

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

In the Matter of)	
)	
Revision of the Commission's Program Access Rules)	MB Docket No. 12-68
)	
News Corporation and The DIRECTV Group, Inc., Transferors, and Liberty Media Corporation, Transferee, for Authority to Transfer Control)	MB Docket No. 07-18
)	
Applications for Consent to the Assignment and/or Transfer of Control of Licenses, Adelphia Communications Corporation (and subsidiaries, debtors-in-possession), Assignors, to Time Warner Cable Inc. (subsidiaries), Assignees, et al.)	MB Docket No. 05-192
)	

COMMENTS OF DISH NETWORK L.L.C.

June 22, 2012

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COMMENTS OF DISH NETWORK L.L.C.

I. INTRODUCTION AND SUMMARY

DISH Network L.L.C. (“DISH”) submits these comments to oppose lifting the program access exclusivity ban. The foreclosure problems that the exclusivity rules were intended to remedy remain serious. Cable operators, which do not compete with one another because they do not overlap geographically, have an incentive to foreclose their non-cable competitors from the programming in which they have an interest. Indeed, the ban “continues to be necessary to preserve and protect competition and diversity in the distribution of video programming.”¹

The current exclusivity rule prohibits in-market exclusive contracts between a cable operator and an affiliated programmer unless the Commission determines on a case-by-case basis

¹ 47 U.S.C. § 548(c)(5).

that such a contract is in the public interest.² Lifting this ban would allow networks affiliated with cable operators, such as Discovery, the MLB Network, MSG, and MSG+, to become subject to exclusive arrangements and possibly withheld from satellite and other non-cable distributors. It could also mean exclusive deals for Comcast-controlled programming, including the USA Network, MSNBC, and NBC Sports, after the expiration (in 2018) of the conditions imposed by the Commission on the approval of Comcast's NBC Universal ("NBCU") acquisition. The competitive landscape has not changed enough to justify the elimination of a rule that has allowed independent distributors to offer some of the most popular programming, thus giving consumers more choices in the pay-TV market. In fact, a greater number of top 20 cable networks (ranked by subscribership) are in cable hands now than they were in 2007.

The gradual decline in the nationwide cable market share masks the fact that cable share is as large as 80% in certain regional clusters and local factors are the most critical in determining the choice of pay-TV providers for consumers. Equally important, as the Commission has found in analogous circumstances, and as DISH's expert economist Dr. Simon Wilkie confirms, the anticompetitive foreclosure of competitors from popular programming can be expected to be profitable even if cable operators had much smaller shares of the Multichannel Video Program Distribution ("MVPD") markets than they do today. For one thing, whether an integrated cable operator has a 60%, 50%, or 40% share in a particular market, an exclusive agreement for that operator's affiliated programming means plainly that the programming will not be available elsewhere in that market. Thus, a majority of the consumers that want the programming will have to knock on the cable operator's door. In addition, temporary foreclosure techniques allow an affiliated pair of cable and programming entities to receive most

² 47 U.S.C. § 548(b)(2)(D).

of the benefit of foreclosure while incurring only a portion of its cost. On the benefit side, many subscribers switching to the cable operator to receive the temporary exclusive may not return to the other distributor at the end of the exclusivity period. On the cost side, the loss of programming revenue in fees paid by the independent distributor to the programmer can be expected to be correspondingly limited, if that distributor resumes paying the programmer fees at the end of the exclusive term, after the harm has been done. Thus, it is no wonder that the econometric models developed by the Commission predict that foreclosure techniques would still be profitable to integrated distributors with relatively small market shares. Dr. Wilkie has also found that foreclosure is particularly attractive to cable operators that are affiliated with multiple programming channels.

Lifting the exclusivity ban would also have an impact on the deterrent value of the Commission's discrimination rules, which would survive if the exclusivity ban were lifted. Cable-affiliated programmers may attempt to require onerous discriminatory rates from unaffiliated distributors by threatening that the programming will otherwise become the subject of a (newly lawful) exclusive arrangement and be withheld altogether. The result would be an even faster pace of programming cost increases, which will likely affect the prices that consumers pay and the choices they have.

II. THE COMMISSION SHOULD NOT ALLOW THE EXCLUSIVITY BAN TO SUNSET

A. A Sunset Is Not Justified by Changes to Cable Market Share

The Commission asks whether changes in the market justify a sunset of the exclusivity rule.³ The answer is no, for two reasons. First, the change in cable's share of the national

³ Revision of the Commission's Program Access Rules, WB Docket No. 12-68, *Notice of Proposed Rulemaking*, FCC 12-30 ¶ 4 (rel. Mar. 20, 2012) ("*NPRM*").

MVPD market ignores the significantly higher penetration enjoyed by some of the nation's largest cable providers in key markets. Second, even at the lower penetration levels, foreclosure remains a profitable strategy for cable and its affiliated programmers.

It is true that cable operators have less of a hold on the MVPD market today than they did five years ago. According to the *NPRM*, cable's market share has decreased from 67% in 2007 to 58.5% in 2011.⁴ That decrease, however, is not sufficient to make foreclosure unprofitable and thus warrant a sunset of the rule. With a 58.5% national share, cable still dominates the market. And this number ignores the clustering of dominant cable providers in key regional markets across the country at much higher penetration levels than the national average. In Philadelphia and Chicago, for instance, where Comcast is the dominant cable provider, cable controls as much as 83% and 77% of the market respectively.⁵ In New York, Cablevision and Time Warner are the incumbent cable providers and have as much as an 88.5% market share.⁶ And it is these dominant cable providers that share affiliation with some of the most popular national and regional programming. Comcast's extensive affiliations include its widespread regional sports network ("RSN") holdings across the country (including in the Philadelphia, Chicago, and San Francisco markets), Bravo, CNBC, E! Entertainment Television, Syfy Network, Style Network, USA Network, NBC Sports Network, A&E, and Lifetime. Cablevision's affiliations include its RSNs in the New York City region, as well as the entire array of AMC networks, including AMC, the Independent Film Channel, Sundance Channel, and

⁴ *NPRM* ¶ 24, Appendix A.

⁵ Review of the Commission's Program Access Rules and Examination of Programming Tying Arrangements, *First Report and Order*, 25 FCC Rcd. 746, 763-64 ¶ 27 n.97 (2010). These figures are from July 2009.

⁶ *Id.*

WE tv. Recently, Time Warner has been expanding its RSN holdings and is now affiliated with RSNs in the Los Angeles, Kansas City, and New York markets, among others.

B. Foreclosure Continues to Be Profitable Even as Market Share Declines

Foreclosure is and will continue to be profitable for cable providers and their affiliated networks, even if cable operators had a significantly lower market share than they enjoy today. To begin, as Dr. Simon Wilkie demonstrates in his accompanying expert report, cable-affiliated programmers may have an incentive to withhold programming from rival distributors regardless of the cable company's share of the relevant market.⁷ The key factor is not the size of the cable company, but the popularity of the affiliated programming with the relevant consumer audience. The more popular the programming for the rival distributor's customer base, the more profitable a withholding strategy becomes. This is because withholding high popularity programming either inhibits subscriber adoption of the rival MVPD, or, in the case of withholding after a period of carriage by the rival MVPD, results in significant churn for the rival MVPD customer base.⁸ As Dr. Wilkie observes, the Commission itself has recognized this phenomenon in the case of Comcast and its Philadelphia RSNs.⁹ In 2007, the Commission observed that satellite penetration was 40% less than what it would have been absent Comcast's multi-year withholding of its RSNs.¹⁰

The exclusivity ban specifically continues to be necessary based on data indicating that some of the most popular programming on MVPD platforms today remains affiliated with cable

⁷ Expert Report of Simon J. Wilkie, PhD ¶ 42 (June 2012) ("Wilkie Report") (attached hereto).

⁸ *Id.* ¶¶ 12-14.

⁹ *Id.* ¶¶ 19-25.

¹⁰ *Id.* ¶ 23; Development of Competition and Diversity in Video Programming Distribution: Section 628(c)(5) of the Communications Act: Sunset of Exclusive Contract Prohibition, *Report and Order*, 22 FCC Rcd. 17791, 17817-18 ¶ 39 (2007).

providers. While it is true that the number of satellite-delivered, national programming networks that are affiliated with cable providers has declined from 22% in 2007 to approximately 14.4% today,¹¹ this decrease is not material to the question of whether the exclusivity ban should be lifted. Indeed, the total number of satellite-delivered, cable affiliated national programming networks has remained almost the same, changing only from 116 to 115.¹² It is only the proliferation of niche and specialty channels over this time frame that has affected the percentage.¹³ The most popular networks remain some of the longest-standing, and these networks remain affiliated with cable. The number of cable-affiliated networks among the 20 top satellite-delivered, national networks has remained at six when ranked by advertising revenue.¹⁴ It has actually increased from six to seven when the top 20 cable networks are ranked by subscribership.¹⁵ Since subscribership is a more important measure of popularity to a distributor than advertising revenue—subscription fees constitute the vast majority of an MVPD's revenue¹⁶—it is the increase from six to seven that matters. The reason for the increase is simple—the reduction in top-cable-affiliated channels caused by the Time Warner spinoff has been more than offset by the Comcast acquisition of control over NBCU.

Also, as Dr. Wilkie notes, there is another reason why the profitability of an exclusive strategy does not significantly depend on the integrated MVPD's market share. Whether that

¹¹ *NPRM* ¶ 26.

¹² *Id.* at Appendix B, Table 1.

¹³ In fact, for those who argue that the program access rules discourage the proliferation of alternative and competitive programming, this proliferation stands as strong evidence that no such inhibition exists.

¹⁴ *NPRM* ¶ 26.

¹⁵ *Id.*

¹⁶ *See, e.g.*, Time Warner Cable, Annual Report (Form 10-K) (Feb. 17, 2012) at 44-46.

