Attachment C

Redacted, Public Version

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

In the Matter of	)	
	)	
TCR Sports Broadcasting Holding, L.L.P.,	)	MB Docket No. 08-214
	)	
Complainant,	)	
	)	File No. CSR-8001-P
v.	)	
	)	
Comcast Corporation,	)	
	)	Direct Testimony of Hal J. Singer, Ph.D.
Defendant.	)	
	)	

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SUMMARY OF TESTIMONY

1. I have been retained as an expert in this matter by TCR Sports Broadcasting Holding, L.L.P. ("TCR"), d/b/a Mid-Atlantic Sports Network, Inc. ("MASN"). I have been asked to address economic issues raised by the conduct of Comcast Cable Communications LLC ("Comcast") vis-à-vis MASN's Regional Sports Network ("RSN"), on the one hand, and Comcast's affiliated RSNs, Comcast SportsNet Mid-Atlantic ("CSN-MA") and Comcast SportsNet Philadelphia ("CSN-Philly"), on the other. This introduction summarizes my principal conclusions.

2. Counsel for MASN has asked me to analyze from an economic perspective whether Comcast's refusal to carry MASN on Comcast's cable systems in the Harrisburg-Lancaster-Lebanon ("Harrisburg") Designated Market Area ("DMA") in Pennsylvania, the Roanoke-Lynchburg DMA in Virginia, and the Tri-Cities DMA in Virginia (collectively, the "contested areas") (1) constitutes discrimination based on affiliation and (2) if so, has impaired MASN's ability to compete fairly vis-à-vis Comcast's affiliated RSNs for programming, advertisers, viewers, and multi-channel video programming distributors (MVPDs) operating in the contested areas. Conditional on a finding of discrimination and rival impairment, I have also been asked to estimate the fair-market value of carrying MASN in the contested areas.

3. From an economic standpoint, Comcast's foreclosure of MASN creates the potential for anticompetitive harm in both the upstream programming and downstream distribution markets. By leveraging its (downstream) market power over the distribution of cable programming into the (upstream) regional sports programming market, Comcast could raise prices to rival MVPDs for its affiliated RSNs and raise prices to advertisers that seek to purchase time on its affiliated RSNs. Moreover, to the extent that Comcast's discrimination against an

unaffiliated RSN allows Comcast to secure the exclusive rights to valuable sports programming, Comcast can then impair the efficiency of rival MVPDs by denying downstream rivals access to that critical input.

4. There are two relevant economic theories of exclusionary conduct that identify the conditions under which foreclosure like that at issue harms both rivals and consumers.[1] That is, there are two recognized conditions in the economics literature that, if satisfied, imply that harm to a rival (in this case, MASN) will redound to the harm of consumers (in this case, advertisers, viewers, and other MVPDs). Under the first theory, a vertically integrated cable operator can impair an unaffiliated network's ability to compete for content, viewers, and advertising by denying it the requisite market share necessary to exploit economies of scale, thereby raising the network's average total costs. Under the second theory, a vertically integrated cable operator can impair an unaffiliated network's ability to compete for content, viewers, and advertising by denying it access to the most efficient distribution channel for cable programming, thereby raising the network's selling and distribution costs at all levels of output.

5. In this testimony, I demonstrate that the conditions that lead to anticompetitive effects under both models of anticompetitive foreclosure are satisfied here. This implies that Comcast's exclusion of MASN from the contested areas generates anticompetitive effects, typically in the form of higher prices. This conclusion is supported by a well-developed body of

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1. Einer Elhauge, *Defining Better Monopolization Standards*, 56 STANFORD LAW REVIEW 253 (2003); Thomas G. Krattenmaker & Stephen C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 THE YALE LAW JOURNAL 234-45 (1986); Michael Whinston, *Tying, Foreclosure and Exclusion*, 80 AMERICAN ECONOMIC REVIEW 837-60 (1990); Dennis W. Carlton, Patrick Greenlee & Michael Waldman, *Assessing the Anticompetitive Effects of Multiproduct Pricing*, Working Paper, Mar. 31, 2008, at 1-29.

regulatory decisions[2] and academic research[3] establishing that foreclosure of rival sports programmers by vertically integrated cable operators is likely to result in anticompetitive harm to consumers. It bears emphasis that the economic standard that I apply here is more stringent than the standard implied by the Cable Act. In particular, I understand that violation of the Cable Act's non-discrimination standard requires proof that *a rival programmer* was impaired in its ability to compete fairly, whereas the standard I impose here requires proof that the harm to the rival programmer redounded to the harm of *consumers*. Presumably, the Cable Act is focused on the welfare of rivals because of the larger diversity objectives of the Act.

A. Comcast Discriminates Against MASN on the Basis of Affiliation

6. By almost any metric, MASN, CSN-MA, and CSN-Philly are similarly situated in the contested areas. All three are RSNs that operate in largely the same areas. All three seek to appeal principally to the same demographic: men aged 24 to 49. MASN and Comcast's affiliated RSNs compete directly with MASN for the same type of regional sports programming. For

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2. Order on Review, TCR Sports Broadcasting Holding, L.L.P, d/b/a Mid-Atlantic Sports Network v. Time Warner Cable Inc., Case No: 71-472-E-00697-07, Oct. 30, 2008, ¶ 24 ("*Order on Review*"); Eighth Annual Report, *Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, 17 FCC Rcd 1,244, ¶ 14 (2002); Memorandum Opinion and Order, *Applications for Consent to the Assignment and/or Transfer of Control Licenses*, 21 FCC Rcd 8,203, ¶¶ 114, 116, 189 (2006) ("*Adelphia Order*"); Memorandum Opinion and Hearing Designation Order, File Nos. CSR-7876-P, CSR-8001-P, ¶ 119, Oct. 10, 2008 ("*Designation Order*").

3. Dong Chen & David Waterman, Vertical Foreclosure in the U.S. Cable Television Market: An Empirical Study of Program Network Carriage and Positioning, Oct. 2005, at 6-7; Hal J. Singer & J. Gregory Sidak, *Vertical Foreclosure in Video Programming Markets: Implications for Cable Operators*, 6 REV. NETWORK ECON. 348-34949. (2007); General Accounting Office, Issues Related to Competition and Subscriber Rates in the Cable Television Industry, Oct. 2003, at 11; Austin Goolsbee & Amil Petrin, *The Consumer Gains from Direct Broadcast Satellites and Competition with Cable TV*, 72 ECONOMETRICA 351 (2004); Kiran Duwadi & Andrew Wise, *Competition between Cable Television and Direct Broadcast Satellite—The Importance of Switching Costs and Regional Sports Networks*, 4 J. COMP. LAW & ECON. 679-705 (2005); FCC, *Report on Cable Industry Prices* (rel. Dec. 27, 2006).

example, MASN failed to secure the rights to broadcast the Washington Redskins preseason football games specifically because of the coverage gaps at issue in this case. The Redskins subsequently agreed to broadcast these preseason games on CSN-MA. MASN and CSN-MA also competed for the Orioles regular season games (awarded to MASN), the Nationals regular season games (awarded to MASN), ACC football games (awarded to CSN-MA), and preseason Baltimore Ravens games (awarded to MASN).

7. Comcast carries either CSN-MA or CSN-Philly on its analog Expanded Basic tier in all of the disputed areas; it has refused to provide MASN the same treatment. Comcast persists in this exclusion despite the fact that MASN is carried by Dish Network, DIRECTV, Kuhn, Armstrong, and Verizon in the Harrisburg-Lancaster-Lebanon DMA, Dish Network and DIRECTV in the Tri-Cities DMA, and Dish Network, DIRECTV, Cox, and NTELOS in the Roanoke-Lynchburg DMA. Collectively, these in-region MVPD rivals account for nearly 80 percent of all non-Comcast MVPD subscribers in the contested areas.

B. The Economic Guidance From Previous Regulatory Decisions Confirms That Comcast's Foreclosure of MASN Constitutes Discrimination Based on Affiliation

8. In a similar carriage dispute between Time Warner and MASN in North Carolina ("*TCR v. Time Warner*"), Arbitrator Margolis found, and the FCC's Media Bureau affirmed, that Time Warner's favoritism of an affiliated RSN showing primarily the games of the Charlotte Bobcats, a professional basketball team, over MASN in the same geographic area constituted discrimination based on affiliation. The conclusions reached in that proceeding confirm the economic truth that regional professional baseball programming (carried by the independent RSN) competes with regional professional basketball programming (carried by the affiliated network). The Media Bureau also found it particularly important that Major League Baseball ("MLB") had designated the Orioles and the Nationals as home teams in the regions of North

Carolina at issue. Comcast's affiliated network CSN-Philly broadcasts the games of the Philadelphia Phillies in the Harrisburg DMA. Comcast's affiliated network CSN-MA broadcasts the games of the Washington Wizards, among other teams, in the Tri-Cities and Roanoke-Lynchburg DMAs. The Orioles and Nationals have been designated as home teams throughout all of these DMAs. Thus, the economic factors that led to a finding that Time Warner had discriminated based on affiliation in North Carolina are directly analogous to the salient economic factors in this proceeding.

C. Comcast Has Impaired MASN's Ability to Compete Against Comcast's Affiliated RSNs

9. MASN has been impaired as a competitor because it has been precluded from enjoying the benefits of economies of scale and faces higher incremental costs as a result of the foreclosure at issue. Economists, the FCC, and the Media Bureau have all recognized the high fixed-costs faced by RSNs; for an unaffiliated RSN to compete effectively, it must have the widest possible distribution network within its footprint. Moreover, as a result of Comcast's discriminatory treatment, MASN faces higher incremental costs at all levels of output for two reasons. *First*, to reclaim viewership in the contested areas, MASN must induce Comcast cable customers to switch to DBS; this can be achieved by spending more on marketing. *Second*, in a two-sided market such as the supply of RSNs, lower advertising revenues are tantamount to incurring higher incremental costs in the provision of sports programming to cable subscribers.

D. Comcast's Conduct Will Harm Both Viewers and Advertisers

10. Comcast's conduct harms viewers in myriad ways. Comcast's cable subscribers who value MASN so highly that they switch to DBS to follow MASN programming incur substantial switching costs. Comcast's cable subscribers who value MASN but are not willing to incur the substantial switching costs are also harmed because their welfare is diminished.

Comcast's economic expert, Mr. Jonathan Orszag, has confirmed the existence and economic significance of switching costs in this industry. Finally, MVPD customers in general are harmed because Comcast's monopolization of the RSN market allows Comcast to raise license fees to MVPDs who carry CSN-MA or CSN-Philly, who in turn will raise monthly subscription fees to end users. This monopolization will also harm advertisers, as unfettered competition from MASN has the effect of pushing down advertising rates.

E. MASN's Fair-Market Value in the Contested Areas Is Reflected in Its Rate Card

11. I have conducted a series of analyses that confirm that MASN's rate card represents its fair-market value in the contested areas. Economic theory indicates that the best indicator of a good's value is its observed market price. The Media Bureau has affirmed this method as the best approach for valuing the programming involved in carriage disputes. Because all of the MVPDs in the disputed geographic areas that carry MASN do so at its rate-card rate ([redacted] with [redacted] percent year-on-year escalations), the best estimate of the fair-market value of MASN is this rate.

