipality deploying a Wi-Fi network by using street lights and utility infrastructure. Analysis included determination of cost of service.

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- **Financial and Pricing Analyses:** Conducted comprehensive financial analysis for a broadband communications provider in the U.S. market, including: developing projections of demand, price elasticities, revenue and capital and operating costs, and pricing points.
- **Cost and Rate Analysis:** Expert Witness in the determination of the rates for pole attachments under the FCC's Cable Rate and Telecom Rate Formulas as applied to electric utility distribution assets. Scope of work included development of utility-specific data in place of FCC rebuttable presumptions.
- **Transfer Pricing:** Performed comprehensive studies of affiliate transactions and cost allocations between holding companies and operating subsidiaries on behalf of telecommunications carriers and electric and gas utilities. Report filed before state regulatory commissions and the Federal Communications Commission.
- **Performance Analysis:** Analyzed wholesale access performance measurement systems on behalf of SBC (now AT&T). Project scope included analysis of the statistical validity of performance measures agreed upon by SBC and regulators as part of approval of SBC's provision of long distance services (as part of proceedings concerning Section 271 of the Telecommunications Act of 1996) or are the outcome of negotiations among various parties regarding proposed mergers. Work focused on detailed statistical testing of performance measures to determine whether measures reflected RBOC performance and supported regulatory goals of increased consumer welfare in local exchange markets.
- **Regulatory Frameworks:** Directed and led multiple engagements on behalf of telecommunications carriers, utilities and regulatory commissions concerning the analysis of changes in regulatory frameworks, including: theoretical and quantitative analysis of the impact of adoption of earnings-based and price-based incentive rate plans upon retail prices and service quality; and a study of the impact of alternative regulatory frameworks on ILEC deployment of advanced telecommunications services, performed on behalf of a state regulatory commission.
- **Productivity Analysis:** Directed, led and authored expert report concerning the level productivity offset that should be applied in setting telephone rates on behalf of the New York State Department of Public Service. Scope of work determining total factor

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productivity (TFP) based on empirical analysis and consideration of projected performance improvement and re-engineering initiatives. Work included detailed analysis of efficiency improvement initiatives in network deployment, operations, customer service and marketing.

- **Cost and Rate Analysis:** Expert Witness in multiple U.S. state regulatory proceedings concerning analysis of rates for unbundled network elements (UNEs), undertaken in fulfillment of requirements associated with the Telecommunications Act of 1996, using the Total Element Long Run Incremental Cost (TELRIC) methodology.

Financial and Business Analyses

- **Commercial Litigation:** Developed expert report concerning damages associated with alleged breach of contract concerning gaming licenses in Asian casino markets. Analysis involved estimating projected cash flows under current and “but-for” scenarios.
- **Economic Impact Analysis:** Directed analysis and authored report regarding the effects of changes in regulatory fees and taxes on mobile prices, penetration and the macro economies of 22 countries in the Middle East and Africa. Study, conducted on behalf of a major mobile operator, involved detailed analysis of the relationships between marginal cost and prices, market structure and concentration, and empirical relationships concerning mobile penetration and GDP.
- **Demand Analysis:** Directed analysis and modeling of multiple projects involving the estimation and projection of segmented customer demand.
 - Analyzed U.S. subscriber market for video services.
 - Analyzed subscriber demand for communications services in the United States, Europe, Asia and the Middle East.
 - Led comprehensive analysis of current and projected market shares and competition in the consumer and business markets for network devices. Scope of work included geographic and customer segmentation; modeling included estimation of revenue and margins by segment.

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- Consumer Welfare Analysis: Directed multiple analyses of impact of changes in market structure upon consumers.
 - Performed empirical analysis on panel of approximately 50 countries to demonstrate the effect of changes in levels of competition on prices, investment and other areas of consumer welfare for the global mobile telecommunication industry.
 - Directed analysis and authored white paper on empirical analysis concerning the impact of changing the price of wholesale access and levels of investment in the U.S. telecommunications market. Results reported in white paper entitled: “Structural Simulation of Facility Sharing: Unbundling Policies and Investment Strategy in Local Exchange Markets.”
- Business Case Analysis: Directed and led multiple projects concerning the financial feasibility of entering new lines of business.
 - Led feasibility study concerning development of publishing business for a major communications company. Work required comprehensive financial modeling.
 - Performed comprehensive financial analysis for an infrastructure support company. Scope of work included market and competitive analyses, projections of market shares, cash flow modeling and pricing analysis.
 - Performed comprehensive business case analysis of entry into the broadband market (including voice, internet access and video services) on behalf of a major U.S. electric utility. Scope of work included technology assessment and detailed financial modeling. Work included customer and geographic segmentation, pricing scenarios and elasticity analysis.
 - Led comprehensive financial analysis concerning the deployment of a broadband communications network for an Asian electric utility. Related work included assessing transfer pricing methodologies regarding the use of utility assets, resources and easements by the broadband affiliate.
 - Directed and led analysis of business diversification for multiple electric utilities. Business opportunities analyzed included dark fiber construction and third party use