MVPD has a 60%, 50%, or 40% share in a particular market, it can likely reserve for itself a majority of the churn if it withholds the programming from all of its competitors.¹⁷

And the profitability of foreclosure increases further still for those cable operators affiliated with more than one network. As Dr. Wilkie observes, when more than one network is withheld, the churn effects on the rival MVPD can be “*super-additive*,” meaning that the aggregate benefit of foreclosing a competitor from two networks at the same time exceeds the sum of the benefits that would accrue if each of the two networks were withheld separately.¹⁸ This “snowball effect” of multiple network foreclosure is confirmed by the seven-month-long retransmission consent dispute between DISH and Fisher Communications, Inc. (“Fisher”) in 2008-2009. During this period, DISH lacked access to Fisher networks in seven Designated Market Areas (“DMAs”). In one of these seven DMAs, DISH lacked access to not one, but two Top 4 network stations. In all seven markets, DISH’s churn rates increased substantially during the foreclosure period. But in the market where two Top 4 network stations were withheld, the churn rates were more than the sum of the rates experienced in markets where only one station was lost.¹⁹ As Dr. Wilkie concludes, “[t]his indicates that a vertically integrated MVPD that controls multiple channels has an incentive to raise its rival’s costs more than calculations performed on a per channel basis indicate.”²⁰

In addition, econometric analysis predicts that a strategy of temporary foreclosure would allow an integrated cable operator to circumscribe the costs of foreclosure while enjoying many of its benefits. Even a brief exclusive enjoyed by an integrated cable operator can be expected to

¹⁷ See Wilkie Report ¶ 15.

¹⁸ *Id.* ¶¶ 26-28, 41.

¹⁹ *Id.* ¶¶ 5, 34-41.

²⁰ *Id.* ¶ 5.

result in a more long-term shift in subscribers from the rival MVPD to the cable operator because many subscribers do not switch back. At the same time, it is reasonable to predict that the programmer's cost would be cushioned if and when the programmer starts to receive programming fees again at the end of the exclusive term.²¹ The Commission found this to be the case in its review of the DIRECTV/News Corp. transaction. At the time, DIRECTV held a 13% share of the MVPD market.²² Based on its own economic analysis, the Commission concluded that temporary foreclosure techniques would be profitable for News Corp.²³ In other words, through a strategy of temporary withholding of its affiliated programming, News Corp. would make more money in additional subscription revenue earned by DIRECTV due to its exclusive rights than it would lose in foregone programming revenue from other distributors. For that reason, the Commission prohibited DIRECTV from possessing exclusivity rights in News Corp.'s regional sports programming. As the Commission is aware, popular sports programming, at both the national and regional level, remains highly desirable.

The profitability of a foreclosure strategy increases further still when the integrated company has a greater economic stake in its cable operation than it has in the programmer in question. This is an important factor, since often each cable operator's ownership of a cable-affiliated cable network is partial. Perhaps it is no coincidence that, in some cases, a programmer is co-owned by a number of large cable multiple system operators. For example, Comcast, Cox, Time Warner Cable, and Bright House co-own iN DEMAND L.L.C. and its suite

²¹ *Id.* ¶ 40.

²² General Motors Corporation and Hughes Electronics Corporation, Transferors, and The News Corporation Limited, Transferee, for Authority to Transfer Control, *Memorandum Opinion and Order*, 19 FCC Rcd. 473, 476 ¶ 3 (2004).

²³ *Id.* at 547 ¶ 161.

of sports programming.²⁴ Co-ownership permits cable operators to share the costs of a foreclosure strategy while each receives the full gains in its franchise area.

Comcast's controlling interest in NBCU is another example of an ownership structure that makes exclusivity more profitable: Comcast would reap all of the economic benefit from its cable distribution business, even as it would bear the costs of a foreclosure strategy only to the extent of its economic interest in NBCU—currently 51%.²⁵ The conditions to which Comcast has become subject are only a partial answer, for two reasons. First, the transaction conditions are set to expire in January 2018. After that date, Comcast will be bound only by the program access rules as they stand at the time. Even before that date, Comcast could use the prospect of the conditions' expiration as leverage to extract benefits in negotiations with other distributors. Second, the Comcast program access conditions apply only to Comcast-*controlled* programming, and not to all Comcast-*affiliated* programming.²⁶ A sunset of the exclusivity ban would thus benefit Comcast and allow exclusionary practices with respect to Comcast-affiliated programming, too. No relevant video market developments have occurred since the Commission's review last year of the Comcast-NBCU transaction. Then, the Commission specifically concluded that the transaction “creates the possibility that Comcast-NBCU, either temporarily or permanently, will block Comcast's video distribution rivals from access to the

²⁴ Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, *Thirteenth Annual Report*, 24 FCC Rcd. 542, 635 ¶ 191, Appendix C, Table C-1 (2009) (“*Thirteenth Video Competition Report*”).

²⁵ Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses and Transfer Control of Licenses, *Memorandum Opinion and Order*, 26 FCC Rcd. 4238, 4245 ¶¶ 17 (2011) (“*Comcast/NBCU Order*”).

²⁶ *NPRM* ¶ 26 n.91; see also *Comcast/NBCU Order*, 26 FCC Rcd. at 4358, Appendix A, Condition II. A Comcast-controlled network is one in which Comcast or NBCU holds a 50% or greater interest, and a Comcast-affiliated network is one in which Comcast or NBCU holds less than a 50% interest.

video programming content the [joint venture] would come to control or raise programming costs to its video distribution rivals.”²⁷

In sum, temporary exclusivity techniques and differential ownership stakes in the programming and distribution links of the vertical chain can ensure the economic incentive of cable-affiliated programmers to engage in anticompetitive behavior if the ban on exclusivity is lifted. As discussed below, the threat of exclusivity can also be used as a lever to extract high rates, which may have to be borne by the consumer—another ill effect of sunseting the ban. Indeed, Dr. Wilkie observes that the advent of additional MVPD distributors may actually make the threat of foreclosure more, not less, serious, even as it causes cable market share to go down. In Dr. Wilkie’s words, the purchasing MVPD “now suffers in that consumers have more alternatives to turn to after the utility shock of having a channel removed from its lineup. . . . This effect tends to improve [the cable operator’s] bargaining position by making the threat of foreclosure more acute, and so it would raise prices.”²⁸

C. Nothing in the *Cablevision* Case or the Statute Itself Mandates that the Commission Terminate the Exclusivity Ban

Nothing in the *Cablevision* decision restricts the Commission’s ability to consider the data before it. In that case, the D.C. Circuit upheld the Commission’s 2007 extension of the exclusivity ban, explaining, in part, that “conclusions based on [the Commission’s] predictive judgment and technical analysis are just the type of conclusions that warrant deference from this Court.”²⁹ In doing so, the Court also briefly speculated about the future, noting:

We anticipate that cable’s dominance in the MVPD market will have diminished still more by the time the Commission next reviews the prohibition, and expect

²⁷ *Id.* at 4250 ¶ 29.

²⁸ Wilkie Report ¶ 12.

²⁹ *Cablevision Systems Corp. v. FCC*, 597 F.3d 1306, 1313 (D.C. Cir. 2010); *NPRM* ¶ 15.

that at that time the Commission will weigh heavily Congress's intention that the exclusive contract prohibition will eventually sunset. Petitioners are correct in pointing out that the MVPD market has changed drastically since 1992. We expect that if the market continues to evolve at such a rapid pace, the Commission will soon be able to conclude that the [exclusive contract] prohibition is no longer necessary to preserve and protect competition and diversity in the distribution of video programming.³⁰

The Court's speculation was not a declaration that the exclusivity ban should end in the next review but merely a statement of its expectations that: (i) cable's dominance in the MVPD market will have diminished still more by the time the Commission next reviews the prohibition; (ii) the Commission will weigh heavily Congress's intent when it enacted the exclusivity ban; and (iii) if the market continues to evolve at such a rapid pace, the Commission may soon be able to conclude that the exclusivity prohibition is no longer necessary.

These expectations have not been fulfilled. The pace of market evolution has actually slowed, stalled, and, in one particularly important case, moved in the opposite direction. The *Thirteenth Video Competition Report* stated that the number of basic cable subscribers had only "fluctuated slightly" in the past four years,³¹ and that the number of cable subscribers went from approximately 66.5 million cable subscribers in June 2002 to 65.3 million in June 2006.³² The Commission has also projected increased cable subscribership "year after year for the next decade."³³ Just as cable operators promise to remain a dominant force in the market, so too do cable-affiliated networks. As mentioned above, the number of popular cable networks has, if anything, risen.

³⁰ *Cablevision*, 597 F.3d at 1314; *NPRM* ¶ 16.

³¹ *NPRM* at Appendix B, Table 2.

³² *Id.* at 684, Table B-1.

³³ *Id.* at 547 ¶ 10.

Indeed, while the *Cablevision* Court made mention of “Congress’s intention that the exclusive contract prohibition will eventually sunset,”³⁴ the so-called “sunset” provision merely required the Commission to conduct one 10-year review and to continue the exclusivity ban if it found “that such prohibition continue[d] to be necessary to preserve and protect competition and diversity in the distribution of video programming.”³⁵ This language actually arose out of the conference committee report, which explains that the limitations “shall expire after 10 years, except that the FCC may extend the limitation if it determines that such limitations are necessary to preserve and protect competition”³⁶ As Senator Daniel Inouye (D-HI) also explained: “Exclusive programming contracts are prohibited for 10 years unless the FCC determines they are in the public interest. The FCC may extend the 10-year time period.” Therefore, neither the statutory language itself nor the legislative history require the Commission to revisit the issue after its initial 10-year review, although the Commission is within its authority to do so.