12. To confirm the robustness of this conclusion, I also estimate the fair-market value of MASN through two additional approaches. According to industry expert Mark Wyche, a commonly used metric for valuing RSNs is the per-subscriber per-major-pro-event ("PSPPE") rate that an MVPD pays for RSN programming. MASN's PSPPE fee in the contested areas ([redacted]) is roughly half the rate Comcast charges other MVPDs for CSN-MA in the Harrisburg DMA ([redacted]) and is less (by [redacted]) than the fee charged by CSN-MA (and paid for by Comcast) in much of the Roanoke-Lynchburg DMA. In the remaining parts of the Roanoke-Lynchburg and in the Tri-Cities DMA, Comcast's PSPPE fee is approximately the same as

MASN's (▇▇▇▇ versus ▇▇▇▇). MASN's PSPPE fee also compares favorably to PSPPE fees Comcast has been willing to pay for RSN programming across the country.

13. Additionally, using pricing data from individual and *voluntary* contracts between Comcast and RSNs (some of which are affiliated with Comcast), I employ a regression analysis to estimate the fair-market value of MASN. The results of this analysis suggest that the fair-market value of carriage for MASN is ▇▇▇▇—that is, based on what Comcast has paid for similarly situated RSNs, my best prediction of the price that would emerge from a voluntary transaction between Comcast and MASN (absent any anticompetitive intent on the part of Comcast) in the contested areas is ▇▇▇▇. Thus, all the empirical evidence indicates that the ▇▇▇▇ per subscriber rate sought by MASN in this proceeding is highly justified and fair.

QUALIFICATIONS

14. My name is Hal J. Singer. I am President and Managing Partner of Empiris, LLC. My areas of economic expertise are antitrust, industrial organization, and regulation. I have applied my expertise to several regulated industries, including telecommunications, video programming, insurance, and health care.

15. I earned M.A. and Ph.D. degrees in economics from the Johns Hopkins University and a B.S. *magna cum laude* in economics from Tulane University.

16. I have published a book chapter in *Access Pricing: Theory, Practice and Empirical Evidence* (Justus Haucap and Ralf Dewenter eds., Elsevier Press 2005) and in *Handbook of Research in Trans-Atlantic Antitrust* (Philip Marsden, ed., Edward Elgar Publishing 2006). I am also the co-author of the book *Broadband in Europe: How Brussels Can Wire the Information Society* (Kluwer/Springer Press 2005).

17. I have published scholarly articles in many economics and legal journals, including *American Economic Review Papers and Proceedings*, *Berkeley Technology Law Review*, *Canadian Journal of Law and Technology*, *Federal Communications Law Journal*, *Harvard Journal of Law and Technology*, *Hastings Law Journal*, *Journal of Business and Finance*, *Journal of Competition Law and Economics*, *Journal of Financial Transformation*, *Journal of Industrial Economics*, *Journal of Insurance Regulation*, *Journal of Network Industries*, *Journal of Regulatory Economics*, *Journal of Telecommunications and High Tech Law*, *Review of Network Economics*, *Telecommunications Policy Journal*, *Topics in Economics Analysis and Policy*, and *Yale Journal on Regulation.*

18. Two of my articles are of particular relevance to this proceeding: "The Competitive Effects of a Cable Television Operator's Refusal to Carry DSL Advertising," *Journal of Competition Law and Economics* (Vol. 2, No. 2, pp. 301-31, 2006); and "Vertical Foreclosure in Video Programming Markets: Implications for Cable Operators," *Review of Network Economics* (Vol. 6, 2007).

19. In regulatory proceedings, I have presented economic testimony in several forums, including the U.S. Federal Communications Commission ("FCC'), the U.S. Federal Trade Commission, the Antitrust Division of the U.S. Department of Justice, the U.S. National Highway Traffic and Safety Administration, the House of Commons of Canada, the Canadian Radio-television and Telecommunications Commission, and the U.S. Congressional Budget Office. My written testimony on the effect of telecom entry on cable television prices was cited

extensively by the Department of Justice in a November 2008 report entitled *Voice, Video and Broadband: The Changing Competitive Landscape and Its Impact on Consumers.*[4]

20. I have served as an economic expert for the NFL Network and for MASN, which owns the television rights to live baseball games for the Baltimore Orioles and the Washington Nationals, in several carriage disputes. On June 2, 2008, the arbitrator in *MASN v. Time Warner*, Judge Daniel H. Margolis, ruled that Time Warner "did discriminate against MASN based on affiliation in not negotiating for carriage of MASN on an analog tier."[5] In his decision, Judge Margolis cited my analysis on behalf of MASN on several occasions[6] in support of his decision that MASN's offer price "accurately reflects the fair market value of the rights to carry MASN in its North Carolina television territory."[7] In its October 30, 2008 *Order on Review* rejecting Time Warner's appeal of the arbitrator's decision, the Media Bureau cited my oral testimony during Phase II in support of the proposition that "the carriage decisions of four of the largest MVPDs operating in North Carolina—that serve the overwhelming majority of non-TWC subscribers to paid television service in North Carolina—are an appropriate reference point for assessing fair market value."[8]

21. In addition to these carriage disputes, I have served as a testifying expert in several litigation matters. My experience as a testifying expert in litigation is summarized in my Curriculum Vitae, which is attached to this report. In addition to litigation, I have written expert

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4. Department of Justice, Voice, Video and Broadband: The Changing Competitive Landscape and Its Impact on Consumers, Nov. 17, 2008, *available at* http://www.usdoj.gov/atr/public/press_releases/2008/239479.htm.
5. *TCR Sports Broadcasting Holding, L.L.P, d/b/a Mid-Atlantic Sports Network v. Time Warner Cable Inc.*, Case No: 71-472-E-00697-07, June 2, 2008, at 22.
6. *Id.* at 19, 19 n.13, and 21.
7. *Id.* at 22.
8. *Order on Review* ¶ 47, n.186.

testimony in regulatory proceedings and commissioned white papers for several firms and trade associations, including 1-800 CONTACTS, Advanced Medical Device Manufacturers Association ("AdvaMed"), Allegheny Communications, AT&T, Bell Canada, BellSouth, Broadband Roundtable, Cellular Telephone Industry Association ("CTIA"), Coventry First, General Motors, Harvest Partners, Fiber to the Home Council, Internet Innovation Alliance, Medical Device Manufacturers Association, National Association of Broadcasters, Qwest, SBC, TELUS, Verizon, and Walt Disney.

22. Before joining Empiris, I was president of Criterion Economics, an economic consulting firm based in Washington D.C. Prior to that, I worked as a senior economist at LECG, an economic consulting firm based in Emeryville, California. In addition, I have worked as an economist for the Securities and Exchange Commission and the Army Corps of Engineers, and I have taught microeconomics and international trade at the undergraduate level.

23. I file this report in my individual capacity. I have no financial stake in the outcome of this case.

I. THE ECONOMIC THEORY OF EXCLUSIONARY CONDUCT

24. A vertically integrated cable operator that excludes a rival supplier of sports programming acts anticompetitively to the extent that such activity leads to a reduction in consumer welfare. Because advertisers and viewers demand the service provided by RSNs, these two groups constitute the consumers potentially adversely affected by Comcast's exclusionary conduct. As discussed above, economic theory indicates two ways by which exclusionary conduct can decrease consumer welfare. Under the first theory, exclusionary conduct can impose barriers to entry and expansion that make rivals smaller, causing them to be less efficient when

markets exhibit economies of scale, scope, research, or when markets display network effects.[9] Under the second theory, exclusionary conduct may deprive rival programmers of the most efficient means of obtaining subscribers and advertisers. This second theory generates consumer harm even if rivals are not deprived of economies of scale.[10] Both outcomes have the effect of raising a rival's costs and neither theory requires rival firms to exit the market.

A. Theory 1: Preventing Rivals from Achieving Economies of Scale

25. Economies of scale exist when the average cost of producing a good or service (in this case, sports programming) decreases with each additional unit of output. Economies of scale are a particular characteristic of markets—such as the market for the production of sports programming—where firms make large initial outlays of capital upon entering the market. The most significant outlay for an entrant in the RSN market is for programming rights of college or professional sports franchises. Having incurred the fixed costs associated with acquiring sports programming, each additional unit of output—in this case, each subscriber acquired—decreases the firm's average total costs as the upfront cost is spread over a greater output base. This allocation of fixed cost across a wider output base has nothing to do with the incremental or marginal cost of covering each additional subscriber. It is instead a measure of the cost to the firm of recouping its fixed costs. Preventing a rival from recovering its fixed costs in the long run will induce exit or "complete foreclosure." But even when a rival can recover its fixed costs in the long run, preventing a rival from enjoying untapped scale economies can lead to higher

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9. Elhauge, *supra* at 253; Department of Justice, Competition and Monopoly: Single Firm Conduct Under Section 2 of the Sherman Act, Sept. 2008, at 137 ("*DOJ Section 2 Report*"); Dennis Carlton, *A General Analysis of Exclusionary Conduct and Refusal to Deal-Why Aspen and Kodak Are Misguided*, 68 ANTITRUST LAW JOURNAL 659 (2001).

10. Krattenmaker & Salop, *supra* at 234-45. For a synthesis of the theories of discriminatory refusals to deal, see EINER ELHAUGE & DAMIEN GERADIN, GLOBAL ANTITRUST LAW AND ECONOMICS 498 (Foundation Press, 2007).

prices. Free from any constraint on output, a firm will maximize profits by choosing a quantity at which marginal revenue equals marginal cost; when marginal costs are trivial, as is the case in most network industries, this condition implies that the firm increases output until marginal revenue is zero. Stated differently, the firm increases output by lowering price until the absolute value of the elasticity of demand is equal to or just greater than one. But if a firm in a network industry is constrained to produce at a level that is higher on its demand curve—that is, more elastic than the optimal price—the next-best solution is to produce at the constrained output level. Because the demand for the firm's product is assumed to be downward-sloping (that is, the firm is assumed to have some degree of market power), a lower output level implies a higher price. Thus, when a firm would otherwise be in a position to exploit economies of scale further, "partial foreclosure" causes it to price along a more elastic portion of the demand curve, where a price decrease and the associated increase in output would increase the firm's revenues and profits.

26. Applied here, Comcast's foreclosure of MASN in the contested areas reduces the number of subscribers who receive MASN and thereby deprives MASN from exploiting its economies of scale. Indeed, Comcast own expert acknowledges the existence of economies of scale in the supply of RSN programming.[11] MASN experiences economies of scale over the portion of its average cost curve where it is decreasing. By construction, throughout this portion

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11. Orszag Declaration, ¶ 35, n. 59 ("Of course, given that sports programming production...is characterized by economies of scale, adding more subscribers at the existing per-subscriber cost will always increase the programmer's revenues and *thus will always improve its economies of scale*.") (emphasis added). *See also* Deposition of Jonathan Orszag at 263 ("And he says if they're similarly situated, if the most efficient distribution mechanism and if there are economies of scale in programming, *and we agree on economies of scale point of programming*, then I'm not sure in his framework where he introduces price into that consideration.") (emphasis added).

of the average cost curve, MASN's marginal cost is less than its average cost and less than its marginal revenue. Because MASN is prohibited from pricing at a point where marginal revenue equals marginal cost, the next-best solution for MASN is to produce as much as possible subject to the constraint imposed by Comcast. As indicated by its desire to serve the contested areas, MASN would prefer to increase output, but is constrained from doing so by Comcast's exclusion. Stated differently, it is reasonable to infer that, as a result of Comcast's conduct, MASN is being forced to produce higher on its demand curve than is optimal. In summary, by reducing the output over which the upstream rival can spread its fixed costs, a vertically integrated cable operator such as Comcast can force its upstream rival to compete less aggressively on price.