WILLIAM P. ZARAKAS

of utility poles, towers and conduit. Scope of analysis included financial modeling and transfer pricing.

Utility Strategic and Management Analysis

- **Investment Analysis:** Authored expert report concerning the impact investments in electric and gas utility infrastructure on system reliability and resiliency, especially following major weather events. Primary area of analysis involved estimation of economic value of investments to customers using value of lost load (VOLL) metrics for electric system investments and consumer surplus and value added metrics for gas system investment.
- **Strategic Option Analysis:** Directed Strategic Organizational Analysis for the Long Island Power Authority. Project involved definition and analysis of organizational options (privatization, municipalization and outsourced management services arrangements) available to LIPA going forward. Options were evaluated based on rate impacts and risk factors, including risks associated with organizational transformation. Project required extensive modeling of LIPA operations and financing scenarios, as well as analysis of power and transmission markets. Project work also involved interaction with LIPA's management team, its Board of Trustees and Board sub-committees.
- **Merger Analysis:** Authored expert reports concerning prospective merger savings and divestiture losses for electric and gas utilities. Scope of work included analyses involved in determining the operating and capital impacts of mergers under multiple scenarios, and also involved the anticipated economic inefficiencies resulting from forced divestiture. Reports authored included studies of merger efficiencies and reports concerning Economic Loss Studies included in U-1 filings before the U.S. Securities and Exchange Commission. Economic Loss Studies are required under PUHCA Section 11 (b) (1) Clauses A, B, and C when utility merger results in the establishment of a registered holding company with electric and gas businesses. Work in these areas included detailed analyses of current and hypothetical future electric and gas utility operations.
- **Benchmarking Analysis:** Conducted transmission and distribution (T&D) function benchmarking study for a major Midwestern U.S. electric utility. Study involved comprehensive analysis of capital and operating costs and reliability and the impact that

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changes in expenditure would likely have upon earnings and shareholder value as well as distribution system reliability.

- Valuation: Directed and advised board of directors of a major generation and transmission (G&T) cooperative and its member electric distribution cooperatives on matters concerning: asset valuations, risk management strategy, merger and acquisition options, and outlook for retail electric markets.
- Feasibility Analyses: Conducted financial analyses and economic feasibility studies of new business opportunities for electric and gas utilities (e.g., fuel cell and distributed generation technologies and alternative fuel transportation) on behalf on numerous clients.
- Transfer Pricing: Authored reports and provided expert testimony on matters of affiliate transfer pricing, corporate overhead allocation, cost allocation, and cross-subsidization, performed on behalf of electric utilities and regulatory commissions. Also, analyzed business separation and affiliate safeguards regarding flow of information, systems access, marketing controls, employee and intellectual transfers and cost allocations for U.S. utilities.
- Rate Analysis: Conducted analyses of major utility capital investment, demand and consumption and cost-of-service performed on behalf of multiple electric and gas utilities and applied in utility rate cases before state and federal regulatory commissions
- Valuation: Performed asset valuation project on generation, transmission and distribution assets for a U.S. municipal electric utility. Determined original, trended original and replacement costs, as well as development of depreciation costs. Analyses used in developing electric rates and in proceeding on municipal special franchise taxes.
- Shareholder Value Analysis: For an east coast electric utility, analyzed impact on stock prices of new and potential markets (for core and non-core utility services), pricing strategies, underlying costs, and regulatory options.
- Margin Analysis: Conducted revenue and margin, geographic impacts and value analysis of utility energy efficiency initiatives on behalf of a major west coast electric utility.