Nor is there a bias in the law toward finding a sunset date. In fact, the Cable Act’s legislative history is replete with concern not with finding an end date for the exclusivity ban, but for the state of competition in the video distribution market as a result of cable’s monopolistic practices. Representative Billy Tauzin (R-LA), the Congressman who introduced the program access rules, explained that access to programming is necessary for competitors to compete with cable and charge lower rates.³⁷ Rep. Tauzin emphatically stated:

We either create competition for the American television viewing audience out there or we leave them strangled . . . by cable monopolies who can charge them what they want, force them to buy what they want in tiers they create and add to those services rental fees on equipment that could be easily purchased at Radio

³⁴ *Cablevision*, 597 F.3d at 1314.

³⁵ 47 U.S.C. § 548.

³⁶ H.R. Rep. No. 102-862, at 93 (1992).

³⁷ See 138 Cong. Rec. H6487, H6533-35 (July 23, 1992).

Shack, if we had the decency to think about the American consumer out there instead of big cable interests that control the situation.³⁸

In sum, neither the statute nor the *Cablevision* decision should be read to exert pressure on the Commission in the direction of “sunsetting” the exclusivity ban.

D. A Sunset Would Allow Programmers to Use the Threat of Exclusivity as Leverage to Extort High Rates

As the *NPRM* observes, a sunset of the exclusivity prohibition would not (and could not) end another statutory requirement—the requirement that the Commission prohibit discrimination.³⁹ A sunset would thus mean that exclusive agreements are no longer prohibited, whereas discrimination in the rates or other terms of programming would still be outlawed. This in turn would create a perverse incentive on the part of programmers to enter into exclusive agreements in order to shelter themselves from discrimination complaints. Even more pernicious, a cable-affiliated programmer could use the threat of entering into exclusive agreements as a tool to extract high rates. Unaffiliated distributors would be faced with a stark choice: either accept high rates, discriminatory terms, or other unfair practices, or be legally shut out from programming altogether.

In the absence of an exclusivity ban, therefore, the video market would likely experience not only higher rates but a faster pace of increase in the cost of programming than distributors have already encountered.⁴⁰ This would compound a trend in rapid escalation of programming costs. The Commission reported an average annual increase in programming expense of 6.9%,

³⁸ *Id.* at H6534.

³⁹ *NPRM* ¶ 4.

⁴⁰ Wilkie Report ¶¶ 5, 11-12.

8.3%, and 9.5% between 2004 and 2007.⁴¹ By some accounts, independent MVPDs' monthly programming costs increased as much as 70% to 84% from 2000-2005,⁴² and by 67.3% for basic and expanded basic programming between 2003 and 2008.⁴³ If cable-affiliated programmers believed themselves able to extract high rates based on a threat of exclusivity and if the independent MVPDs find themselves forced to capitulate, these increases would likely be higher still in the future.

E. A Lifting of the Exclusivity Ban Would Be, at Best, Premature

The expiration of the Comcast/NBCU conditions, set for 2018, provides yet another reason why the Commission should not lift the exclusivity ban now. If the circumstances in the MVPD market, as they have unfolded by that time, warrant a continued ban on Comcast's ability to enter into programming exclusives, a lift of the ban now means that the Commission would be left with one less regulatory tool in its kit down the road. Specifically, if the Commission allows the statutory prohibition to sunset now, it is questionable whether (and in what circumstances) it can be resurrected in the future. At a bare minimum, therefore, the Commission should preserve the option that Comcast could remain subject to the exclusivity ban if circumstances warrant it then.

⁴¹ Statistical Report on Average Rates for Basic Service, Cable Programming Service, and Equipment, *Report on Cable Industry Prices*, 24 FCC Rcd. 259, 264 ¶ 11 (2009).

⁴² Arlen Communications, Programming, Retrans Costs...Ouch! Monthly Programming Costs per Home for Two Independent MSOs, *The Bridge*, July 28, 2006, at 1.

⁴³ Steven C. Salop et al., Video Program Costs and Cable TV Prices: A Comment on the Analysis of Dr. Jeffrey Eisenach (attached to Letter from Matthew A. Brill, Counsel for Time Warner Cable Inc., to Marlene Dortch, Secretary, Federal Communications Commission, MB Docket No. 10-71 (June 1, 2010)).

III. CONCLUSION

The need for the exclusivity ban continues. The foreclosure problems that cable-affiliated programmers would create absent a ban demonstrate that the exclusivity ban continues to be necessary to preserve and protect diversity in the distribution of video programming. The exclusivity ban should therefore be extended until the Commission can conclude it is no longer in the public interest to maintain it.

Respectfully submitted,

Jeffrey H. Blum
Senior Vice President and
Deputy General Counsel
Alison A. Minea
Corporate Counsel
Hadass Kogan
Associate Corporate Counsel
DISH Network L.L.C.
1110 Vermont Avenue, NW, Suite 750
Washington, DC 20005
(202) 293-0981

/s/
Pantelis Michalopoulos
Christopher Bjornson
Stephanie A. Roy
Steptoe & Johnson LLP
1330 Connecticut Avenue, NW
Washington, DC 20036
(202) 429-3000
Counsel for DISH Network L.L.C.

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EXPERT REPORT OF SIMON J. WILKIE, PH.D.

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I. INTRODUCTION

A. Qualifications

1. My name is Simon J. Wilkie. I am the Chairman of, and a Professor in, the Department of Economics at the University of Southern California, as well as Executive Director of the Center for Communication Law and Policy at the University of Southern California Law School and a (Courtesy) Professor of Communication. Prior to joining the faculty at the University of Southern California, I was a Senior Research Associate in Economics at the California Institute of Technology. From 1990 to 1994, I held the position of Member of the Technical Staff at Bell Communications Research Inc., the research arm of the Bell Operating Companies. From 2007 through 2009, I sat on the program committee of the Telecommunications Policy Research Conference. I currently serve on the editorial board of the *International Journal of Communication*. I have also been an Affiliated Scholar of the Milken Institute and a Visiting Assistant Professor at Columbia University.

2. From 2002 to 2003, I served as Chief Economist at the Federal Communications Commission (“FCC” or “Commission”). In that capacity, I oversaw the economic analysis performed by the Commission staff and advised the FCC Chairman and Commissioners on issues involving economic analysis. Major items before the Commission during my tenure included the EchoStar/DIRECTV transaction, the Comcast/AT&T Broadband transaction, the Triennial Review of Unbundling Obligations, and the Biennial Review of Media Ownership rules.

3. Over the past twenty years, my academic research has focused on the areas of mechanism design, regulation, and game theory, with a particular emphasis on

the telecommunications industry. I received a Bachelor of Commerce degree in Economics from the University of New South Wales, and M.A. and Ph.D. degrees in Economics from the University of Rochester. My resume, which contains more information on my background and qualifications, is contained in the appendix. My work on this matter is ongoing, and I reserve the right to supplement and modify my report as additional information and data become available.

B. Assignment

4. I have been asked by DISH Network L.L.C. (“DISH”) to perform an economic analysis of the Commission’s Notice of Proposed Rulemaking (“*NPRM*”)¹ regarding a possible elimination of the current ban on exclusive deals for cable-affiliated programming. As part of my study, I have constructed an economic model that predicts when withholding programming is profitable in the face of new-entry competition from other Multichannel Video Programming Distributors (“MVPDs”). Our economic model will allow us to answer the following important questions:

- Given a particular level of competition, is withholding programming profitable?
- What is the minimum level of competition that would render withholding of programming unprofitable?
- How does the size of an MVPD’s market footprint affect its incentive and ability to withhold programming?
- What are the economic effects of the current ban on exclusivity and of lifting that ban?

C. Summary of Conclusions

5. My primary conclusions are summarized as follows:

¹ Revision of the Commission’s Program Access Rules, WB Docket No. 12-68, *Notice of Proposed Rulemaking*, FCC 12-30 (rel. Mar. 20, 2012).

- Denial of access to popular programming by a vertically integrated competitor serves to raise rivals' costs and leads to diminished competition and higher prices in the MVPD market.
- Basic economic theory shows that in a vertically integrated market, the profits of upstream suppliers with market power are higher with fewer downstream firms. Thus, as a baseline matter, more downstream competitors can increase the incentive to foreclose.²
- Thus, the entry of new competitors in the MVPD market, such as AT&T and Verizon, has no bearing on the relevance of the exclusivity ban. Indeed, such entry may increase the economic importance of the ban.
- The incentive of a vertically integrated MVPD to foreclose a competitor's access to programming depends in part on the size of the market for the programming outside the MVPD's footprint.
- The exploitation of the terrestrial loophole by Comcast in the Philadelphia designated market area ("DMA") has led to higher prices and impaired competition.
- DISH's experience shows that withholding programming has been a profitable strategy for its competitors. From December 2008 to June 2009, Fisher Communications, Inc. ("Fisher") withheld programming from DISH in seven DMAs. This withholding led to an increase in net churn rates during the channel-loss period in these DMAs.
- The churn rates suffered by DISH were "super-additive" in cases where two channels were withheld and these channels were of roughly equal popularity. In other words, for an integrated MVPD, the aggregate benefit of foreclosing a competitor from two networks at the same time exceeds the sum of the benefits that would accrue if each of the two networks were withheld separately. This indicates that a vertically integrated MVPD that controls multiple channels has a greater incentive to raise its rivals' costs than calculations performed on a per channel basis indicate.

6. In this report, I present an economic model in which programming foreclosure can be usefully analyzed. I then present two case studies on the impact of access to programming in the MVPD market and how it bears on the parameters of the

² See generally Patrick Rey & Jean Tirole, A Primer on Foreclosure, *in* Handbook of Industrial Organization III (Mark Armstrong and Robert Porter eds. 2006).

model. First, I review the case of Comcast and regional sports programming in the Philadelphia market. Second, I analyze the causal impact of channel withholding by Fisher on DISH's net churn rates.