B. Theory 2: Foreclosing Rivals from the Most Efficient Distribution Channel

27. Anticompetitive exclusion under the second theory induces harm by depriving a vertically integrated cable operator's programming rivals access to the most efficient means of selling advertising and programming. As a result, rivals are forced to use less efficient distribution platforms, including smaller MVPDs or, in other cases, less-penetrated tiers of the incumbent cable operator's system. This can deprive rivals of market share, as described above, but also raises rivals' costs at all levels of output. For example, rivals might incur incremental selling expenses in the form of larger advertising campaigns aimed at inducing subscribers to switch MVPDs in areas where the vertically integrated cable operator has foreclosed carriage. Even rivals that achieve the market share needed for economies of scale are still rendered less effective competitors, because at every level of output, their incremental or marginal costs are raised.

II. THE ANTICOMPETITIVE NATURE OF COMCAST'S CONDUCT

28. As both Congress and the FCC have acknowledged, cable operators like Comcast have significant market power in the downstream distribution market and these operators have both the incentive and ability to use vertical foreclosure strategies to preserve their power in the downstream distribution market and to extend their power into upstream programming markets. The Cable Act of 1992 explicitly recognized that, due to the lack of competition in the downstream distribution market, cable systems possessed "undue market power."[12] More than a decade after the passage of the Act, cable operators on average still control approximately 70 percent of MVPD households.[13] The 1992 Act was a response to the economic reality uncovered by economists in the late 1980s[14] that firms with significant market power could use vertical foreclosure strategies to leverage their monopoly power into adjoining, more competitive markets to the detriment of consumers. To discourage dominant MVPDs from using their downstream monopoly power to harm consumers in these ways, the FCC promulgated rules that prohibit discrimination "in the selection, terms, or conditions for carriage" and created a complaint process.[15]

29. The Commission has explicitly recognized that any carriage decision based solely on affiliation is likely to be anticompetitive, especially when it involves a vertically integrated cable operator like Comcast excluding an unaffiliated RSN like MASN. When approving the acquisition of Adelphia by Comcast and Time Warner in 2006, the Commission confirmed that

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12. Cable Television Consumer Protection and Competition Act of 1992, Public Law 102-385, Oct. 5, 1992, 106 Stat. 1460.

13. Thirteenth Annual Report, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, rel. Jan. 16, 2009, Appendix B, Table B-1 (showing cable operators with 68 percent of MVPD subscribers as of June 2006).

14. Krattenmaker & Salop, *supra* at 234-38; Whinston, *supra* at 837-60.

15. 47 C.F.R. § 76.1301(c).

dominant MVPDs still had the ability to jeopardize competition in upstream programming markets, especially with regard to the foreclosure of unaffiliated RSNs. In particular, the Commission found that the (shared) acquisition of Adelphia would increase Comcast's incentive and ability to discriminate against unaffiliated RSNs.[16] The Commission singled out RSNs specifically because "the programming provided by RSNs is unique" and "is particularly desirable and cannot be replicated."[17] To protect against this type of discrimination, the Commission imposed non-discrimination remedies on Comcast (and Time Warner) that prevented Comcast from discriminating against independent RSNs.[18] It is important to note that the Commission found that the relevant geographic market for assessing vertical foreclosure strategies vis-à-vis independent RSNs was the entire "distribution footprint" of the independent RSN.[19] Putting these two ideas together implies that the non-discrimination requirements intended to protect independent RSNs were designed to protect RSNs throughout their entire

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16. *Adelphia Order* ¶¶ 114, 116, 189.

17. *Id.* ¶ 189.

18. *Id.* ("We find that this strategy would be made less likely by the arbitration and program access conditions that we adopt but recognize that Comcast and Time Warner nevertheless may be more likely to succeed in foreclosing an unaffiliated RSN as a result of the transactions. As a result, consumers could be unable to view the RSN's programming or could have to pay higher costs for the programming. Accordingly, to prevent such behavior, we adopt a further condition requiring Comcast and Time Warner to engage in commercial arbitration with any unaffiliated RSN that is unable to reach a carriage agreement with either firm, should the RSN elect to use the arbitration remedy.").

19. *Id.* ¶ 68 ("We have found it reasonable to approximate the relevant geographic market for video programming by looking to the area in which the program owner is licensing the programming. . . . In contrast, with respect to regional sports networks ("RSNs") and other regional networks, we conclude, as we did in the Comcast-AT&T and News Corp.-Hughes transactions, that the relevant geographic market is regional. In general, contracts between sports teams and RSNs limit the distribution of the content to a specific "distribution footprint," usually the area in which there is significant demand for the specific teams whose games are being transmitted. MVPD subscribers outside the footprint are unable to view many of the sporting events that are among the most popular programming offered by RSNs. *We thus find it reasonable to define the relevant geographic market for regional networks as the "distribution footprint" established by the owner of the programming.*") (emphasis added).

distribution footprint—not some subset of their distribution footprint, as Comcast would have the Commission believe now.

A. Discrimination Based on Affiliation

30. The Media Bureau has stated that the central economic criterion for identifying when foreclosure of an RSN is anticompetitive is whether the exclusion is predicated on the RSN's affiliation.[20] It is clear from the evidence brought to light in this and other similar proceedings that Comcast's exclusion of MASN is based on MASN's rivalry with Comcast's family of affiliated RSNs, Comcast SportsNet.

31. The crux of establishing that discrimination is based on affiliation is demonstrating that the affiliated and unaffiliated programming at issue in a carriage dispute are "similarly situated."[21] Perhaps the most compelling evidence that MASN and the affiliated Comcast networks are similarly situated is that they have competed for the *same programming*. MASN and Comcast have competed over the programming rights to the Baltimore Orioles, the Washington Nationals, the Washington Redskins preseason games, and Baltimore Ravens preseason games, the DC United professional soccer games, the ACC college football games, the Big East college basketball games, and the CAA college football games.[22] MASN's interest in acquiring the rights to the Redskins is particularly salient because the Redskins specifically cited

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20. *See Order on Review* ¶ 24 ("In such cases, the MVPD is not precluded from treating unaffiliated programmers disparately from affiliates, so long as it can demonstrate that such treatment did not result from the programmer's status as an unaffiliated entity.").

21. *Id.*, ¶¶ 14-15.

22. Conversation with James Cuddihy, Executive Vice President of Marketing, Programming, Affiliated Relations, MASN, Apr. 29, 2009.

lack of coverage in the contested areas as a deficiency to any potential arrangement with MASN.[23]

32. The demand for MASN's programming in the contested areas provides direct evidence that Comcast's exclusion is based on MASN's rivalry with CSN-MA and CSN-Philly. Indeed, nearly every other significant MVPD in the contested areas, including Comcast's in-region competitors DIRECTV and Dish Network, *voluntarily choose to carry MASN on their most-penetrated tiers at the same rates offered to Comcast.*[24] In particular, DIRECTV, Dish Network, Kuhn, Verizon and Armstrong carry MASN in Harrisburg; DIRECTV and Dish Network carry MASN in the Tri-Cities DMA; and DIRECTV, Dish Network, Cox, and NTELOS carry MASN in the Roanoke-Lynchburg DMA. These MVPDs collectively serve approximately 80 percent of non-Comcast MVPD subscribers in the contested areas—a fact that is hard to reconcile with Comcast's claim that there is no interest in MASN's programming (at MASN's prices) in the contested areas. The fact that so many of Comcast's rivals carry MASN in the contested areas implies that Comcast's exclusion of MASN is contaminated by Comcast's ownership of rival RSNs (CSN-MA and CSN-Philly).

33. In addition, MASN provides programming that caters specifically to the local preferences of viewers in the contested areas. For instance, MASN purchased a four-game package from the Harrisburg Senators, the AA affiliate of the Washington Nationals, and is interested in providing additional coverage of the Senators.[25] MASN also broadcasts many college sports games, including those of the Virginia Military Institute, Radford University, and

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23. *Id.*
24. *Designation Order* ¶ 116.
25. Conversation with James Cuddihy, Apr. 29, 2009.

Liberty University, all of which are located in the Roanoke-Lynchburg DMA.[26] This should increase demand for MASN's programming in the Roanoke-Lynchburg market and gives further reason to believe that Comcast has refused to carry MASN for reasons related to its ownership of a rival RSN.

34. The conclusion that Comcast's favoritism of CSN-Philly in the Harrisburg DMA is predicated on affiliation is further bolstered by the fact that CSN-Philly and MASN both feature Major League Baseball as their core programming. Harrisburg is approximately equidistant from the venues of the Orioles (70 miles) and the Phillies (95 miles);[27] neither team can claim a monopoly on Harrisburg baseball fans. Moreover, because Comcast's affiliated sports networks operating in the contested areas also show professional basketball games (Washington Wizards in the Virginia DMAs, Philadelphia 76ers in the Harrisburg DMA), the discrimination here is perfectly analogous—affiliated professional basketball versus unaffiliated professional baseball—to the discrimination addressed in the recent decision by the Media Bureau in MASN's dispute with Time Warner in North Carolina. There, the Media Bureau found that Time Warner's favoritism toward an affiliated network, News 14 (showing Charlotte Bobcats basketball games in North Carolina), and its refusal to carry MASN (showing Orioles and Nationals baseball games) at all in North Carolina, constituted illegal discrimination on the basis of affiliation.[28] Specifically, MASN contended that "because TWC carried its affiliated RSN, News 14, on an analog tier in North Carolina, TWC's refusal to afford MASN similar

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26. Declaration of James Cuddihy, June 24, 2008, ¶ 13.

27. I performed this analysis by taking the zip code associated with Harrisburg's City Center, the zip code associated with Citizens Bank Field in Philadelphia, and the zip code associated with Camden Yard in Baltimore and matching those to the Census's ZCTA5 geospatial delineation. The census assigns each ZCTA5 a latitude and longitude from which I was able to calculate the distance between Harrisburg-Citizens Bank Field and Harrisburg-Camden Yards.

28. *Order on Review*, ¶ 29.

treatment constitutes unlawful discrimination."[29] The Media Bureau agreed, explaining that TWC's delivery of Bobcats games on its own RSN to all of its subscribers in North Carolina's three largest markets, and its simultaneous refusal to carry MASN on any of its North Carolina cable systems, constituted illegal discrimination on the basis of affiliation.[30] It is worth noting that even if rival RSNs show different programming today (basketball versus baseball), they are potential competitors for the same programming in the future. Indeed, from an *ex ante* perspective, CSN and MASN have competed for the identical programming in many instances (for example, live games of the Washington Nationals, Baltimore Orioles, preseason Baltimore Ravens, and preseason Washington Redskins).