TESTIMONY

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Before the Public Utilities Commission of the State of Hawaii, In The Matter of Public Utilities Commission Instituting an Investigation to Reexamine the Existing Decoupling Mechanisms for Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Limited, Docket No. 2013-1041, On Behalf of the Hawaiian Electric Companies. Report: "Targeted Performance Incentives: Recommendations to the Hawaiian Electric Companies," Prepared For The Hawaiian Electric Companies, William P. Zarakas and Philip Q Hanser, September 15, 2014.

Before the New Mexico Public Regulatory Commission, In The Matter Of The Application of TECO Energy, Inc., New Mexico Gas Company, Inc. and Continental Energy Systems, LLC, For Approval of TECO Energy Inc.'s Acquisition of New Mexico Gas Intermediate, Inc. and For All Other Approvals and Authorizations Required To Consummate and Implement The Acquisition, Utility Case No. 13-00231-UT, On Behalf of TECO Energy, Inc., New Mexico Gas Company, Inc. and Continental Energy Systems, LLC, Joint Applicants. March 2014.

"Analysis of Benefits: PSE&G's Energy Strong Program," by Peter Fox-Penner and William P. Zarakas. In the Matter of the Petition of Public Service Electric and Gas Company for Approval of the Energy Strong Program, NJ BPU Docket No. EO13020155 and GO13020156.

"Review and Analysis of Service Quality Plan Structure In The Massachusetts Department of Public Utilities Investigation Regarding Service Quality Guidelines For Electric Distribution Companies and Local Gas Distribution Companies." Philip Q Hanser, David E. M. Sappington and William P. Zarakas, Massachusetts D.P.U. 12-120, March 2013.

"Alaska Mobile Broadband Cost Model, Before The Federal Communications Commission In The Matter Of Connect America Fund and Universal Service Reform – Mobility Fund. WC Docket No. 10-90 and WT Docket No. 10-208A." William P. Zarakas and Giulia McHenry, February 2013

Expert Report of William P. Zarakas In The United States District Court For The Northern District of Florida MCI Communications Services, Inc., Plaintiff v. Murphree Bridge Corporation, Defendant, Case No. 5:09-cv-337, February 19, 2010.

Testimony of William P. Zarakas Before The Copyright Royalty Judges, Library of Congress, Washington D.C. In The Matter of Distribution of the 2004 and 2005 Cable Royalty Funds, Docket No. 2007-3 CRB CD 2004-20. June 1, 2009.

Declaration of William P. Zarakas In The Circuit Court of Fairfax County, Virginia In The Matter of Sharon Dougherty, Plaintiff Vs. Thomas J. Dougherty, Defendant Case No. CL 2007-008757. October 2008.

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Expert report provided in Public Service Company of New Mexico vs. Smith Bagley, Inc. and Lite Wave Communications LLC In The United States District Court For The District of New Mexico. March 2007.

Expert report entitled “Comparative Market Value Analysis of Upper 700 MHz Public Safety Spectrum” in FCC WT Docket no. 96-86 (In the Matter of The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010). June 2006.

Expert report entitled “Analysis of Potential Lost Profits Associated With The Alleged Breach of Contract Between Orbcomm and Orbcomm Asia Limited” before the American Arbitration Association. May 2006.

Direct testimony before the Federal Communications Commission in the matter of *Petition of ACS of Anchorage, Inc. Pursuant to Section 10 of the Communications Act of 1934, as amended, for Forbearance from Sections 251(c)(3) and 251(d)(1) In the Anchorage LEC Study Area*, WC Docket No. 05-281, January 9, 2006.

Expert report co-authored with Dorothy Robyn Before the U.S. House of Representatives Committee on Energy and Commerce and the U.S. Senate Committee on Commerce, Science and Transportation regarding the value of wireless spectrum in the 700 MHz band. Letters, May 18, 2005.

Direct and rebuttal testimony before the Federal Communications Commission in the matter of *Virginia Cable Telecommunications Association v. Virginia Electric and Power Company, d/b/a Dominion Virginia Power and Dominion North Carolina Power*, PA No. 01-005, December 21, 2001.

Expert report Before the U.S. Securities and Exchange Commission included in Form U-1 Application/ Declaration Under The Public Utility Holding Company Act of 1935 in the combination of Energy East Corporation with RGS Energy Group, Inc. (June 20, 2001) in Exhibit J-1, entitled “Analysis Of The Economic Impact Of A Divestiture Of The Gas Operations Of Rochester Gas And Electric Corporation,” May 15, 2001.