II. AN ECONOMIC MODEL OF THE PROGRAM ACCESS RULES

A. Theory

7. A consumer chooses between purchasing monthly subscription services from competing MVPD service providers: a cable service provider ("Cable") and satellite service providers ("DBS"), and, in some areas, an Incumbent Local Exchange Carrier ("ILEC"). Each service offers a package of channels X , Y , and Z . For each of the channels X , Y , and Z , consumer i has a valuation x_i , y_i , and z_i respectively. Consumer i also has an idiosyncratic random utility component δ_{ij} , which determines whether she prefers Cable, DBS, or ILEC. If $\delta_{iI} > \delta_{ij}$, then she prefers Cable over DBS and the ILEC. Each of the variables x_i , y_i , z_i , and δ_i are monthly utility flows. Let p_s be the monthly price of DBS and let p_c be the monthly price of Cable. Then, in any month, consumer i will purchase DBS if the monthly utility flow from purchasing DBS is greater than the monthly flow from purchasing Cable, i.e., if $x_i + y_i + z_i - p_s > x_i + y_i + z_i - p_c + \delta_i$, or $p_c - p_s > \delta_i$. For each consumer, x , y , z , and δ are distributed according to the joint cumulative probability distribution $F(x,y,z,\delta)$, with density $f(x,y,z,\delta)$. Suppose that, having subscribed to DBS, consumer i now faces a situation where channel X is withheld with the expectation that bargaining will take one month before channel X is restored. If consumer i faces a transaction cost of T , which includes cancellation charges, installation charges, and the time-cost of scheduling installation, then she will now switch to the cable provider and sign a k -month contract if the value of switching is greater: $x_i + y_i + z_i$

$-k p_s < x_i + y_i + z_i - k p_c + k \delta_i - T$, i.e., if $x_i > k (p_c - p_s - \delta_i) + T$. These inequalities determine the percentage of consumers who will churn from a platform following the withholding of a channel from that platform.

8. Let $D(x)$ denote the matrix diversion ratios or churn if programming channel “ x ” is withheld. We will indicate the incumbent vertically integrated cable company as MVPD by index “1” in the market, and will assume for simplicity’s sake a total of four MVPDs in the market. Thus $D(x) = [d_{ij}(x)]$ where $d_{ij}(x)$ is the percentage of customers who churn from MVPD i to MVPD j if channel x is withheld from i (by definition $d_{ii}(x) = 0$). The gain to the incumbent, firm 1 in market share is thus $d_{1j}(x) s_j$. The loss of market share to MVPD i is $\sum_{j \neq i} d_{ij}(x) \bullet s_j = l_i(x)$. The financial loss to MVPD i is thus $\pi_i \bullet l_i(x)$ and the market gain to the incumbent cable company is thus $\pi_1 \bullet d_{1j}(x) s_j$.

9. The Nash bargaining approach to price formation has been adopted by the Commission to explain the setting of prices in this context.³ The Nash bargaining solution implies that firms split the net surplus from the transaction in proportion to each firm’s bargaining strength, which is typically assumed to be equal.⁴ The surplus is

³ See Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses and Transfer Control of Licenses, *Memorandum Opinion and Order*, 26 FCC Rcd. 4238, 4393, Appendix B ¶ 39 (2011) (“*Comcast/NBCU Order*”); General Motors Corporation and Hughes Electronics Corporation, Transferors, and the News Corporation Limited, Transferee, for Authority to Transfer Control, *Memorandum Opinion and Order*, 19 FCC Rcd. 476, 543-48 ¶¶ 149-162 (2004) (“*DIRECTV-News Corp. Order*”); see also William P. Rogerson, “Economic Analysis of the Competitive Harms of the Proposed Comcast-NBCU Transaction,” 21-26 (June 21, 2010) (“Rogerson Report”).

⁴ See, e.g., Timothy Besley & Maitreesh Ghatak, Government Versus Private Ownership of Public Goods, 116 *The Quarterly Journal of Economics* 1343, 1348 (2001) (“We use Nash bargaining so that the parties are assumed to split their renegotiation surplus 50/50 over the disagreement point.”).

defined as the sum of the benefits of each firm's disagreement payoff—the payoff that obtains if the firms fail to reach a deal. We adopt this model and consider the effect of more competitors—i.e., whether the existence of additional MVPDs makes foreclosure less profitable and therefore less likely.

10. Let us assume that the costs of programming are all sunk and the marginal cost of distribution to an extra subscriber is zero. (This assumption does not affect the results but makes the analysis more transparent.) Let us posit that, given the level of MVPD competition, the addition of the channel in question would add value v per subscriber to the MVPD. Then, under the Nash bargaining formulation, the price for carriage of the channel would be $\frac{1}{2}v$ per subscriber without vertical integration. As has been demonstrated in the past, vertical integration changes the prices when the purchaser is a direct competitor of firm 1—the vertically integrated MVPD. Nevertheless, the pricing of the programming should remain $p = \frac{1}{2}v$ for firms that are in markets outside firm 1's franchise footprint, as they are not direct competitors. Moreover, if the program access rules are in place then no exclusion and non-discriminatory pricing holds; in this case too, therefore, the program pricing should remain $p = \frac{1}{2}v$ for firms that are also competing in firm 1's markets.

11. However, if the program access rules are relaxed, then firm 1 can threaten firms that compete directly against it with exclusion; in that case, the Nash bargaining solution implies that the price splits the surplus from the disagreement point payoffs. Notice that here the disagreement payoffs are the resulting change in profits when the channel is not carried by the independent MVPD. Since firm 1's disagreement payoff is positive (it benefits from churn to it by withholding content from the competitor), and

since firm *i*'s disagreement payoff is negative, prices can be expected to rise if exclusion is allowed. In past proceedings, most recently in the Comcast/NBCU merger, the Commission has recognized this point.⁵

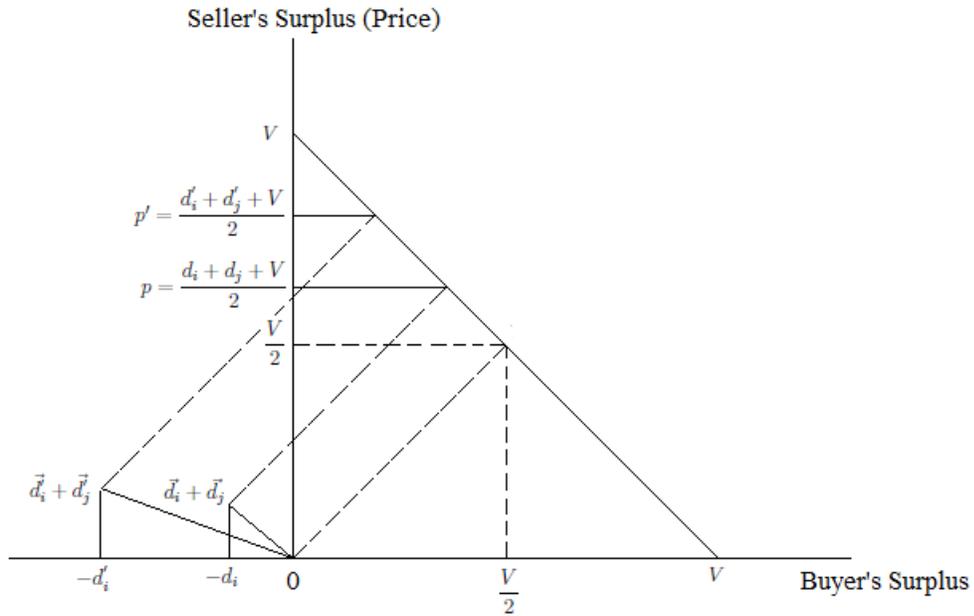
12. The relevant questions for the Commission then become: how does an increase in downstream competition affect these prices, and does it necessarily ameliorate the ability to raise the costs of the cable operators' rivals? The answer depends on the shift in the disagreement point. In particular, with more consumer alternatives than before, it is likely that the churn to firm 1 will be lower than before, meaning that firm 1 benefits less from exclusion. In the case of the linear logic demand model, the gain to firm 1 will fall in line with the reduction of its market share due to increased downstream competition. But this is not the end of the analysis: we must also consider what happens to the disagreement payoff for the purchasing firm. It now suffers in that consumers have more alternatives to turn to after the utility shock of having a channel removed from its lineup. Let us suppose, for example, Verizon has entered a market with FiOS. A consumer who might not have left a DBS platform such as DIRECTV for cable after a channel was foreclosed from DIRECTV, because of her low personal utility for cable, might now switch to FiOS. This effect tends to improve firm 1's bargaining position by making the threat of foreclosure more acute, and so it would raise prices. Notably, this might happen even if the programming is withheld from FiOS, too, as the total utility that a consumer receives from DIRECTV will decline. Thus, a subscriber who had considered leaving DIRECTV for FiOS before but had refrained may do so after DIRECTV loses the programming in question. The risk to DIRECTV would, of course,

⁵ See *Comcast/NBCU Order*, 26 FCC Rcd. at 4393, Appendix B ¶ 39; *DIRECTV-News Corp. Order*, 16 FCC Rcd. at 546-47 ¶¶ 159-160.

be even greater if, for example, FiOS's agreement for the programming expires later than DIRECTV's deal, and thus the effects of the exclusive set in earlier for DIRECTV. The net impact on competition on prices thus depends on the size of the sum of the disagreement point as $p = \frac{1}{2} (v + \pi \bullet l(x) + \pi_1 \bullet d_{i1}(x)s_i)$.