B. Economies of Scale and "The Exclusive Dealing Case that You Ought to Worry About"

35. The exclusion at issue in this matter is particularly worrisome because of the dramatic economies of scale inherent to the market for RSN programming. It is well-established that the exclusion of rivals is especially pernicious when an industry is characterized by economies of scale. In its recent release on anticompetitive single-firm conduct, the Department of Justice summarized the consensus view on the subject: "As one panelist put it, 'The exclusive dealing case that you ought to worry about' is where exclusivity deprives rivals of the ability to obtain economies of scale."[31]

36. Economists have likewise recognized that most forms of video programming are subject to "extreme" economies of scale.[32] The economic logic was summarized nicely by

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29. *Id.* ¶ 15.
30. *Id.* ¶ 29.
31. *DOJ Section 2 Report*, *supra* at 137.
32. *See* David Waterman, *The Economics of Media Programming*, in HANDBOOK OF MEDIA MANAGEMENT & ECONOMICS (2006).

economists Dong Chen and David Waterman in a recent article on the economics of media programming:

> A large portion of the total cost of producing and distributing cable networks consists of the initial product cost, or the 'first-copy' cost. In comparison, the cost of distributing this video programming via satellite is negligible. Therefore, the size of the national audience that a certain video program is able to reach (and thus can collect revenue from) is crucial to determining its average cost per subscriber.[33]

Because RSNs operate within a fixed geographic territory, it is particularly important that they achieve a high rate of market penetration. The Media Bureau concurred in its *Order on Review*: "Because RSNs, unlike national networks, are regional in nature, they require access to the maximum number of subscribers within their footprints, including the RSN's extended inner markets, in order to compete effectively."[34] In other words, it is essential that RSNs have the opportunity to reach as many subscribers as possible so that they can benefit from the substantial scale economies inherent to the production of sports programming.

37. Because Comcast's discriminatory conduct has eliminated MASN's ability to reach approximately 13 percent[35] of Comcast's subscribers within MASN's service territory, there is no question that MASN has been forced to operate with higher average costs. As explained previously, Comcast's own expert does not appear to dispute this point. Indeed, it is

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33. *See* Dong Chen & David Waterman, Vertical Foreclosure in the U.S. Cable Television Market: An Empirical Study of Program Network Carriage and Positioning, Oct. 2005, at 6-7. I note that because the Orioles and Nationals have equity in MASN, there was never a direct payment from MASN to these teams. Rather, the fixed cost that MASN must spread over its subscribers, is the opportunity cost implicit in the Orioles and Nationals decision not to sell the rights to another organization. From an economic perspective, this cost is just as significant, and the concept of economies of scale just as applicable, as if the cost were incurred directly.

34. *See Order on Review* ¶ 31.

35. Comcast has approximately [redacted] households within MASN's territory. As a result of Comcast's refusal to carry MASN in the two DMAs, MASN reaches only [redacted] Comcast households in MASN's territory.

clear from the discussion above that any conduct that prevents MASN from achieving the maximum penetration within its territory effectively raises its average total costs. Saddled with higher average total costs, MASN cannot compete for localized content, advertisers, and viewers as effectively as it could in a world in which MASN reached 100 percent of Comcast's subscribers within MASN's territory.

C. Raising Rivals' Costs by Denying RSNs Access to the Most Efficient Distribution Network

38. Antitrust economics has shown that dominant firms can use various strategies that raise rivals' incremental costs to extend their monopoly power.[36] For instance, by foreclosing rivals from the most efficient distribution network for delivery of the relevant product, a monopolist can force rivals to incur higher costs at all levels of output. As a result of these higher marginal costs, rivals are forced to raise prices, allowing the monopolist to raise its prices as well and garner supra-competitive profits.

39. Comcast's refusal to carry MASN in the contested areas increases MASN's marginal cost of operation in two ways. *First*, because MASN cannot access Comcast's large, installed base of customers via Comcast's cable system, MASN's only competitive recourse is to induce subscribers to switch to a different MVPD. Accordingly, MASN would have to increase its promotional expenses to encourage switching, which would raise its incremental costs. Indeed, MASN has requested that DirecTV spend a portion of MASN's launch-support subsidy to lure Comcast customers from the contested areas.[37]

40. *Second*, in a two-sided market such as television programming, where programming networks rely on revenues from both advertisers and viewers, conduct that reduces

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36. Krattenmaker & Salop, *supra* at 267.
37. Conversation with James Cuddihy, April 29, 2009.

revenue from one side of the market (advertisers) effectively increases the marginal cost of providing the service to the other side of the market (viewers). Conduct that decreases advertising revenues in a two-sided market effectively increases a supplier's costs, which leads to higher equilibrium prices. This principle is well recognized in the economic literature on two-sided markets.[38]

41. Applying this economic logic to the instant case, Comcast can increase MASN's costs by decreasing MASN's advertising revenues. The simplest way to do so is to refuse to carry MASN or to carry MASN on an inferior tier. I understand that MASN's advertising revenues are critically linked to the number of subscribers it reaches.[39] Thus, precluding MASN from reaching an additional 330,000 viewers in the contested areas will necessarily raise MASN's marginal cost of providing sports programming to viewers. The result of Comcast's conduct is to reduce MASN's efficiency as a firm and the economic efficiency of the upstream and downstream markets as a whole.

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38. Amelia Fletcher, *Predatory Pricing in Two-Sided Markets: A Brief Comment*, 3 Competition Policy International, Spring 2007, at 222 ("In a two-sided market, the cost term needs instead to be interpreted as a form of opportunity cost, which comprises the marginal cost of serving the buyer side of the market minus any extra revenue that the extra sales on the buyer side of the market generate on the seller side of the market . . ."); Jean-Charles Rochet & Jean Tirole, *Two-Sided Markets: An Overview*, Institut d'Economie Industrielle Working Paper 25 (Mar. 12, 2004) ("Under pure usage pricing, the loss of a transaction on side i due to an increase in the per-transaction price pi has an opportunity cost $c - pj$, since the platform cost c of the transaction has to be defrayed by the payment pj levied on the other side.").

39. Conversation with John McGuinness, VP for Integrated Sales and Marketing, MASN, April 29, 2009. Because advertising fees are denominated in terms of number of viewers reached, MASN realizes a loss in advertising revenues from *existing advertising clients* as a result of Comcast's exclusionary conduct in the contested areas. Moreover, MASN forgoes incremental advertising revenues from clients who do not advertise on MASN due to MASN's coverage gaps.

42. Moreover, economic research has shown that gaps in a network's coverage area have grave consequences for advertising revenues. As Dong Chen and David Waterman explain in their article on vertical foreclosure in the cable television market:

> Furthermore, for an advertisement-supported basic cable network, cost-per-thousand ad rates are an increasing function of the network's national audience reach, possibly because advertisers regard geographic gaps in the national audience coverage of a given network to be a serious disadvantage. In this case, foreclosure may not only increase programming costs per subscriber, but disproportionately reduce the network's advertising revenues. In turn, the rival network will be disadvantaged in its ability to offer a competitive quality of programming, and may be induced to exit the market altogether.[40]

Because cost-per-thousand ad rates are an increasing function of a regional network's reach, this source of harm applies equally to Comcast's foreclosure of MASN. Thus, MASN has necessarily been rendered a less efficient competitor as a result of Comcast's exclusionary conduct. As noted below, there is also substantial evidence in this case that carriage gaps can significantly impact advertising revenue.

43. This concern is not merely theoretical: I am aware of two specific incidents where holes in MASN's coverage territory reduced MASN's advertising revenues. [redacted]

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40. *See* Chen & Waterman, *supra* at 7.
41. Conversation with James Cuddihy, April 27, 2009.

[redacted]

III. HARM TO MASN AND RIVAL MVPDS WILL REDOUND TO VIEWERS AND ADVERTISERS

44. The economic rationale for why the exclusion of rival RSNs by a vertically integrated cable operator is likely to have anticompetitive consequences—that is, is likely to harm viewers and advertisers—is simple. By reducing the competitive pressure fostered by unaffiliated RSNs, the vertically integrated cable operator is able to increase its market power in the supply of RSN programming and its associated advertising. In addition, by foreclosing a rival RSN, a vertically integrated cable operator is able to extend its downstream market power into the upstream sports programming market and to weaken its main source of competition in the downstream distribution market, DBS providers.[43] To the extent that discrimination against an unaffiliated RSN allows Comcast to secure the rights to valuable sports programming (once the upstream rival is forced to exit entirely or to surrender the rights to a particular sports team), Comcast can then deny those rights to rival MVPDs. The Commission has already concluded that access to regional sports programming constitutes a vital competitive input for DBS providers seeking to compete with cable operators.[44] To be clear, Comcast's exclusionary conduct in the contested areas alone will not likely force MASN to exit the industry. However, it would be a mistake to forget that as recently as 2006, Comcast refused to carry MASN in the Washington, D.C. DMA as part of Comcast's retaliatory strategy for losing the programming rights to the Washington Nationals. Analyzing the challenged conduct here in isolation risks

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42. *Id.*
43. Singer & Sidak, *supra* at 348-349.
44. *Adelphia Order*, ¶ 151 ("We conclude that there is substantial evidence that a large number of consumers will refuse to purchase DBS service if the provider cannot offer an RSN.").

missing the larger picture—namely, Comcast's original intention of securing the programming rights to the Nationals exclusively so that Comcast could charge exorbitant fees for that (affiliated) programming to its downstream MVPD rivals. Indeed, the FCC recognized this very threat to competition in its Adelphia Order.[45]

A. Harm to Viewers of Sports Programming

45. Comcast's refusal to carry MASN in the contested areas causes harm to consumers in several ways. These include increased expenditures for former Comcast subscribers who choose to follow MASN on a rival MVPD and higher expenditures to watch Comcast-affiliated regional sports programming.

46. Furthermore, switching costs harm *all* Comcast subscribers who value MASN, not merely those who switch from Comcast to a DBS provider. Switching customers incur a one-time switching cost that most economists consider to be significant. In addition, and perhaps less obvious, a Comcast customer in the contested areas who values MASN but does not want to incur the cost of switching to DBS also suffers injury. Consider a Comcast customer in the contested area who values MASN at $5 per month, but would incur a one-time switching cost of $50 to convert to a DBS system. If MASN charges all MVPDs in the contested areas, including Comcast, [redacted] per subscriber per month, and if Comcast passes on half of that license fee to its subscribers, then the customer will switch to a DBS provider only if the present discounted value

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45. *Adelphia Order*, ¶ 189 ("We find that this strategy would be made less likely by the arbitration and program access conditions that we adopt but recognize that Comcast and Time Warner nevertheless may be more likely to succeed in foreclosing an unaffiliated RSN as a result of the transactions. As a result, consumers could be unable to view the RSN's programming or could have to pay higher costs for the programming. Accordingly, to prevent such behavior, we adopt a further condition requiring Comcast and Time Warner to engage in commercial arbitration with any unaffiliated RSN that is unable to reach a carriage agreement with either firm, should the RSN elect to use the arbitration remedy.").

of the [redacted] monthly surplus (equal to $5 less [redacted]) exceeds $50.[46] Every customer in the contested areas for which that value is positive but less than $50 will suffer a loss in consumer welfare by Comcast's refusal to carry MASN. It is particularly salient that Mr. Jonathan Orszag, Comcast's economic expert, who originally disputed the economic significance of switching costs,[47] has now admitted at his deposition to their existence and economic significance.[48]

47. Viewers are further harmed because Comcast's monopolization of the RSN market will necessarily lead to higher implicit costs for regional sports programming. By weakening MASN's ability to compete with Comcast's affiliated RSNs, CSN-Philly and CSN-MA, Comcast has ensured that those affiliated RSNs have increased market power vis-à-vis DIRECTV and Dish Network and therefore an increased ability to raise license fees—especially in the contested areas. I understand that the Philadelphia Phillies (distributed by CSN-Philly) and the Orioles-Nationals (distributed by MASN) now share television rights (along with the Pittsburgh Pirates), and thus home team status, in the Harrisburg DMA.[49] Given the closeness of their programming lineups,[50] and given their shared territory, MASN would likely constrain the market power of CSN-Philly (especially within the Harrisburg DMA) to a greater degree if

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46. For ease of exposition, I assume that the surplus associated with subscribing to cable or DBS is the same in all other dimensions.