Expert report Before the U.S. Securities and Exchange Commission included in Form U-1 Application/ Declaration Under The Public Utility Holding Company Act of 1935 in the acquisition by Sierra Pacific Resources of Portland General Electric Company, 2000 in Exhibit H-1, entitled “Analysis Of The Economic Impact Of A Divestiture Of The Gas Operations Of Sierra Pacific Resources,” January 31, 2000.

Before the U.S. Securities and Exchange Commission included in Form U-1 Application/ Declaration Under The Public Utility Holding Company Act of 1935 in the combination of Energy East Corporation

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with CMP Group, Inc. and with CTG Resources, Inc. in Exhibit J-1, entitled “Analysis Of The Economic Impact Of A Divestiture Of The Gas Operations Of Energy East,” October 29, 1999.

Before the Supreme Court of the State of New York, County of Niagara, Supplemental Affidavit in *Village of Bergen, et al. vs. Power Authority of the State of New York*, February 1999.

Rebuttal Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the North Carolina Utilities Commission, Docket No. P-100, SUB 133D, Filed March 9, 1998; *In Re: Proceeding to Determine Permanent Pricing for Unbundled Network Elements*.

Direct Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the North Carolina Utilities Commission, Docket No. P-100, SUB 133D, Filed December 15, 1997; *In Re: Proceeding to Determine Permanent Pricing for Unbundled Network Elements*.

Rebuttal Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the South Carolina Public Service Commission, Docket No. 97-374-C, Filed November 25, 1997; *In Re: Proceeding to Review BellSouth Telecommunications, Inc.’s Cost Studies for Unbundled Network Elements*.

Direct Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Florida Public Service Commission, Docket Nos. 960757-TP/960833-TP/960846-TP/960916-TP/971140-TP, Filed November 13, 1997; *In Re: Petition of AT&T, MCI, and MFS for Arbitration with BellSouth Concerning Interconnection, Rates, Terms and Conditions of a Proposed Agreement*.

Direct Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the South Carolina Public Service Commission, Docket No. 97-374-C, Filed November 3, 1997; *In Re: Proceeding to Review BellSouth Telecommunications, Inc.’s Cost Studies for Unbundled Network Elements*.

Rebuttal Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Tennessee Regulatory Authority, Docket No. 97-01262, Filed October 17, 1997; *In Re: Contested Cost Proceeding to Establish Final Cost Based Rates for Interconnection and Unbundled Network Elements*.

Direct Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Tennessee Regulatory Authority, Docket No. 97-01262, Filed October 10, 1997; *In Re: Contested Cost Proceeding to Establish Final Cost Based Rates for Interconnection and Unbundled Network Elements*.

Rebuttal Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Alabama Public Service Commission, Docket No. 26029, Filed September 12, 1997; *In Re: Generic Proceeding: Consideration of TELRIC Studies*.

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Rebuttal Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Georgia Public Service Commission, Docket No. 7061-U, Filed September 8, 1997; *In Re: Review of Cost Studies, Methodologies and Cost-Based Rates for Interconnection and Unbundling of BellSouth Telecommunications Services.*

Rebuttal Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Louisiana Public Service Commission, Docket Nos. U-22022/22093, Filed September 5, 1997; *In Re: Review of Consideration of BellSouth Telecommunications, Inc.'s TSLRIC and LRIC Cost Studies to Determine Cost of Interconnection Services and Unbundled Network Components, to Establish Reasonable, Non-Discriminatory, Cost-Based Tariff Rates.*

Direct Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Alabama Public Service Commission, Docket No. 26029, Filed August 29, 1997; *In Re: Generic Proceeding: Consideration of TELRIC Studies.*

Direct Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Louisiana Public Service Commission, Docket Nos. U-22022/22093, Filed July 11, 1997; *In Re: Review of Consideration of BellSouth Telecommunications, Inc.'s TSLRIC and LRIC Cost Studies to Determine Cost of Interconnection Services and Unbundled Network Components, to Establish Reasonable, Non-Discriminatory, Cost-Based Tariff Rates.*

Direct Panel Testimony of William P. Zarakas and D. Daonne Caldwell before the Georgia Public Service Commission, Docket No. 7061-U, Filed April 30, 1997; *In Re: Review of Cost Studies, Methodologies and Cost-Based Rates for Interconnection and Unbundling of BellSouth Telecommunications Services.*

Direct and rebuttal testimony Before the Virginia State Corporation Commission on behalf of United Telephone - Southeast, Inc. and Centel Corporation, May 1994.