13. In the simple case of two firms, firm 1's gain is firm 2's loss. With more firms, on the other hand, it is likely that the total churn away from firm 2 is greater than the churn towards firm 1. Most importantly, *if the sum of these absolute values, $\pi \bullet l_i(x) + \pi_1 \bullet d_{i1}(x)s_i$, increases with more firms in the marketplace, then the presence of more competitors would make the threat of exclusion more effective, and ultimately lead to higher prices in the marketplace.* This point is illustrated in the following diagram:

ILLUSTRATION 1



14. Illustration 1 demonstrates how prices can rise due to the shifts in the disagreement point accompanying an increase in the number of competitors. Notice, of course, the importance of the churn rates in this result. For programming so unpopular

that its withdrawal induces minimal churn, there is little threat of foreclosure. However, for programming that is pivotal and where the withdrawal induces significant churn, there is a very real threat of foreclosure, and, as shown above, even if the programming is not foreclosed, this threat induces higher prices.

15. There is another reason why the profitability of an exclusive strategy does not significantly depend on the integrated MVPD's market share. Whether that MVPD has an 60%, 50%, or 40% share, it can likely reserve for itself a majority of the churn if it withholds the programming from all of its competitors. It can expect that most of the subscribers leaving its competitors will "churn into" itself in an exclusive.

16. In addition, a strategy of temporary foreclosure would allow an integrated cable operator to circumscribe the costs of foreclosure while enjoying many of its benefits. Even a brief exclusive enjoyed by an integrated cable operator can be expected to result in a more long-term shift in subscribers from the rival MVPD to the cable operator because many subscribers do not switch back. At the same time, it is reasonable to predict that the programmer's cost would be cushioned if and when the programmer starts to receive programming fees again at the end of the exclusive term. The Commission found this to be the case in its review of the DIRECTV/News Corp. transaction. At the time, DIRECTV held a 13% share of the MVPD market.⁶ Based on its own economic analysis, the Commission concluded that temporary foreclosure techniques would be profitable for News Corp.⁷ In other words, through a strategy of temporary withholding of its affiliated programming, News Corp. would make more money in additional subscription revenue earned by DIRECTV due to its exclusive rights

⁶ *DIRECTV-News Corp. Order*, 19 FCC Rcd. at 476 ¶ 3.

⁷ *Id.* at 547 ¶ 161.

than it would lose in foregone programming revenue from other distributors. For that reason, the Commission prohibited DIRECTV from possessing exclusivity rights in News Corp.'s regional sports programming. As the Commission is aware, popular sports programming, at both the national and regional level, remains highly desirable.

17. The profitability of a foreclosure strategy increases further still when the integrated company has a greater economic stake in its cable operation than it has in the programmer in question. This is an important factor, since often each cable operator's ownership of a cable-affiliated cable network is partial. Perhaps it is no coincidence that, in some cases, a programmer is co-owned by a number of large cable multiple system operators. For example, Comcast, Cox, Time Warner Cable, and Bright House co-own iN DEMAND L.L.C. and its suite of sports programming.⁸ Co-ownership permits cable operators to share the costs of a foreclosure strategy while each receives the full gains in its franchise area.

18. Comcast's controlling interest in NBCU is another example of an ownership structure that makes exclusivity more profitable: Comcast would reap all of the economic benefit from its cable distribution business, even as it would bear the costs of a foreclosure strategy only to the extent of its economic interest in NBCU—currently 51%.⁹

III. CASE STUDY 1: THE PHILADELPHIA STORY

19. In 2007, the Commission had occasion to review Comcast's history of denying for many years the two DBS operators (DISH and DIRECTV) access to

⁸ Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, *Thirteenth Annual Report*, 24 FCC Rcd. 542, 635 ¶ 191, Appendix C, Table C-1 (2009).

⁹ *Comcast/NBCU Order*, 26 FCC Rcd. at 4245 ¶ 17.

Comcast's affiliated sports programming in the Philadelphia DMA and in other markets. As the Commission found, Comcast had denied DBS providers access to Comcast SportsNet Philadelphia ("CSN-Philadelphia"), which carries the games of the Philadelphia Phillies (Major League Baseball), Philadelphia 76ers (National Basketball Association), and Philadelphia Flyers (National Hockey Association). Comcast had also denied access to CN8, which carries overflow regional sports programming when it is not possible for CSN-Philadelphia to accommodate two events. Comcast's denial of regional sports programming has foreclosed its DBS competitors from regional sports programming shown on two Comcast-affiliated channels: CSN-Philadelphia and CN8.

20. Comcast was the majority owner of CSN-Philadelphia, with approximately an 80% equity share in the regional sports network ("RSN"). Comcast also controlled future access to the 76ers' and Flyers' carriage rights. Specifically, in 1996, Comcast acquired a controlling interest in Spectacor (now "Comcast Spectacor"), a holding company that owns the 76ers, the Flyers, and the Wachovia Center stadium that hosts the teams.

21. By August 1997, Comcast acquired all the local telecasting rights to Philadelphia Flyers', Philadelphia 76ers', and Philadelphia Phillies' games, rights previously held by Rainbow Sports, the owner of SportsChannel. Thereafter, SportsChannel announced that it would cease to operate as of September 30, 1997. On October 1, 1997, CSN-Philadelphia debuted as a new channel on Comcast's basic service tier in the Philadelphia area, and it was distributed only through terrestrial microwave and fiber technology. Before introducing CSN-Philadelphia as a new channel, Comcast indicated that CSN-Philadelphia's programming would not be available to any national

DBS provider. Comcast's discriminatory and continuous refusal to provide CSN-Philadelphia to its primary downstream competitors caused DBS providers to experience significantly lower-than-expected penetration rates in the Philadelphia DMA.

22. The Commission and others found that Comcast's foreclosure of CSN-Philadelphia to its DBS competitors enabled Comcast to charge higher cable rates. Economic reports prepared by the Commission, the General Accounting Office, and peer-reviewed research clearly support the finding that reductions in DBS penetration rates lead to higher cable rates.

23. The economic evidence strongly supports the conclusion that DBS penetration rates are reduced when cable operators deny access to an RSN. In the 2007 *NPRM*, the Commission concluded: "without access to the cable-affiliated RSN in Philadelphia, the percentage of television households that subscribe to DBS service in Philadelphia is 40 percent below what would otherwise be expected."¹⁰ The Commission further stated: "The addition or subtraction of variables will yield different magnitudes for the coefficients measuring the effect on DBS penetration in areas in which DBS is unable to carry RSNs, but whatever the mix of variables, the negative effect on DBS penetration of RSN withholding remains clear."¹¹

24. Reductions in DBS penetration rates cause higher cable rates. Goolsbee and Petrin, for example, asked "whether cable prices vary systematically with the level of competition provided by satellite" and found "that more competition from DBS is

¹⁰ Development of Competition and Diversity in Video Programming Distribution: Section 628(c)(5) of the Communications Act: Sunset of Exclusive Contract Prohibition, *Report and Order*, 22 FCC Rcd. 17791, 17817-18 ¶ 39 (2007) ("*2007 Program Access NPRM*").

¹¹ *Id.* at 17882, Appendix B, ¶ 19.

correlated with lower cable prices and somewhat higher quality cable.”¹² In addition, our conclusion is consistent with the study performed by Dr. Willig and Mr. Orszag, which led them to conclude that, as of July 2003, Comcast’s cable rates in Philadelphia were between \$3.75 and \$7.47 per month higher than predicted given the characteristics of the market.¹³

25. Finally, in its *2009 Report on Cable Industry Prices*, the Commission found that an increase in the concentration of MVPD providers (like Comcast) in a given location (*e.g.*, as a result of decreased DBS penetration rates) also causes cable rates to increase.¹⁴ In its *2007 Program Access NPRM*, the Commission found that the decreased DBS penetration rate in the Philadelphia DMA caused by Comcast’s denial of CSN-Philadelphia to DBS providers has adversely affected competition in that market. As the Commission stated: “there is factual evidence that cable operators have withheld this programming from competitors and, in two instances—in San Diego and Philadelphia—*there is empirical evidence that such withholding has had a material adverse impact on competition in the video distribution market.*”¹⁵

IV. CASE STUDY 2: THE DISH-FISHER RETRANSMISSION DISPUTE

26. DISH provides subscription television services. With about 14 million customers, DISH is the third largest pay-TV provider in the United States. DISH began

¹² Austin Goolsbee & Emil Petrin, *The Consumer Gains from Direct Broadcast Satellites and the Competition with Cable TV*, 72 *Econometrica* 351, 377 (2004).

¹³ See Letter from Pantelis Michalopoulos, Counsel for EchoStar Satellite Corporation, to Marlene Dortch, Secretary, Federal Communications Commission, MB Docket No. 03-124, at 4 (Dec. 15, 2003).

¹⁴ See Statistical Report on Average Rates for Basic Service, Cable Programming Service, and Equipment, *Report on Cable Industry Prices*, 24 FCC Rcd. 259, 296-97 ¶ 55 (2009).

¹⁵ *2007 Program Access NPRM*, 22 FCC Rcd. at 17817 ¶ 39.

offering subscription television services in March 1996. DISH programming includes more than 280 basic video channels, 30 premium movie channels, 35 regional and specialty sports channels, 2,500 local channels, 220 Latino and international channels, and 50 channels of pay-per-view content.¹⁶

27. Fisher is a subsidiary of Fisher Communications, Inc., and owns and operates 13 full power television stations, seven low power television stations, and ten owned and managed radio stations in the Western United States.¹⁷ Fisher's 20 television stations include network affiliations with ABC, CBS, FOX, Univision, and CW.¹⁸ According to Nielsen Media Research, Fisher's television stations reach approximately 3.5% of U.S. television households.¹⁹

28. In December 2008, DISH and Fisher were involved in a retransmission dispute that resulted in DISH's inability to retransmit a number of Fisher's major network affiliates. A Fisher news release published on December 17, 2008, stated: "DISH Network's satellite carriage agreement with [Fisher] expired on December 17, 2008, immediately leaving DISH customers in 7 media markets without the ability to receive Fisher's programming. Stations no longer available to DISH customers are: KOMO and KUNS in Seattle, KIMA and KUNW in Yakima, KATU in Portland, KVAL in Eugene, KBCI in Boise, KIDK in Idaho Falls, and KBAK and KBFX in Bakersfield."²⁰ Thus,

¹⁶ DISH, Annual Report (Form 10-K) (2009).