47. Declaration of Jonathan Orszag and Jay Ezrielev, File No. CSR-8001-P, Jul. 31, 2008, ¶ 12 ("However, Dr. Singer does not provide a single piece of evidence regarding the number of former Comcast subscribers who have switched to another MVPD to receive MASN. He also does not present any evidence of actual switching costs incurred by viewers. In fact, any switching costs incurred by viewers are likely relatively low.").

48. *See* Deposition of Jonathan Orszag at 62 ("Q. Why irreparably? A. Because at that time—there are switching costs associated with switching. If EchoStar just got the programming, if all they did was get Comcast SportsNet, it's not like magically subscribers would move the next day back to EchoStar. They had decided to stay with Comcast and people don't move all the time.").

49. *Complaint* ¶ 10.

50. *Id.* ¶ 19. *See also* http://midatlantic.comcastsportsnet.com/pages/ncaa.

MASN were carried by Comcast throughout the Harrisburg DMA. Without MASN's price-disciplining effect, CSN-Philly can increase the license fees it charges to MVPDs. In turn, those higher license fees would harm viewers through higher subscription fees.

B. Harm to Advertisers

48. A second group of consumers that is adversely affected by Comcast's discriminatory conduct is advertisers. By refusing to carry MASN in the contested areas, Comcast has depressed advertisers' demand for commercials on MASN, thereby undermining price competition between MASN and Comcast's affiliated RSNs for advertisers. CSN-MA, for example, currently enjoys a subscriber base of approximately [redacted] Comcast households within MASN's territory (equal to 100 percent of Comcast's subscribers within MASN's territory).[51] As a result of Comcast's refusal to carry MASN in the relevant areas, MASN reaches only [redacted] Comcast households in MASN's territory (equal to [redacted] of Comcast's subscribers within MASN's territory).[52] The result is less overall competition because an advertiser who wants to reach all [redacted] Comcast subscribers via RSN programming has no means of doing so other than Comcast's affiliated RSNs.

49. As discussed in my previous filings, such coverage gaps are extremely damaging to MASN due to the two-sided nature of the market in which MASN operates. The loss of advertising revenue associated with these gaps effectively raises MASN's marginal cost of broadcasting programming to viewers, thereby vitiating the network's ability to compete with affiliated RSNs. It is also worth noting that the companies that wanted to advertise on MASN and consumers are likely harmed as well. By reducing the options of advertisers seeking to reach

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51. *Complaint* ¶ 47.
52. *Id.* ¶ 53.

specific audiences, Comcast increases its leverage in the marketplace through the creation of artificial scarcity in supply of advertising space. One need look no further than the MASN-[redacted] (unraveling) contract to understand how this harm to advertisers manifests itself. Due to the hole in MASN's coverage area created by Comcast, [redacted]. Accordingly, MASN no longer can discipline as effectively the advertising price charged by CSN-Philly to [redacted]. Finally, as a matter of basic economic theory, Comcast's undue market power should translate directly into higher prices for the remaining advertising space and less information for consumers.

IV. MARKET COMPARABLES PROVIDE THE BEST EVIDENCE OF MASN'S FAIR-MARKET VALUE

50. My analysis of fair-market value follows the valuation approach adopted by the Media Bureau in its October 2008 *Order on Review*. In that *Order*, the Media Bureau determined that "the best and most persuasive evidence of fair market value is the objective price that [sports network] programming yields in the marketplace."[53] As noted by the Media Bureau, the best price evidence is provided by "current or previous contracts between MVPDs and RSNs in which…[the MVPD does] not have an interest."[54] As an economist, I fully agree that willingness to pay is the best and most reliable measure of fair market value.

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53. *Order on Review* ¶ 46.

54. *Id.* n.178 (citing *Adelphia Order*, 21 FCC Rcd at 8339, Appendix B.4.c.). I cite the most important factor, Factor 1. This factor was also enumerated in the Commission's order approving News Corp.'s acquisition of DIRECTV. 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 Dkt. No. 03-124, released Jan. 14, 2004, at 82 ("*News Corp. MO&O*").

51. Moreover, in its *Order on Review* of the arbitrator's decision in *TCR Sports v. Time Warner*, the Media Bureau explained the importance of the voluntary rate paid for the subject programming by other MVPDs in assessing fair market value:

> Contrary to TWC's assertions, we find that the carriage decisions of four of the largest MVPDs operating in North Carolina—that serve the overwhelming majority of non-TWC subscribers to paid television service in North Carolina—*are an appropriate reference point for assessing fair market value*. We reject TWC's assertion that MASN's carriage on a widely available tier by DirecTV and Echostar [Dish Network] bear no significance because DBS operators possess different economic motivations from cable operators that are derived from differences in cost structure and technology. MASN presented testimony that the actions of these carriers—two of TWC's most direct competitors in North Carolina—offer a more appropriate meter for gauging programming demand than those of smaller cable operators because they provide service throughout the state, rather than to scattered pockets of subscribers like the smaller cable operators that TWC cites.[55]

It follows that the carriage decisions of the largest MVPDs operating in the contested areas are "an appropriate reference point for assessing fair market value" here.

52. In this dispute, this valuation exercise is particularly straightforward because *all MVPDs that carry MASN in the contested areas pay the same rate*. The following table summarizes MASN's rate card.[56]

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55. *Order on Review*, *supra*, ¶ 47 (citations omitted) (emphasis added).

56. This figure does not include launch support, which I understand is a one-time subsidy of [redacted] per subscriber per month for every zone within MASN's footprint. Accordingly, if Comcast were to carry MASN in the contested areas, Comcast would enjoy the same subsidy as all other major MVPDs that carry MASN in the contested areas.

TABLE 1: MASN RATE CARD

Region	2008	2009	2010	2011	2012	2013	2014	2015	2016
DC/Baltimore (Zones 1-3)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Ext. Inner (Zone 4)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Ext. DC Inner (Zone 5)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Nor. Carolina (Zone 6)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Source: First Amendment to Affiliate Term Sheet Between TCR Sports Broadcasting Holding, L.L.P., dba Mid-Atlantic Sports Network and Comcast Corporation at 4.Projected rates after 2008 are based on the 5 percent escalation year-on-year escalation clause in this contract.

The contested areas all fall in MASNs' "Extended Inner" region (highlighted in Table 1), which is also designated as "Zone 4." It is worth noting that MVPDs in the "Extended Inner" region enjoy a [redacted] percent discount relative to MVPDs in the "DC/Baltimore" region, under the theory that those viewers closest to the Washington Nationals and the Baltimore Orioles have the highest willingness to pay for MASN.

53. In Table 2, I list the MVPDs carrying MASN in the contested areas along with the rate they paid for MASN (per subscriber per month) in 2008.

TABLE 2: MVPDS CARRYING MASN IN THE CONTESTED AREAS, AND THE PRICE PER SUBSCRIBER PER MONTH PAID IN 2008

Harrisburg-Lancaster-Lebanon DMA	Tri-Cities DMA	Roanoke-Lynchburg DMA
Dish Network ([redacted])	Dish Network ([redacted])	Dish Network ([redacted])
DIRECTV ([redacted])	DIRECTV ([redacted])	DIRECTV ([redacted])
Kuhn ([redacted])		Cox ([redacted])
Armstrong ([redacted])		NTELOS ([redacted])
Verizon ([redacted])		

Source: MASN_COM001126-1137; MASN_COM001210-1230; MASN_COM001277-1305; MASN_COM001231-1276; MASN_COM001343-1352; MASN_COM001379-1190; MASNCOM_001408-001418

Given this simple fact pattern, the fair-market value that Comcast should be compelled to pay MASN is the rate that these MVPDs are contractually bound to pay MASN in the contested areas (that is, the "Extended Inner" rates on MASN's rate sheet) for the duration of the Comcast-

MASN contract (through 2016). It bears emphasis that the MVPDs that already carry MASN in the contested areas collectively account for nearly 80 percent of the non-Comcast MVPD subscribers in those areas. Comcast and its experts cling to the naïve notion that these sophisticated economic agents have overpaid for MASN's programming in the contested areas.

V. MASN'S PROPOSED CARRIAGE TERMS COMPARE FAVORABLY TO THE TERMS ON WHICH COMCAST PURCHASES REGIONAL SPORTS PROGRAMMING IN THE CONTESTED AREAS AND THROUGHOUT COMCAST'S NATION-WIDE FOOTPRINT

54. In further support of my conclusion that MASN's proposed terms represent an offer consistent with the fair-market value for MASN programming in the contested areas, I compared MASN's proposed terms to the terms on which Comcast carries affiliated and unaffiliated RSNs, both within the contested areas and throughout Comcast's national footprint. My analysis is based on data derived from MASN's own rate card and from affiliate contracts and other materials produced by Comcast in this proceeding. As I demonstrate below, MASN's proposed terms compare favorably to the terms on which Comcast purchases regional sports programming.

55. To gauge the value of the programming offered by RSNs across the industry, industry experts (including those engaged in the negotiation of RSN affiliation agreements) often use benchmarks that can take account of variations in the precise mix of live sports programming offered by RSNs across the industry.[57] My analysis uses one such measure suggested by industry expert Mark Wyche: the per-subscriber per-major-pro-event ("PSPPE") rate that an MVPD pays for RSN programming.

56. Table 3 presents the results of a PSPPE analysis comparing MASN, CSN-Philly, and CSN-MA in the contested areas. The second and third columns of Table 3 provide the

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57. *See generally* Expert Report of Mark Wyche, Part VI.

contractual designation given to each particular region or zone serviced by each RSN and the corresponding geographic location, respectively. The next four columns report each RSN's total number of live major professional games, including the mix of professional sports events reflected in each number, and the monthly per-subscriber fee charged by each RSN for analog carriage in the relevant DMA or portion thereof. The final column reports the PSPPE rate for each RSN in the relevant DMA or portion thereof.

TABLE 3: COMPARATIVE ANALYSIS OF MASN AND COMCAST AFFILIATED RSNS IN THE CONTESTED AREAS

RSN	*Contract Designated Region*	*Relevant Geographic Location*	*Number of Major Pro Events*	*Combined Number of Major Pro Events*	*2008 License Fee/Sub/Month*	*Annual Per Subscriber License Fee Per Pro Event*
MASN	**Region 4**	**H, R, T**	**Orioles (161), Nationals (161)**	**322**	[redacted]	[redacted]
Comcast SportsNet Philadelphia	"Outer"	H	[redacted]	[redacted]	[redacted]	[redacted]
Comcast SportsNet Mid-Atlantic	Zone 2	H	[redacted]	[redacted]	[redacted]	[redacted]
Comcast SportsNet Mid-Atlantic	Zone 3	R*	[redacted]	[redacted]	[redacted]	[redacted]
Comcast SportsNet Mid-Atlantic	Zone 4	T, R**	[redacted]	[redacted]	[redacted]	[redacted]

Notes: H = includes Harrisburg DMA; R = includes Roanoke-Lynchburg DMA; T = Includes Tri-Cities DMA.