Direct and rebuttal testimony Before the Tennessee Public Service Commission on behalf of United Telephone - Southeast, Inc., Docket No. 93-04818, January 28, 1994.

Direct and rebuttal testimony Before the Florida Public Service Commission on behalf of Southern Bell Telephone & Telegraph Company, Docket No. 920260-TL, December 10, 1993.

Direct and rebuttal testimony Before the Tennessee Public Service Commission on behalf of South Central Bell, Docket Nos. 92-13527 and 93-00311, March 22 and March 29, 1993.

PAPERS AND PUBLICATIONS

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WILLIAM P. ZARAKAS

“Infrastructure and Competition in the Electric Delivery System,” by William P. Zarakas, *The Electricity Journal*, Volume 26, Issue 7, September 2013.

“Low Voltage Resiliency Insurance, Portable small-scale generators could keep vital services on line during a major power outages,” by William Zarakas, Frank Graves, and Sanem Sergici, forthcoming *Public Utilities Fortnightly* September 2013.

"Finding the Balance Between Reliability and Cost: How Much Risk Should Consumers Bear?," by William P. Zarakas and Johannes P. Pfeifenberger, presented at the Western Conference of Public Service Commissioners, Santa Fe, NM, June 3, 2013

"The Utility of the Future: Distributed or Not?," by William P. Zarakas, The Brattle Group, Inc., presented at Advanced Energy 2013, New York, NY, April 30, 2013

"Rates, Reliability, and Region," by William P. Zarakas, Philip Q Hanser, and Kent Diep, *Public Utilities Fortnightly*, January 2013

"Approaches to Setting Electric Distribution Reliability Standards and Outcomes," by Serena Hesmondhalgh, William P. Zarakas, and Toby Brown, The Brattle Group, Inc., January 2012

“Measuring Concentration In Radio Spectrum License Holdings,” presented at the Telecommunications Policy Research Conference (TPRC), George Mason University, September 26, 2009 (with Coleman Bazelon).

“Structural Simulation of Facility Sharing: Unbundling Policies and Investment Strategy in Local Exchange Markets,” White Paper, July 2005 (with Glenn A. Woroch, Lisa V. Wood, Daniel L. McFadden, Nauman Ilias, and Paul C. Liu).

“Betting Against The Odds? Why broadband over power lines (BPL) can’t stand alone as a high-speed Internet offering.” *Public Utilities Fortnightly*, April 2005, pp. 41-45 (with Kenneth J. Martinian).

“The Impact of the Number of Mobile Operators on Consumer Benefit,” White Paper, March 2005 (with Kenneth J. Martinian and Carlos Lapuerta).

“Wholesale Pricing and Local Exchange Competition”, *Info*, Volume 6, Number 5, 2004, pp. 318-325 (with Lisa V. Wood and David E. M. Sappington).

“Regulatory Performance Measurement Plans and the Development of Competitive Local Exchange Telecommunications Markets”, Working Paper, November 2003 (with David E. M. Sappington, Lisa V. Wood and Glenn A. Woroch).

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ATTACHMENT B:
DECLARATION OF VINCENT KUNZ
Comcast-NBCU Proceeding (June 7, 2010)

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STEPTOE & JOHNSON LLP

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FILED/ACCEPTED

June 7, 2010

JUN - 7 2010

VIA HAND DELIVERY

Federal Communications Commission
Office of the Secretary

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

Re: Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licenses, MB Docket No. 10-56

Dear Ms. Dortch:

DISH Network L.L.C. ("DISH"), through its undersigned counsel, submits the attached redacted version of a declaration providing statistical and economic analysis related to the above-referenced proceeding.

In December 2008, DISH and Fisher Broadcasting ("Fisher") were involved in a retransmission dispute, which resulted in DISH's inability to retransmit several of Fisher's local affiliates, including a number of major network affiliates, between December 17, 2008 and June 10, 2009. Mr. Vincent Kunz, DISH's Senior Marketing Manager for Reporting and Analytics has measured the effect of DISH's loss of these rights for DISH's business during that period.

Mr. Kunz's analysis contains proprietary and highly confidential information that DISH has kept strictly confidential and is not available from public sources. It contains some of DISH's most sensitive business data that, if released to DISH's competitors, would allow those competitors to gain a significant advantage in the marketplace. We are therefore filing Mr. Kunz's declaration under the *Second Protective Order* adopted by the Commission for this proceeding, DA 10-371.¹

¹ Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licenses, MB Docket No. 10-56, *Second Protective Order*, DA 10-371 (rel. March 4, 2010).