¹⁷ Fisher Communications, Inc., Annual Report (Form 10-K) (2009).

¹⁸ See About Fisher, Fisher Communications, Inc., <http://fsci.com/about-fisher/> (last visited June 20, 2012).

¹⁹ Fisher Communications, Inc., Annual Report (Form 10-K) (2009).

²⁰ See Press Release, "DISH Network Carriage Agreement With Fisher Communications, Inc. Expires," Fisher, *available at*

Fisher stations were withheld by DISH in seven DMAs during the December 2008 to June 2009 channel loss period. Table 1 shows a list of the DMAs that were subjected to channel withholding by Fisher, and includes a column displaying whether a second network affiliate was also withheld in the DMA, and whether the second network was a “Top 4”²¹ or Univision affiliate. On June 10, 2009, Fisher entered into a new multi-year retransmission agreement with DISH,²² and retransmission of the Fisher stations resumed.

TABLE 1
LIST OF DMAS SUBJECTED TO CHANNEL WITHHOLDING BY FISHER

DMA	Primary Channel Withheld	Second Affiliate Withheld
Bakersfield, CA	CBS	Fox
Boise, ID	CBS	N/A
Eugene, OR	CBS	N/A
Idaho Falls, ID	CBS	N/A
Portland, OR	ABC	Univision
Seattle, WA	ABC	Univision
Yakima, WA	CBS	Univision

29. I regard the DISH-Fisher retransmission dispute as a natural experiment that can be used to determine the relationship between channel substitutability and net churn rates. To study the effects of channel withholding on net churn rates, I identify

<http://investor.fsci.com/phoenix.zhtml?c=61026&p=irol-newsArticle&ID=1237841&highlight=> (viewed June 2012).

²¹ The “Top 4” Networks are ABC, CBS, FOX, and NBC.

²² Fisher Communications, Inc., Annual Report (Form 10-K) (2009).

three channel withholding scenarios: (1) only one Top 4 Network channel is withheld, (2) two Top 4 Network channels are withheld, and no other station, and (3) two channels are withheld and one of the two is a Univision affiliate. In scenario 1, only one channel is withheld. In scenario 2, two channels are withheld that are of roughly equal popularity (both are affiliated with Top 4 networks). Our prior assumption in scenario 2 is that net churn is “super-additive.” In scenario 3, the two channels withheld are not both Top 4 network affiliates. In this scenario, the hypothesis that we want to test in scenario 3 is that net churn rates would be additive.

30. To observe the trends in net churn in the seven DMAs in scenarios 1, 2, and 3, I examined monthly net churn data obtained from DISH. These data show that net churn rates increased significantly during the channel loss period in scenarios 1, 2, and 3 respectively.²³ Furthermore, to test the hypothesis that net churn rates are super-additive when the withheld channels are of roughly equal popularity, I specified and estimated an econometric model of net churn in Section IV.A. The model was estimated using (1) monthly data obtained from DISH on the number of subscribers and net churn for 14 DMAs from June 2008 through March 2010, (2) statistical summary data (for the channel loss period) obtained on socio-economic and demographic characteristics of households living in these DMAs, and (3) data on DISH penetration in each of the DMAs for the months December 2008, March 2009, June 2009, and December 2009.

²³ These charts were constructed using data provided by DISH.

A. A Theoretical Model of Churn

31. We expand upon the models used by Rogerson,²⁴ Murphy,²⁵ and Katz and Israel²⁶ of bargaining over a carriage price between an MVPD and a channel owner, by allowing the owner to control multiple channels. We investigate whether a merger creates an increase in bargaining power that will raise the prices for carriage beyond the sum of the standalone carriage prices of each channel. The key issue is the impact of the merger on the cost of negotiation breakdown (the “disagreement point”) to both parties.

32. We simplify the model developed above to the case of just two firms, but allow for withholding multiple channels. A consumer chooses between purchasing monthly subscription services from two MVPD service providers: a cable service provider (“Cable”) and a satellite service provider (“DBS”). Each service offers a package of channels X , Y , and Z . For each of the channels X , Y , and Z , consumer i has a valuation x_i , y_i , and z_i respectively. Consumer i also has an idiosyncratic random utility component δ_i , which determines whether she prefers Cable or DBS. If $\delta_i > 0$, then she prefers Cable; if $\delta_i < 0$, then she prefers DBS. Each of the variables x_i , y_i , z_i , and δ_i represents monthly utility flows. Let p_s be the monthly price of DBS, and let p_c be the monthly price of Cable. Then, in any month, consumer i will purchase DBS if the monthly utility flow from purchasing DBS is greater than the monthly flow from purchasing Cable, *i.e.*, if $x_i + y_i + z_i - p_s > x_i + y_i + z_i - p_c + \delta_i$, or $p_c - p_s > \delta_i$. For each

²⁴ See Rogerson Report, 9-14, 18-23.

²⁵ See Kevin M. Murphy, “Economic Analysis of the Impact of the Proposed Comcast/NBCU Transaction on the Cost to MVPDs of Obtaining Access to NBCU Programming,” ¶¶ 8-21 (June 21, 2010).

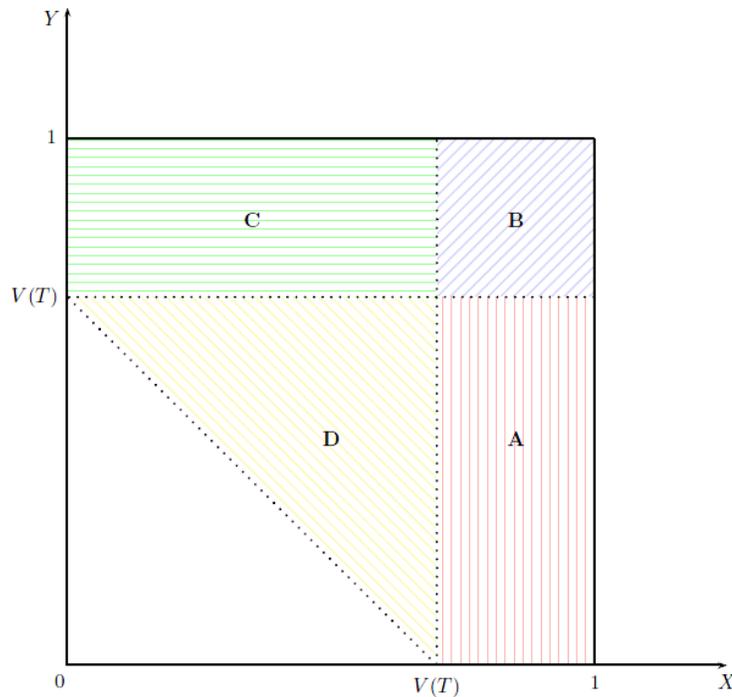
²⁶ See Mark Israel and Michael L. Katz, “Economic Analysis of the Proposed Comcast-NBCU-GE Transaction,” 53-62 (July 20, 2010).

consumer, x , y , z , and δ are distributed according to the joint cumulative probability distribution $F(x,y,z,\delta)$, with density $f(x,y,z,\delta)$. Suppose that a DBS now faces a situation where channel X is withheld with the expectation that bargaining will take one month before channel X is restored. If consumer i faces a transaction cost of T , which includes cancellation charges, installation charges, and the time-cost of scheduling installation, then she will now switch to the cable provider and sign a k -month contract if the value of switching is greater: $x_i + y_i + z_i - k p_s < x_i + y_i + z_i - k p_c + k \delta_i - T$, i.e., if $x_i > k (p_c - p_s - \delta_i) + T$. Similarly, if channel y is withheld in a carriage dispute, then the consumer will switch if $y_i > k (p_c - p_s - \delta_i) + T$. If both channels are withheld simultaneously in a carriage dispute, then the consumer will switch if $x_i + y_i > k (p_c - p_s - \delta_i) + T$.

33. Figure 1 offers a graphic description of the implications of the model for the super-additivity of net churn rates. Consumers' monthly valuations x and y are independently and identically distributed according to a uniform distribution on the support $[0, 1]$. Since the valuations are distributed identically, the critical valuation for each channel, as a function of the transaction cost T , above which a consumer will switch, will be the same for both channels X and Y ; this critical value is denoted $V(T)$. The measure of customers who switch if only channel X is withheld is the area $A + B$; the measure of customers who switch if only channel Y is withheld is the area $C + B$; the measure of customers who switch if both are withheld is $A + B + C + D$. Thus, the question whether a greater number of customers switch if both channels are simultaneously withheld depends on whether D is greater than B . In the case of independent and identical uniform distributions, $D > B$ when the net churn resulting from

withholding a single channel is below approximately 41.4%.²⁷ As net churn rates in practice are between 0 and 10, this suggests that we are in the region where harm is likely. Somewhat paradoxically, the lower the net churn rate from withholding a single channel, the greater the likelihood of a “snowball” effect—greater than additive harms from the joint withholding of multiple channels.