* Includes the counties of Highland, Bath, Rockbridge, Buena Vista, Amherst, Nelson, Lynchburg, Appomattox, and Charlotte.

** Includes the counties of Covington, Botetourt, Bedford, Campbell, Halifax, Pittsylvania, Danville, Martinsville, Franklin, Salem, Craig, Montgomery, Radford, Floyd, Carroll, Pulaski, Giles, Bland, Wythe, Grayson, and Galax. "Standard Rate Card" used for Comcast SportsNet Mid-Atlantic calculations. Pro Events defined as games from the following major professional sports leagues: Major League Baseball (MLB), National Basketball Association (NBA) and National Hockey League (NHL).
Sources: Various Comcast affiliate agreements; MASN; COMMASN_00006403-6404.

57. Comparing MASN's PSPPE rate to the PSPPE rate for Comcast's own affiliated RSNs demonstrates that MASN's proposed terms are a relative bargain. MASN's PSPPE fee in the contested areas, [redacted], is less than one-third of the PSPPE fee [redacted]) that Comcast charges for its Comcast SportsNet Philadelphia programming in the Region 4 portion of Harrisburg. Table 3 further shows that MASN's PSPPE fee in the contested areas ([redacted]) is

roughly half the rate Comcast charges for CSN-MA in the Harrisburg DMA [redacted])[58] and is less (by [redacted]) than the fee charged by CSN-MA in much of the Roanoke-Lynchburg DMA. In the remaining parts of the Roanoke-Lynchburg and in the Tri-Cities DMA, Comcast's PSPPE fee is approximately the same as MASN's [redacted] versus [redacted]). In summary, MASN's proposed terms are a better value proposition than the terms on which Comcast offers its own affiliated RSN programming.

58. I have also performed a further PSPPE analysis that compares MASN's proposed carriage terms in the contested areas to the terms on which Comcast has agreed to carry affiliated and unaffiliated RSNs in other "Intermediate" viewing markets throughout Comcast's nation-wide footprint. Table 4 presents the results of my analysis using the same basic approach I used in the analysis set forth in Table 3. In constructing the analysis set forth in Table 4, I defined "Intermediate" viewing markets as those contractual RSN zones for which the population-weighted distance to a professional sports team carried by that RSN is between 75 and 150 miles.[59] This best captures viewing markets that, like MASN's Region 4, are neither "inner" nor "outer" viewing markets; for example, this criterion excludes CSN-MA Zone 4, whose population-weighted average distance is approximately 232 miles from the Verizon center.

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58. I understand that Comcast carries CSN-MA at this price in some but not all portions of the Harrisburg DMA.

59. This distance measure is based on the way in which the particular contract under consideration designates zones. If zones are defined by counties, then I use population-weighted county distances. For a fuller explanation, *see infra* (describing regression analysis). If zones are defined by distances from the stadium, I use zip codes. Distances are not always from the stadium's zip code. For example, the FSN-KC contract defines zones based on the distance from a street corner in central Kansas City, MO. In that case I use the distance from the zip code that includes that street corner. Also, for CSN-MA and MASN, there are multiple venues associated with the primary programming on those networks (Verizon Center, Nationals Park, and Camden Yards). The distances for these zones are based on the closer of the distance to either DC (Verizon Center) or Baltimore (Camden Yards).

TABLE 4: ANALYSIS OF 2008 LICENSE FEES FOR SELECTED COMCAST-CARRIED RSNS IN "INTERMEDIATE" MARKET AREAS

RSN	Contract Designation for "Intermediate" Market Area	Distance (miles)	License Fee/Sub/Month	Number of Major Pro Events*	PSPPE
CSN New England	Outer	110	[redacted]	[redacted]	[redacted]
FSN West	Zone 2 -- Inner	79	[redacted]	[redacted]	[redacted]
FSN Arizona	Zone 2A	116	[redacted]	[redacted]	[redacted]
New England Sports Network	Outer	106	[redacted]	[redacted]	[redacted]
Altitude	Region 2	100	[redacted]	[redacted]	[redacted]
CSN Mid-Atlantic	Zone 2	89	[redacted]	[redacted]	[redacted]
CSN California	Outer Outer	87	[redacted]	[redacted]	[redacted]
CSN Northwest	Zone 3	146	[redacted]	[redacted]	[redacted]
FSN West 2 (Prime Ticket)	Zone 2 -- Inner	79	[redacted]	[redacted]	[redacted]
CSN Philadelphia	Fringe	88	[redacted]	[redacted]	[redacted]
FSN Midwest (Ohio)	Zone 2A	109	[redacted]	[redacted]	[redacted]
FSN Midwest (Ohio)	Zone 2B	110	[redacted]	[redacted]	[redacted]
CSN Mid-Atlantic	Zone 3	121	[redacted]	[redacted]	[redacted]
Mid Atlantic Sports Network	**Region 4 (Extended Inner)**	**107**	[redacted]	[redacted]	[redacted]
CSN Philadelphia	Outer Fringe	150	[redacted]	[redacted]	[redacted]
FSN Midwest (Ohio)	Zone 2C	145	[redacted]	[redacted]	[redacted]
FSN Midwest (Ohio)	Zone 3B	112	[redacted]	[redacted]	[redacted]
CSN Bay Area	Intermediate	114	[redacted]	[redacted]	[redacted]
CSN Philadelphia	Outer -- Rehobeth	88	[redacted]	[redacted]	[redacted]
Overall median		109.00	[redacted]	[redacted]	[redacted]
Overall average		108.21	[redacted]	[redacted]	[redacted]

Note: "Distance" is the population-weighted distance (in miles) from the Intermediate Market Area to the nearest applicable professional sports team stadium or, *if contractually specified*, to a particular location (e.g. a downtown intersection).

Note: "PSPPE" is the Annual Per Subscriber Per Pro Event fee. Professional events include professional baseball, basketball, or hockey games.

Sources: Various Comcast affiliate agreements; MASN; RSN and Team websites; other Comcast-produced documents.

59. The terms on which Comcast has agreed to carry regional sports programming in these "Intermediate" zones provides an appropriate comparison to the terms on which MASN is seeking carriage on Comcast's cable systems in the contested areas because the population-weighted distance in MASN's Region 4—which, as noted previously, encompasses the contested areas—is 107 miles. Thus, MASN's Region 4 lies roughly at the middle of the 75-to-150 mile range.

60. The analysis set forth in Table 4 is based on 12 RSNs throughout Comcast's national footprint for which Comcast provided affiliate agreements and related documents. Because several of those RSNs have more than one zone that meet my definition of an "Intermediate" viewing market, my analysis includes 18 observations. Including MASN's Region 4 itself brings the total number of observations to 19. The initial columns to the left on Table 4 indicate the RSN at issue and the contractual designation given to each particular region or zone serviced by each RSN that I have determined is an "Intermediate" viewing market. The middle columns of Table 4 provide the population-weighted distance from the various counties within the relevant viewing market to the nearest stadium or arena of a major professional sports team carried by that RSN and the monthly per-subscriber fee in each market. The right-hand columns report the total number of live major professional games and then calculate the resulting PSPPE rate.

61. Comparing MASN's "Intermediate" market PSPPE rate to the "Intermediate" market rate Comcast agreed to pay for 12 other RSNs throughout its national footprint demonstrates once more that MASN's proposed carriage terms compare favorably to the terms on which Comcast carries RSNs throughout its national footprint. MASN's "Intermediate" PSPPE fee (▇▇▇▇) is exactly ▇▇▇▇▇▇▇▇ than the average PSPPE fee (▇▇▇▇) that Comcast agreed to pay for RSN programming in "Intermediate" market areas throughout the United States. Only 5 of the 18 "Intermediate" market areas of the 12 RSNs included in my analysis have a lower PSPPE fee than does MASN. In short, Comcast has repeatedly agreed to pay more for regional sports programming in "Intermediate" viewing markets than it would under MASN's proposed carriage terms for the contested areas. MASN's proposed carriage terms fall comfortably within the range of fair market value for regional sports programming.

VI. REGRESSION ANALYSIS FURTHER DEMONSTRATES THAT MASN'S PROPOSED CARRIAGE TERMS COMPARE FAVORABLY TO THE TERMS ON WHICH COMCAST PURCHASES REGIONAL SPORTS PROGRAMMING

62. The reasonableness of MASN's proposed terms is also corroborated by a regression analysis that further examines the price that Comcast willingly pays for regional sports programming throughout its national footprint. Regression analysis is one method that economists use to examine complex goods—like regional sports programming—that may differ in terms of certain characteristics (such as location) but are generally similar. Regression analysis is a powerful tool because it allows an economist to control for the effects of key variables in determining the underlying relationship of one or more independent variables (the number of live major professional events offered by an RSN or the demographics of an area) to a dependent variable (the per-subscriber fee that Comcast is willing to pay to carry a given RSN on its cable systems).

A. The Estimation Methodology

63. In what follows, I analyze the pricing structure of regional sports programming carried by Comcast to determine Comcast's willingness to pay to carry MASN in the contested areas. This metric supports my estimate of the fair-market value of carrying MASN [redacted] per subscriber per month). In particular, I seek to estimate the relationship between subscriber fees paid by Comcast for regional sports programming and market characteristics. This sort of regression analysis is known as "hedonic-price" modeling. Employing this approach, I can use empirical results of my regression analysis to estimate the appropriate carriage fee in a given region based on observed market behavior.

1. The Model of Subscriber Fees and Market Characteristics

64. I model monthly subscriber fees for regional sports programming paid by Comcast using a hedonic model. A hedonic model uses information on quantitative differences between products to estimate what portion of the total price can be attributed to each component of a given product.[60] My model seeks to estimate the implicit sports-license fee paid by Comcast associated with each of several characteristics of broadcast markets. Those characteristics, or "explanatory variables," include the total number of major men's professional sporting events (from Major League Baseball, the National Basketball Association, and the National Hockey League),[61] the type of broadcast zone, the income, population, and population density within a particular broadcast zone, the average performance of the major professional sports teams carried by the RSN, and the distance between the broadcast zone and the home sports venue at which a professional team plays its games. I use an "out-of-sample" regression technique that includes the contract affiliation fees Comcast pays for a variety of RSNs. I also include the three MASN pricing zones that are not the subject of this dispute.[62] To ensure the robustness of my result, I supplement this analysis by estimating the same model on a sample that excludes all four MASN price zones. I report the results of this second analysis in Appendix 3. I ultimately use these estimates to predict the monthly subscriber fee that MASN would receive if its affiliation fees with Comcast were set objectively based on these market characteristics.

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60. *See, e.g.*, Sherwin Rosen, *Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition*, 81 J. POL. ECON. 34-55, 34 (1974) (noting that "[h]edonic prices are defined as the implicit prices of attributes and are revealed to economic agents from observed prices of differentiated products and the specific amounts of characteristics associated with them.").

61. Mr. Wyche explains that these events are the only major professional sporting events. Declaration of Mark Wyche, May 8, 2009, ¶ 19.

62. That is, I include the observations for the three other MASN areas: (1) Zones 1-3 (the uniformly-priced area that includes Washington DC and Baltimore ("DC/Baltimore"), (2) Zone 5 ("Extended Inner", encompassing western Virginia), and (3) Zone 6 ("North Carolina").