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Marlene H. Dortch
June 7, 2010
Page 2

Pursuant to the procedures established in the *Second Protective Order*, two copies of both the confidential and the redacted versions of the declaration are being filed with the Commission. Pursuant to 47 C.F.R. § 0.459(e), DISH requests that the Commission return the relevant portions of the submissions if its request for confidentiality is denied.²

Respectfully submitted,

/s/

Pantelis Michalopoulos
Christopher Bjornson
Counsel for Dish Network L.L.C.

Enclosure

² See 47 C.F.R. § 0.459(e).

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DECLARATION OF VINCENT KUNZ

I, Vincent Kunz, being over 18 years of age, swear and affirm as follows:

1. I make this declaration in support of the confidential submission of DISH Network L.L.C. (“DISH”) to the Federal Communications Commission (“FCC”) in connection with the FCC’s review of Comcast Corporation’s proposed purchase of a controlling interest in NBC Universal.
2. I make this declaration based upon personal knowledge, information, and belief.
3. I am Senior Marketing Manager, Reporting and Analytics at DISH and have been in this role since December 28, 2007.
4. In my role of Senior Marketing Manager, Reporting and Analytics, I oversee analytics and reporting for acquisition and retention marketing. In performing my duties, I have access to and regularly review data related to DMAs in which DISH has a presence, including, without limitation, penetration, churn, marketing spend, and other information.
5. Fisher Broadcasting (“Fisher”) owns or owned eight ABC, CBS, and/or Fox affiliates and 2 Univision affiliates in the following DMAs in the western region: Bakersfield, California; Boise, Idaho; Eugene, Oregon; Idaho Falls et al., Idaho; Portland, Oregon; Seattle-Tacoma, Washington, and Yakima et al., Washington. In December 2008, DISH and Fisher were involved in a retransmission dispute, which resulted in DISH’s inability to carry Fisher’s local affiliates between December 17, 2008 and June 10, 2009 (the “Channel Loss Period”).
6. I was asked to measure the impact to DISH’s business as a result of DISH’s loss of the right to distribute Fisher’s local network channels during the Channel Loss Period. My conclusions: [REDACTED]

[REDACTED]

7. To measure the impact of the loss of the Fisher channels during the Channel Loss Period, we compared data between each of the 7 DMAs in which Fisher offered local channels that became unavailable during the Channel Loss Period and four comparable DMAs (25 total comparable DMAs reviewed because there were three overlaps) during the same Channel Loss Period. These DMAs are specifically comparable to the Fisher DMAs in terms of the following factors:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] An explanation of the method used is attached as Exhibit A. DISH uses similar methods to identify comparable DMAs for other market analysis purposes. On these criteria, each Fisher DMA is more comparable to each of the four comparable DMAs listed below than to any other non-Fisher DMA.

8. Based upon these factors, the comparable DMAs for each of the 7 Fisher DMAs are depicted below and the comparative analysis relative to each of these factors is attached hereto as Exhibit B:

Fisher DMA	Comparable DMAs Selected
Boise, Idaho	[REDACTED]
Idaho Falls, Idaho	[REDACTED]

Fisher DMA	Comparable DMAs Selected
Bakersfield, California	[REDACTED]
Eugene, Oregon	[REDACTED]
Yakima et al., Washington	[REDACTED]
Seattle-Tacoma, Washington	[REDACTED]
Portland, Oregon	[REDACTED]

MARKET PENETRATION [REDACTED]

9. After selecting the 4 comparable DMAs for each Fisher DMA, we compared our market penetration in each comparable DMA with the Fisher DMA and discovered that the penetration numbers demonstrated [REDACTED]

[REDACTED]

10. The data with respect to the market penetration are attached as Exhibit C hereto. With respect to average market penetration, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

11. [REDACTED]

[REDACTED]

12. The average market penetration comparison mirrors accurately comparisons of each of the Fisher DMAs to the comparable DMAs. [REDACTED]

[REDACTED]

[REDACTED]

Eugene, Oregon

a. In particular, in the Eugene, Oregon DMA (Fisher DMA), [REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

Yakima et al., Washington

b. Similarly, in the Yakima et al, Washington DMA (another Fisher DMA), [REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

Bakersfield, California

- c. Similarly, in the Bakersfield, California DMA (another Fisher DMA), [REDACTED]
- [REDACTED]