FIGURE 1
GRAPHICAL ANALYSIS OF SUPER-ADDITIVITY CRITERION



B. An Empirical Analysis of DISH’s Churn Rates

1. Data and Methodology

34. In order to estimate the effect of channel withholding on net churn rates, monthly data were obtained from DISH on (1) the number of subscribers and (2) net

²⁷ This critical mass is derived in the following way. Set $x = V(T)$. Then, in Figure 4, $B = (1 - x)^2$ and $D = (1/2) x^2$. Deriving the value of x at which $D = B$ involves solving a quadratic equation whose only feasible solution is $x = 2 - \sqrt{2}$. Thus, the critical mass from withholding a single channel must be less than $(1 - x) (1) = 41.4\%$.

churn for 14 DMAs from June 2008 through March 2010. Statistical summary data (for the channel loss period) were obtained on socioeconomic and demographic characteristics of households living in the DMAs. In addition, data on DISH penetration in each of the DMAs were obtained for the months December 2008, March 2009, June 2009, and December 2009.

35. Of the 14 DMAs in the dataset, seven DMAs had stations withheld by Fisher. Of the seven DMAs, three DMAs—Eugene, OR, Boise, ID, and Idaho Falls, ID—had only one station withheld. We regard them as having undergone “Treatment 1” (one channel withheld) during the treatment period. One DMA, Bakersfield, had two Top 4 network affiliates withheld. We report that DMA as having undergone Treatment 2. The other three DMAs had two stations withheld, one of which was not a Top 4 network affiliate, and we regard them as having undergone “Treatment 2S.” The DMAs undergoing one of treatments 1, 2, and 2S will be called the “treated” DMAs. The remaining seven DMAs are each the top “look-alike” DMA for each of the treated DMAs (as determined by DISH, based on socioeconomic and demographic similarity). We performed an OLS regression after pooling data for the 14 DMAs.

36. “DISH penetration” is defined as the number of DISH subscribers divided by the number of Households subscribing to Pay Television. We averaged the value of DISH penetration across the four months for which we have data, and used this value as a proxy for market share for each month for the entire sample time period.

37. We used the following structural model to estimate the treatment effect of withholding stations on net churn rates:

$$Net\ Churn\ Rate_{it} = \alpha + \gamma_{it}^1 Treatment1_{it} + \gamma_{it}^2 Treatment2_{it} + \gamma_{it}^{2S} Treatment2S_{it}$$

$$+ \beta_i X_i + \gamma_i \text{Market Share}_i + \sum_j \delta_i^j \text{Month}_t^j + \epsilon_{it}$$

38. DMAs are indexed by i and months by t . Dummy variable $Treatment1_{it}$ is equal to 1 if DMA i received Treatment 1 during month t . Dummy variables $Treatment2_{it}$ and $Treatment2S_{it}$ are defined analogously. The vector X_i consists of (1) dummies for major ethnicities (White, African American, and Hispanic), (2) Average Householder Age, (3) Average Household Income Bracket, and (4) Average Estimated Credit Score. The dummy variable $Month_t^j$ is equal to one when the index j (which indexes all the months in the sample) equals t .²⁸

2. Hypothesis Tests: Super-additivity of Churn If Channels Are of Roughly Equal Popularity

39. We derived an equivalent formulation of the model to test the one-sided null hypothesis that $\gamma_{it}^2 \geq 2 \gamma_{it}^1$. Our results show that we cannot reject the null hypothesis at the 5% level, and we conclude the net churn rates are super-additive. We also found that the churn from withholding two channels with one not in the Top 4 was higher than withholding a single Top 4 alone. This increase in churn, however, is small and indicative that some channels may not be pivotal in many customer's MVPD purchase decisions.

40. Thus, a vertically integrated MVPD that has control of several channels can gain enhanced leverage over its competitors by withholding multiple channels. This strategy simultaneously (i) inflicts a higher cost on the competitor and (ii) generates a

²⁸ We also use an alternative model, where DMA fixed effects replace demographic variables. The results for both gross and net churn rates are roughly similar in this case—the coefficient of Treatment 2 is approximately, though slightly less than, twice the coefficient of Treatment 1, and the coefficient of Treatment 2S is approximately equal to the coefficient of Treatment 1. Thus, our results are robust to the natural alternative specification of the model using fixed DMA effects.

greater benefit to the integrated firm as customers churn to its distribution arm, which continues to show the withheld programming. In addition, a strategy of temporary foreclosure would allow an integrated cable operator to circumscribe the costs of foreclosure while enjoying many of its benefits. Even a brief exclusive enjoyed by an integrated cable operator can be expected to result in a more long-term shift in subscribers from the rival MVPD to the cable operator because many subscribers do not switch back. At the same time, it is reasonable to predict that the programmer's cost would be cushioned if and when the programmer starts to receive programming fees again at the end of the exclusive term.

3. Regression Results

41. The results confirmed our hypothesis: In cases where two Top 4 network stations were withheld, the rate of churn was more than twice what would have been expected if each one had been withheld separately. In cases where one Top 4 station and one Univision station were withheld, the rate of churn was larger than the churn rates that followed removing a single Top 4 channel, but less than twice the effect of a single Top 4 channel. In addition, we found that the effects of temporary foreclosure persist beyond the foreclosure period: churn is higher several months after the end of the programming outage.

V. CONCLUSIONS

42. We have presented an economic model to analyze the impact of the exclusivity ban. We have shown that the entry of new competitors in the MVPD market, such as AT&T and Verizon, does not necessarily reduce the public interest benefit of the rule. Indeed, such entry may increase the prohibition's economic importance. Rather, the incentive of a vertically integrated MVPD to foreclose a competitor's access to

programming depends in part on the size of the market for the programming outside the MVPD's footprint, and crucially on the level of churn induced by removing access to the channel.

43. We presented two case studies to illustrate the real-world importance of this analysis. First, the exploitation of the terrestrial loophole by Comcast in the Philadelphia DMA has led to higher prices and impaired competition. Second, DISH's experience with foreclosure shows that withholding programming can be a profitable strategy for an integrated MVPD. The withholding of the Fisher stations led to an increase in net churn rates during the channel-loss period in these DMAs.

**APPENDIX – RESUME OF PROFESSOR
SIMON J. WILKIE**

RESUME OF PROFESSOR SIMON J. WILKIE

Professor of Economics and Chair Department of Economics
University of Southern California, 2300 Vermont Ave., Los Angeles 90089-7725
Phone: (213) 743-1789
Email: swilkie@law.usc.edu

EDUCATION

Ph.D. (Economics) University of Rochester, 1990

M.A. (Economics) University of Rochester, 1988 B.Comm. Honors. (Econ) University of New South Wales, 1984

AWARDS AND FELLOWSHIPS

California Institute of Technology Graduate Student Council: 1996-97 Mentoring Award.

California Universities for Research in Earthquake Engineering: "Social Economic and System Aspects of Earthquake Recovery and Reconstruction," co-PI with James Beck, Caltech, and Anne Kiremidjian, Stanford, \$400,000 for 1997-1999.

National Science Foundation, SES Grant "Applied Mechanism Design," \$38,113 for 2000-2002.

National Science Foundation, PEER Grant "A Decision Theoretic Approach to Evaluating Building Specific Losses," \$75,000 for 2000-2002.

APPOINTMENTS

Professor and Chair, Department of Economics, University of Southern California, 2008-present; Professor of Communication Economics and Law, USC Law School 2008-present; Executive Director, Center for Communication Law and Policy, USC Law School; and Professor of Communication (Courtesy), The Annenberg School, University of Southern California, August 2005-present.

Senior Fellow, USC Annenberg Center for Communication, March 2006-2007.

Senior Research Associate, California Institute of Technology, July 2002-2005.

Chief Economist, Federal Communications Commission, Washington DC, 2002-2003.

Assistant Professor, California Institute of Technology, 1995-2002.

Lecturer, California Institute of Technology, 1994-1995.

Member of Technical Staff, Bell Communications Research, 1990-94.

Visiting Assistant Professor, Columbia University, 1992-93.

Post-Doctoral Fellow, Bell Communications Research, 1989-90.

JOURNAL ARTICLES

“Incremental Export Subsidies,” with Martin Richardson, *The Economic Record*, March 1986, pp. 88-92.

“The Bargaining Problem Without Convexity: Extending The Egalitarian and Kalai-Smorodinsky Solutions,” with John Conley, *Economics Letters*, 1991, Vol. 36, pp. 365-369.

“A Generalization of Kaneko’s Ratio Equilibrium,” with Dimitrios Diamantaris, *Journal Of Economic Theory*, 1994, Vol. 62, No 2, pp. 499-512.

“Incremental R&D Subsidies,” with Martin Richardson, *The Journal of Regulatory Economics*, 1995, Vol. 7, pp. 161-175.

“Implementing the Nash-Extension Bargaining Solution,” with John Conley, *Economic Design*, 1995, Vol. 1, pp. 205-216.

“Auctioning the Airwaves: The Contest for Radio Spectrum,” with Bhaskar Chakravorti, Yossef Spiegel and William Sharkey, *Journal of Economics and Management Strategy*, 1995, Vol. 4, pp. 344-373.

“On the Set of Pareto Efficient Allocations in Economies with Public Goods,” with Dimitrios Diamantaris, *Economic Theory*, 1996, Vol. 7, pp. 371-379.

“An Extension of The Nash Bargaining Solution to Non-Convex Problems,” with John Conley, *Games and Economic Behavior*, 1996, Vol. 13, pp. 26-38.

“Investment in New Technology as a Signal of Firm Value Under Regulatory Opportunism,” with Yossef Spiegel, *Journal of Economics and Management Strategy*, 1996, Vol. 5, pp. 251-276.

“Comment on Spiller’s ‘A Positive Political Theory of Regulatory Instruments: Contracts, Administrative Law or Regulatory Specificity?’” *The Southern California Law Review*, 1996, Vol. 69, pp. 517-519.

“Double Implementation of the Ratio Solution by a Market Game,” with Luis Corchon, *Economic Design*, 1996, Vol. 2, pp. 325-337.