2. The Empirical Specification

65. Empirically, my model can be written as:

$$Fee = f(sports, demographic, spatial)$$

Or, more specifically:

$$Fee = \alpha + \beta_1(TotalGames) + \beta_2(Income) + \beta_3(Population) + \beta_4(Pop\ Density) + \beta_5(Distance) + \beta_6(MLB\ Performance) + \beta_7(NBA\ Performance) + \beta_8(NHL\ Performance) + B_9(Inner) + \varepsilon$$

where:

Fee is the monthly per-subscriber affiliate fee paid by Comcast for an RSN zone;

Total Games is the number of Major League Baseball, National Basketball Association, and National Hockey League games available per year;

Income is the median household income in the zone;

Population is the population of the zone;

Pop Density is the population density of the zone;

Distance is the average population-weighted distance from the broadcast zone to the center of the city (or venue if specified in contract);

MLB Performance is the average winning percentage of the MLB team(s) carried by the RSN for the period 1999 to 2008;

NBA Performance is the average winning percentage of the NBA team(s) carried by the RSN for the period 1999 to 2008;

NHL Performance is the average percentage of total possible points received by the NHL team(s) carried by the RSN for the period 1999 to 2008, excluding the lock-out year of 2004;

Inner is a discrete indicator equal to 1 if the zone is classified as an "inner" viewing zone.

I estimate this model using the OLS regression technique with robust standard errors. This technique is characterized by minimal variance relative to other linear and unbiased techniques.[63] These excellent properties have made OLS extremely popular for applied economics.[64]

B. The Estimation Results

66. I obtained pricing, sports, demographic, and geospatial data for 19 RSNs carried by Comcast throughout the United States.[65] Some of these RSNs are affiliated with Comcast. However, my dataset does *not* include all RSNs carried by Comcast. For instance, it excludes networks (1) for which Comcast did not supply sufficient data or (2) with imprecise pricing or geographic price zone delineations. In the following section, I describe my data and provide my estimation results. I also estimate the predicted MASN monthly subscriber fee if pricing were based solely on the factors in my model (and not on the lack of MASN's affiliation with Comcast).

1. Data Summary

67. My pricing data come directly from individual contracts between Comcast and unaffiliated or Comcast-affiliated RSNs. These contracts, which vary in their complexity, were

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63. George G. Judge, W.E. Griffiths, R. Carter Hill, Helmut Lutkepohl, and Tsoung-Chao Lee, 15 THE THEORY AND PRACTICE OF ECONOMETRICS (John Wiley & Sons 1985) (1980) ("Given this covariance result, the Gauss-Markov theorem provides proof that out of the *class of linear unbiased rules* for the statistical model (2.1.1) the least squares estimator is best, where best is defined in terms of minimum variance … the least squares estimator is equal to or better in terms of sampling precision than all others in its class.")

64. *Id.* ("This [superior sampling precision] is a beautiful result, which does much to explain the popularity of the least squares rule.").

65. Specifically, these networks are: Altitude Sports & Entertainment; Comcast SportsNet ("CSN") Bay Area; CSN-California; CSN-Mid Atlantic; CSN-Northwest; CSN-Philadelphia FSN-Arizona; FSN-Detroit; FSN-Florida; FSN-Kansas City; FSN-Ohio; FSN-Pittsburgh; FSN-Southwest (Dallas); FSN-West; FSN-West II; Mid-Atlantic Sports Network; (MASN); New England Sports Network (NESN); Sportsnet New York; and Yankees Entertainment and Sports ("YES").

made available to me by counsel for MASN. All contracts, however, assign different carriage rates to different geographic areas, which are called "zones." These zones can be delineated by state, county, television market,[66] or county subdivision. For example, Portland, Oregon-based Comcast SportsNet Northwest ("CSN-Northwest") has three zones. [redacted] receives [redacted] per subscriber per month for its innermost "Zone 1", which consists of parts of the states of [redacted]n. CSN-Northwest receives [redacted] per subscriber per month for its "Zone 2", which includes more distant areas of the states of [redacted]. Finally, CSN-Northwest receives [redacted] per subscriber per month for its "Zone 3" in [redacted]. Although [redacted] broadcast territory is composed of only three zones, many networks have three or four zones, and one network—[redacted]. In most cases, only the zone including the city center or venue was classified as an "inner" zone.[67]

68. I also compiled sports programming data from a combination of the individual contracts supplied by counsel and from publicly available sources. These data detail the number of games for each team that may be televised under each contract. For example, an RSN may have broadcast rights for 161 MLB games, 41 NBA games, and 32 NHL games. Because some RSNs provide coverage for more than one team, I used the total number of MLB, NBA, and NHL games broadcast by each RSN.

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66. These areas are generally defined by Nielsen's Designated Market Area (DMA) classification. In one rare case, however, a viewing market was defined in terms of Arbitron's Area of Dominant Influence ("ADI") classification, which is usually used to define radio markets.

67. Some RSNs also split their inner zones into "core" and "inner" zones or otherwise made minor distinctions for in-city areas. Thus I defined two inner zones for FSN-West, FSN-West II, FSN-Arizona, and FSN-Pittsburgh. Because Sunshine carries games for teams based in Tampa, Orlando, and Miami, multiple inner zones were defined for this network.

69. I used geospatial data from the 2000 U.S. Census to measure the distance from each sports venue to the center of each price zone. Specifically, I used latitude and longitude data to estimate the distance (in miles) from the geographic center of each county, zip code, or television market to the center of the city. In cases where zone distances are specified in terms of distance from the performing venue—such as the distance from Yankee Stadium—this distance was used instead.[68] I aggregated these distances into mean zonal distances by taking the population-weighted mean distance for each zone. My distance measure thus provides the distance from the population-weighed center of each zone to either the central city or the performing venue.

70. I similarly added demographic data derived from the 2000 U.S. Census to my dataset. Specifically, I include zonal population, median household income,[69] and population density.[70] These data were measured for the same geographic areas as the distance units. That is, if distance is measured by county, demographic data are similarly measured by county. Furthermore, the geographic unit of measurement—county, zip code, and so forth—is chosen to most closely mirror the defined boundaries of each price zone. Thus, using 2000 U.S. Census data, my model controls for the effects that income, population, and population density have on sports network fees.

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68. In both cases, however, I used the latitude and longitude of the zip code that encompasses the city center or the stadium.

69. Because I aggregate using population-weighting, my model actually includes the population-weighted mean of the median household income of the constituent zip codes or counties of a particular zone.

70. Zonal population density was expressed as the total zonal population divided by the total zonal land area (in square miles).

71. The dataset I use for this analysis includes a separate observation for each zone of each network. Altogether, this encompasses 55 data points. I report summary statistics for this dataset in Table 5.

TABLE 5: SUMMARY STATISTICS

	Mean	Standard Deviation	Minimum	Maximum
Fee ($/sub/month)	[redacted]	[redacted]	[redacted]	[redacted]
Total Games	222	88	66	370
Population (000s)	3,896	3,461	68	20,100
Population Density (per mi^2)	253	332	10	1893
Median Household Income ($000s)	$42.50	$7.21	$32.02	$64.29
Distance to Venue (miles)	193	330	15	2,390
MLB Winning Percentage	0.50	0.04	0.41	0.59
NBA Winning Percentage	0.49	0.07	0.37	0.65
NHL Point Percentage	0.53	0.07	0.43	0.69
Inner Zone (discrete)	0.29	0.46	0	1

72. My data are broadly representative of sports networks nationwide. The mean per-subscriber-per-month license fee in my sample is approximately [redacted]; the networks show an average of 222 MLB, NBA, and NHL games per year. Approximately 3.9 million people live in the average zone, with an average population density of 253 persons per square mile and a median household income of approximately $42,500. The population-weighted mean distance to the city center is 193 miles, reflecting the fact that most networks span multiple states.[71] Finally, approximately 29 percent of all zones in my sample are classified as "inner" zones (the remaining 71 percent are classified as "outer" zones).

2. Regression Results

73. I used the dataset described above to calculate the parameters of my model. Table 6 provides these results.

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71. Note that the maximum average zonal distance, 2,390 miles, is for carriage of Comcast SportsNet Bay Area in Hawaii.

TABLE 6: OLS PARAMETER ESTIMATES

	Coefficient	Standard Error	P-value
Inner Zone (discrete)	0.3783	0.2409	0.123
Total Games	0.0012	0.0007	0.114
Population	-0.00004	0.00003	0.183
Distance to Venue (miles)	-0.0007	0.0002	0.000
Median Household Income	0.0185	0.0258	0.477
Population Density (per mi^2)	0.0009	0.0004	0.026
MLB Winning Percentage	-0.3549	2.3057	0.878
NBA Winning Percentage	3.1585	1.5013	0.041
NHL Point Percentage	2.3227	1.4040	0.105
Constant	-2.2035	1.5918	0.173
Sample Size	55		
Adjusted R-Squared	0.580		
F-Statistics (zero slopes)	12.57		

74. As indicated by the R-squared statistic, the model explains approximately 48 percent of the variation in monthly subscriber fees (above and beyond that which could be explained by knowledge of the mean subscriber fee) paid by Comcast for RSNs in my database. The parameter estimates are also rather intuitive. For example, I find that, *ceteris paribus*, fees increase with additional sports games (the coefficient on total games is positive), and fees decrease as the distance to the venue increases. I also find that carriage fees decrease as population size increases, but increase as population density increases (although neither effect is statistically significant). Furthermore, "inner" zones command higher fees than other zones. Finally, I find that affiliation fees increase as income levels increase, although this effect does not reach statistical significance. One variable, MLB Winning Percentage, has a counterintuitive sign, but the estimated coefficient is not statistically significant; the anomalous sign is largely driven by the fact that some baseball teams (for example, the Detroit Tigers and Philadelphia Phillies) had low winning percentages but high license fees.

75. I also estimated my model without any of the MASN zones. My results, which are generally consistent with the sample I use here, are reported in Appendix 3.

3. Predicting the Subscriber Fee for MASN in the Disputed Areas Based on What Comcast Pays Other RSNs

76. I use the parameter estimates derived from my hedonic-price model to predict the monthly subscriber fee Comcast would pay for each zone of each RSN if fees were set objectively and based solely on the factors in my model. Of particular interest was the relationship between my fair-market value estimate (■ per subscriber per month) and the predicted fees paid by Comcast for MASN in the contested areas. That is, I estimate the zone fee for MASN Zone 4 (which includes Harrisburg, Roanoke, and the Tri-Cities) such that MASN would receive remuneration comparable to what Comcast pays to carry RSNs generally, including its affiliated RSNs. Table 7 presents these results.

TABLE 7: MASN ACTUAL AND PREDICTED FEES, ZONE 4, 2008

Zone	Actual MASN Fee (per Subscriber per Month)	Predicted MASN Fee (per Subscriber per Month)	95 Percent Confidence Interval	
			Lower	Upper
4	■	■	■	■

77. My analysis indicates that the fee MASN seeks for carriage in Zone 4 (■ per subscriber per month) is ■ the predicted fee of ■ per subscriber per month. Moreover, the fee sought by MASN here is within the bounds of the 95 percent confidence internal predicted by the model (between ■ and ■ per subscriber per month). The implication of this finding is that MASN's Zone 4 fee can be justified based on objective, marketplace data of what Comcast pays to carry other RSNs.