[REDACTED]

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[REDACTED]

Boise, Idaho

- d. Similarly, in the Boise, Idaho DMA (another Fisher DMA), [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

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REDACTED - FOR PUBLIC INSPECTION

[REDACTED]

Idaho Falls, et al. Idaho

- e. Similarly, in the Idaho Falls et al., Idaho DMA (another Fisher DMA), [REDACTED]
- [REDACTED]

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REDACTED - FOR PUBLIC INSPECTION

[REDACTED]

Portland, Oregon

- f. Similarly, in the Portland, Oregon DMA (another Fisher DMA), [REDACTED]
- [REDACTED]

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REDACTED - FOR PUBLIC INSPECTION

[REDACTED]

Seattle-Tacoma, Washington

g. Similarly, in the Seattle-Tacoma, Washington DMA (another Fisher DMA), [REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

13. Monthly churn rates are determined by calculating the number of subscribers at the beginning of a month who disconnect during that month after having been a subscriber for in excess of 30 days. [REDACTED]

[REDACTED] The churn rate data is attached as Exhibit D hereto.

14. In particular, during the Channel Loss Period, [REDACTED]

[REDACTED]

15. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

16. Moreover, the average data discussed above is again mirrored in each of the Fisher DMAs. [REDACTED]

[REDACTED]

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REDACTED - FOR PUBLIC INSPECTION

[REDACTED]

Bakersfield, California

- a. For example, in the Bakersfield, California DMA (Fisher DMA), [REDACTED]

[REDACTED]

[REDACTED]

Boise, Idaho

b. Similarly, in the Boise, Idaho DMA (another Fisher DMA), [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Eugene, Oregon

c. Likewise, in the Eugene, Oregon DMA (another Fisher DMA), [REDACTED]

[REDACTED]
[REDACTED]

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[REDACTED]

[REDACTED]

Idaho Falls et al., Idaho

d. Similarly, in the Idaho Falls et al., Idaho DMA (another Fisher DMA), [REDACTED]

[REDACTED]

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REDACTED - FOR PUBLIC INSPECTION

[REDACTED]

Portland, Oregon

- e. Likewise, in the Portland, Oregon DMA (another Fisher DMA), [REDACTED]

[REDACTED]

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REDACTED - FOR PUBLIC INSPECTION

[REDACTED]

Seattle-Tacoma, Washington

- f. Similarly, in the Seattle-Tacoma, Washington DMA (another Fisher DMA), [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Yakima et al., Washington

g. Likewise, in the Yakima et al., Washington DMA (another Fisher DMA), [REDACTED]

[REDACTED]

[REDACTED]

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REDACTED - FOR PUBLIC INSPECTION

[REDACTED]

17. Moreover, as a result of the loss of local channels in the Fisher DMAs during the Channel Loss Period, [REDACTED]

[REDACTED]

18. [REDACTED]

[REDACTED]

19. [REDACTED]

[REDACTED]

20. [REDACTED]

[REDACTED]

[REDACTED]

21. [REDACTED]

[REDACTED]

OTHER GENERAL IMPACTS

22. [REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

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REDACTED - FOR PUBLIC INSPECTION

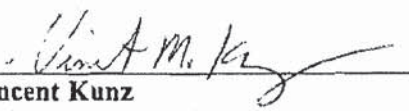
24.

[REDACTED]

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I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge, information and beliefs. Executed on June 7, 2010.


Vincent Kunz
Senior Marketing Manager
Reporting and Analytics
DISH Network L.L.C.

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EXHIBIT A

[REDACTED IN ITS ENTIRETY]

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REDACTED – FOR PUBLIC INSPECTION

EXHIBIT B

[REDACTED IN ITS ENTIRETY]

REDACTED - FOR PUBLIC INSPECTION

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EXHIBIT C

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EXHIBIT D

[REDACTED IN ITS ENTIRETY]

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EXHIBIT E

[REDACTED IN ITS ENTIRETY]

REDACTED - FOR PUBLIC INSPECTION

REDACTED – FOR PUBLIC INSPECTION

EXHIBIT F

[REDACTED IN ITS ENTIRETY]

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CERTIFICATE OF SERVICE

I hereby certify that on December 22, 2014, I caused true and correct copies of the foregoing to be served by electronic mail upon the following counsel:

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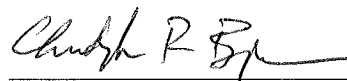
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