“Reference Functions and Possibility Theorems for Cardinal Social Choice Problems,” with John Conley and Richard McLean, *Social Choice and Welfare*, 1997, Vol. 14, pp. 65-78.

“Implementation of the Walrasian Correspondence by Market Games,” with Carmen Beviá, and Luis C. Corchón, *Review of Economic Design*, 2003, Vol 7, pp. 429-442.

“Current Regulatory Realities: Overcoming the Regulatory Quandary,” *Michigan State DCL Law Review*, 2003 Issue 3 pp. 599-605.

“Economic Analysis at the FCC,” with Mark Bykowsky, Jonathan Levy, William Sharkey and Tracy Waldon, *Review of Industrial Organization*, 2003, Vol. 23, pp. 157-174.

“Introduction to the Special Issue on Telecommunications,” *Journal of Public Economic Theory*, 2004, Vol 6, pp. 537-539.

“Endogenous Games and Mechanisms: Side Payments Among Players,” with Matt Jackson, *Review of Economic Studies*, 2005 Vol. 72 pp. 544-566.

“Sequencing Lifeline Repairs after an Earthquake,” with Marco Casari *The Journal of Regulatory Economics*. 2005 Vol. 27, pp. 47-65.

“Credible Implementation,” with Bhaskar Chakravorti and Luis Corchon, *Games and Economic Behavior*, 2006, Vol. 57, pp. 16-36.

“Axiomatic Foundations for Compromise Theory: The duality of Bargaining Theory and Multi-Objective Programming,” with John Conley and Richard McLean, *Games and Economic Behavior* (forthcoming).

“Lies, Damned Lies and Political Campaigns,” with Steve Callander, *Games and Economic Behavior*, 2007, Vol. 60, pp. 262-286.

“Introduction: The State of the Debate on Net Neutrality,” with John Peha and William Lehr, *International Journal of Communication*, 2007, Vol. 1, pp.709-716.

“The Ordinal Egalitarian Bargaining Solution,” with John Conley, *Social Choice and Welfare*, November 2010.

“Economics of Cloud Computing,” with Ergin Bayrak and John Conley, *The Korean Economic Review*, 2011, Vol. 27, No. 2, pp. 203-230.

“China’s Anti-Monopoly Law: What is the Welfare Standard?,” with Pingping Shan, Guofu Tan, and Michael A. Williams, *Review of Industrial Organization*, March 2012 (online version).

“Tax Incidence under Imperfect Competition: Comment,” with Philip J. Reny and Michale Williams, *Journal of Industrial Organization*, March 2012 (online version).

“Second Mover Advantage and Entry Timing,” with David Sibley and Du Van Tran, *Journal of Industrial Economics*, March 2012.

BOOK CHAPTERS

“The Greatest Auction in History,” with John McMillan and R. Preston McAfee, in *Better Living Through Economics*, John Sigfreid, editor. AEA and Harvard University Press, 2009.

BOOKS

“*ICT: The 21st Century Transitional Initiative. Report of the 23rd Annual Aspen Institute Conference on Communications Policy.*” The Aspen Institute Washington DC 2009.

OTHER PUBLICATIONS

“Economic Policy In the Information Age,” *Engineering and Science*, Vol. LXIV, No 1. 2001. Pp. 28-37.

“Memorial to Jeffrey Scott Banks,” *Journal of Public Economic Theory*, 2001, Vol. 3 No. 4, pp. 551-554.

“Local Competition and Universal Service,” with Charles Plott, *Jobs and Capital*, 1995 Vol. 4, pp. 43-45.

“Installment Payments and the FCC Spectrum Auctions.” *Jobs and Capital*, 1996, Vol. 5, pp. 26-29.

NSF PROJECT REPORTS

“Decision Support Tools for Earthquake Recovery: Interim Report,” with Jim Beck Anne Kiremidjian, and S. King, Y. Achkire, R. Olson, J. Goltz, K. Porter, A. Irfanoglu, M. Casari, J.M Legrue, F. Boehmke and A. Gonzales CUREe-Kajima Project Report 1999.

“Decision Support Tools for Earthquake Recovery: Final Report,” with Jim Beck Anne Kiremidjian, and S. King, R. Olson, J. Goltz, T. Salmon, A Mason, K. Porter, and A. Irfanoglu CUREe-Kajima Project Report, 2000.

POLICY CENTER AND THINK TANK REPORTS

Progress and Freedom Foundation “The Digital Age Communications Act Project” (member of the Universal Service Working Group), *available at* <http://www.pff.org/daca/>.

CCLP “Annenberg Center CCLP Principles on Net Neutrality,” *available at* <http://cclp.usc.edu/research/policy.cfm>.

New America Foundation, “Open Access for the 700 MHz Auction,” *available at* http://www.newamerica.net/publications/policy/open_access_700_mhz_auction.

INVITED TESTIMONY, EXPERT PANELS AND GOVERNMENT ADVICE

Australian Industry Assistance Commission: Design of Export Promotion Mechanisms.

Canadian Competition Bureau: Expert Economist on Merger Review.

Germany, Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste (WIK): Invited Panelist “Net Neutrality—Implications for Europe.”

Jamaican Office of Utilities Regulation: Broadband Policy and Universal Service (USAID Funded Project).

Mexican Ministry of Communications: Broadband Deployment Competition Policy and Spectrum Auction Design.

US Congress Staff Briefing Session (sponsored by Senator Diane Feinstein and Georgetown Law School): “Broadband Policy and Universal Service.”

US Congress Staff Briefing Session (sponsored by Senator Mike DeWine and American Antitrust Institute): “Telecom Mergers.”

US Congress Briefing Conference (sponsored by Senator Diane Feinstein and CCLP USC Law School): “Wireless Broadband: Is the US Lagging.”

US Department of Justice, Antitrust Division: Expert Economist on Merger Review.

US Department of Justice, Antitrust Division: Invited Panelist December 2007
“*Telecommunications Symposium: Voice, Video and Broadband: The Changing Competitive Landscape and Its Impact on Consumers.*”

US Federal Communications Commission: “*Affirmative Action, Auction Design and Installment Payments*” (presentation to FCC Chairman William Kennard and Senior Staff).

US Federal Communications Commission: Member of the “*Localism Task Force.*”

US Federal Communications Commission Advanced Economics Course: “*Bargaining Theory.*”

US Federal Trade Commission: Invited Panelist “*Broadband Connectivity Competition Policy Workshop.*” Video, transcripts and the FTC Report to Congress, available at <http://www.ftc.gov/opp/workshops/broadband/index.shtml>.

US National Academy of Sciences and National Telecommunications & Information Administration: “*Improving Spectrum Management Through Economic and Other Incentives: A Workshop.*”

New Jersey Senate Commerce Committee: “*Statewide versus Local Cable TV Franchising.*”

City of Los Angeles Board of Information Technology Commissioners: “Impact of New State Legislation AB 2987 (The Digital Infrastructure and Video Competition Act of 2006) on the City of Los Angeles.”

GRADUATE STUDENTS

Principal Advisor: Alvaro Gonzalez, 2000, Telcordia Technologies. Marco Casari, 2002, Ohio State University. Ergin Bayrak, 2009, USC Annenberg School. Rahul Nilakantan, 2010 Indian Institute of Management. Brijesh Pinto, 2010, Competition Economics.

Committee Member: Szilvia Papai, 1996, Koc University Istanbul. Robin Hanson, 1998, University of California Berkeley, School of Public Health. Peter Coughlin, 1999, Harvard Business School. Dean Williamson, 1999, U.S. Department of Justice. Jin Yu, 1999, FinEcon LLP. Leslie Fine, 2001, Hewlett-Packard Labs. Angela Huang, 2001, Carnegie-Mellon University. Guillaume Roger, 2008, UNSW. Francesco Sobbrío, 2008, Lucca University. Yong Chao, 2009, University of Louisville.

PROFESSIONAL ACTIVITIES

Editorial Board Member, *Journal of Public Economic Theory*, 1997-2006.

Editorial Board Member, *International Journal of Communications*, 2006-present.

Guest Editor, *Journal of Public Economic Theory*, Vol. 6 No. 4, October 2004.

Guest Editor, *Review of Network Economics*, “Net Neutrality Issue,” 2008.

Referee: National Science Foundation, *The American Economic Review*, *Econometrica*, *Economic Design*, *Economic Theory*, *European Transactions on Telecommunications*, *Games and Economic Behavior*, *The International Economic Review*, *The International Journal of Game Theory*, *The Journal of Economics and Management Strategy*, *The Journal of Economic Theory*, *The Journal of Economic Behavior and Organization*, *The Journal of Industrial Economics*, *The Journal of Regulatory Economics*, *Telecommunication Systems*, and *Theory and Decision*.

Committee Memberships: Program Committee, *Telecommunications Policy Research Conference* (TPRC): 2006-2008. Organizer of CCLP Conferences: “Wireless Broadband: is the US Lagging,” Washington DC, 2005, “Symposium on Net Neutrality” USC, 2006, “Summit on US Telecommunications Policy,” USC, 2006, Symposium on International Approaches to Telecommunication regulation and Competition,” Las Vegas 2007. Local Committee: 2002 *Social Choice and Welfare Society* Meetings, Pasadena. Session Chair: 1997 Summer Meetings of the *Econometric Society*. Member of the Organizing Committee: “Workshop on Computer Science and Game Theory,” at *Fourth International Conference on Game Theory*, SUNY Stony Brook, 1993. “Workshop on Implementation,” at *Third International Conference on Game Theory*, SUNY Stony Brook, 1992. “Workshop on Cost Allocation and Transfer Pricing,” at the *Second International Conference on Game Theory*, SUNY Stony Brook, 1991.