78. Finally, MASN's Zone 4 fee is corroborated by the price that the model predicts for Zone 4 using a smaller sample that does not include any observations from MASN.[72] This alternative analysis predicts that MASN Zone 4 should command a monthly per subscriber affiliation fee of [redacted].

79. In summary, I find substantial economic evidence that the sports, spatial, market, and demographic characteristics of MASN Zone 4 support MASN's proposed 2008 subscriber fee of [redacted] per subscriber per month. In fact, my analysis indicates that MASN's requested price is somewhat lower, all else equal, than the price Comcast willingly pays for comparable regional sports programming. As a result of Comcast's discriminatory conduct here, MASN has lost licensing revenues of approximately [redacted] million from April 1, 2007 through April 30, 2009 (equal to the product of [redacted] per subscriber per month and [redacted] subscribers and 24 months).

VII. MR. ORSZAG'S ERRONEOUS CRITIQUES OF MY DECLARATION ARE LACKING IN ECONOMIC SUBSTANCE

80. On March 19, 2009, Mr. Jonathan Orszag submitted a declaration in this proceeding in which he opined that Comcast's refusal to carry MASN in the contested areas does not constitute discrimination based on affiliation.[73] Mr. Orszag also responds to the analysis that I provided in previous submissions in this proceeding. As I demonstrate below, Mr. Orszag either misrepresents or misconstrues many of the central factual and economic aspects of Comcast's conduct with regard to MASN.

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72. *See* Appendix 3.

73. Expert Report of Jonathan Orszag, TCR Sports Broadcasting Holding, L.L.P., d/b/a Mid-Atlantic Sports Network, Complainant, v. Comcast Corporation, Defendant, MB Docket No. 08-214, Mar. 19, 2009 [hereinafter *Orszag Declaration*].

A. Mr. Orszag Ignores the Economic Guidance Provided by Previous Authorities in Interpreting the Cable Act

81. In his recently filed declaration, Mr. Orszag cites the Cable Act and suggests that his conclusions follow from the economic logic underlying the statute.[74] However, Mr. Orszag then completely ignores the Media Bureau's decision-making that provides guidance on the economic interpretation of the Cable Act. For instance, in its Order on Review, in TCR v. Time Warner, the Media Bureau explained:

> We disagree with Time Warner's assertion that an entity does not constitute an RSN under the *Adelphia Order* in areas, such as North Carolina, that are remote from the city in which the RSN's team plays, because the competitive concerns identified in the *Order* are not implicated, i.e., TWC would not be able to drive MASN out of business by denying carriage in North Carolina. First, TWC's narrow reading of the relevant geographic market finds no support in the text of the *Adelphia Order*. In addition, the Orioles and Nationals have been designated by MLB as "home teams" in most of North Carolina.[75]

Despite the clarity of this analysis, Mr. Orszag attempts to prove that MASN is not similarly situated to CSN-Philly and CSN-MA by rehashing many of the same arguments the Media Bureau has explicitly rejected. He repeatedly argues that the geographic areas at issue in the present case are too remote from the District of Columbia and Baltimore to support a finding of discrimination based on affiliation,[76] and he conveniently ignores that both the Nationals and Orioles have home team status in the geographic areas at issue.[77]

82. Mr. Orszag's deposition testimony also indicates that he does not truly embrace the discrimination based on affiliation standard articulated by the Cable Act. For instance, at deposition he explained, "[H]ow Comcast treats Comcast SportsNet Mid-Atlantic or Comcast

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74. *Id.* at ¶ 9.
75. *Order on Review*, ¶ 28.
76. *Orszag Declaration*, ¶¶ 10, 19, 22, 25.
77. *Complaint*, ¶¶ 10-11.

SportsNet Philadelphia is really ***second order*** to the question of if Comcast were just a cable company, how—would it treat MASN any differently than it treats MASN today as a vertically integrated company."[78] Of course, the issue of favoritism—that is, how Comcast treats its affiliated programming relative to how it treats independent but similarly situated programming—is a crucial part of any discrimination analysis. To ignore the preferential treatment Comcast shows its affiliated networks is to ignore the crux of the program-carriage dispute. These deficiencies are critical, and, as I demonstrate further below, infect his entire analysis.

B. Mr. Orszag Inappropriately Cites the Purportedly High Price of MASN as an Efficiency Defense

83. Mr. Orszag attempts to justify Comcast's foreclosure of MASN in the contested areas by claiming that MASN has a "relatively high cost of carriage," and that MASN would be "one of the most expensive networks carried by Comcast on the systems at issue."[79] Logically speaking, such price-based claims cannot serve as an efficiency defense in a discriminatory refusal to deal case like the present one, because the vertically integrated carrier could *always* argue that the price of carriage is "too high." Nowhere in the economics literature can one find "avoidance of high prices" as an efficiency defense for a vertical restraint.[80] Consequently, Mr.

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78. *See* Deposition of Jonathan Orszag at 15-16 (emphasis added); *see also id.* at 144-5 ("Q. We'll get there in a moment. As an economist, would it cause you concern if there was evidence that Comcast, in making the decision not to carry MASN in Harrisburg, was influenced by its ownership interest in CSN-Philly? A. Not necessarily.").

79. *Orszag Declaration*, ¶ 12.

80. *See* Patrick Rey & Jean Tirole, *A Primer on Foreclosure* (reprinted in III Handbook of Industrial Organization, Mark Armstrong & Rob Porter, eds., 2145-2220, 2007), at *75 ("Vertical or horizontal foreclosure may be socially beneficial in certain circumstances. First, it may enhance innovators' benefit from R&D efforts and thus foster their incentives to innovate or develop new products. Second, in situations where unrestrained competition in the downstream or adjacent markets leads to excessive entry and duplication of fixed costs, foreclosure may help

Orszag's proposed efficiency defense is vacuous because it cannot distinguish between a precompetitive refusal to deal and an anticompetitive refusal to deal.

84. Furthermore, these assertions regarding MASN's "relatively high" pricing are simply not true. When the price of MASN is compared to the price of other sports programming carried by Comcast in the contested areas, MASN (▇ per subscriber in 2008) is relatively cheaper. Comcast carries ESPN in the contested areas, whose average price was $3.26 per subscriber in 2007.[81] To borrow another example, Comcast paid ▇ per subscriber per month in 2008 for CSN-Philly (Outer Zone) in the Harrisburg DMA. These examples are conveniently ignored in Mr. Orszag's analysis. Due to the exclusive nature of the content and its sheer popularity, sports programming is, generally speaking, more expensive than other forms of programming. But the claim that MASN is relatively more expensive than other sports programming carried by Comcast in the contested areas is false. Indeed, my PSPPE and regression analysis demonstrates conclusively that MASN is less expensive than Comcast's affiliated RSNs and less expensive than many RSNs carried by Comcast generally.

[in] reducing excessive entry. Finally, integration may improve coordination between firms, for example by producing better incentives to monitor their efforts; foreclosure then is an undesired byproduct of a useful institution."); *see also* Elhauge, *supra* at 253 ("The proper monopolization standard should instead focus on whether the alleged exclusionary conduct succeeds in furthering monopoly power (1) only if the monopolist has improved its own efficiency or (2) by impairing rival efficiency whether or not it enhances monopolist efficiency. Under this standard, which would permit the former conduct and prohibit the latter, a defendant that has increased its own efficiency by investing in its intellectual or physical property should not have a duty to share that property with rivals, but has no privilege to discriminate by offering worse terms to rivals or to those who deal with rivals. Such discrimination on the basis of rivalry is not necessary to support optimal ex ante investment incentives, and its success may thus depend not on increasing the value of the property and the efficiency of the monopolist but rather on selectively impairing the efficiency of rivals.").

81. KAGAN RESEARCH, ECONOMICS OF BASIC CABLE NETWORKS 60 (Jupiter Kagan 13ed. 2006).

C. Mr. Orszag Claims That the Relevant Foreclosure Is Too Small To Violate the Program Carriage Rules

85. Mr. Orszag's common refrain is that the size of the foreclosure at issue is too small to be of significance.[82] In advancing this claim, Mr. Orszag fails to consider the extent of scale economies in production of RSN programming; he ignores factual conclusions already reached by the Media Bureau; and he quickly forgets the history of this carriage dispute. In *TCR v. Time Warner*, the Media Bureau found that "because RSNs, unlike national networks, are regional in nature, they require access to the maximum number of subscribers within their footprints, including the RSN's extended inner markets, in order to compete effectively."[83] Here, the Media Bureau recognized the economic truth that for MASN to realize its full potential as a competitor to Comcast's affiliated RSNs, MASN must spread its fixed costs over the greatest number of subscribers possible. Thus, Mr. Orszag's argument that Comcast's refusal to grant MASN access to [redacted] of subscribers in MASN's footprint (or to [redacted] of Comcast's subscribers in MASN's footprint) is not economically significant contradicts important precedent and economic theory.

86. Furthermore, Mr. Orszag's assertion that the size of the foreclosure is too small to matter reveals his ignorance of the importance of coverage gaps to advertisers. Indeed, the Washington Redskins specifically decided to assign their preseason games to CSN-MA rather than to MASN at least in part because of the coverage gaps resulting from the foreclosure at issue in this proceeding. In addition, as I discussed above, the economic literature on advertising explicitly discusses how holes in an RSN's coverage seriously impair its ability to attract

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82. *Orszag Declaration*, ¶¶ 10, 22, 25-26, 41.
83. *See Order on Review*, ¶ 31.

advertisers. For example, MASN's advertising revenues will suffer if MASN is required to rebate money to [redacted] as a result of the coverage gaps at issue.

87. The economic issues here are also greater than merely the foreclosure at issue. In approving Comcast's and Time Warner's acquisition of Adelphia, the Commission granted Comcast and Time Warner the right to take over Adelphia's cable systems conditional on assurances that the purpose of these transactions was not to foreclose unaffiliated regional sports networks. To allow Comcast to slowly renege on the commitments it made during the Adelphia proceeding invites cable companies to abuse their newfound market power through incremental foreclosure; it is the strategic equivalent of death by a thousand cuts.

88. In fact, Mr. Orszag's own work in a different dispute before the Commission demonstrates that Comcast is a recidivist discriminator. Along with another colleague, Mr. Orszag found that Comcast's decision to withhold its RSN from DBS competitors in the Philadelphia DMA resulted in prices as much as seven percent higher than they would have been had Comcast granted DBS providers access to CSN-Philly.[84] During his deposition testimony, Mr. Orszag attempted to explain that his analysis did not actually implicate Comcast.[85] Yet his analysis was filed on behalf of an entity opposing Comcast, Echostar; this revisionist history clearly cannot reflect his original beliefs. Furthermore, because his analysis controlled for factors

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84. Redacted Letter from David K. Moskowitz, Executive Vice President and General Counsel, EchoStar Satellite L.L.C. to Marlene H. Dortch, Secretary, FCC, MB Dkt. No. 05-192 (filed Jan. 25, 2005) at 4 (*citing* the redacted Willig/Orszag study).

85. *See* Deposition of Jonathan Orszag at 60 ("All we're saying is there's an unobserved factor in Philadelphia and it could be due to a variety of reasons. It could be due to the fact that EchoStar and DirecTV have a lower market share. It could be due to the fact there's higher-quality programming in Philadelphia that the model, just looking at the number of channels in use and the number of premium channels available doesn't fully capture.").

affecting quality, the logical implication of his findings is that Comcast has a history of using discriminatory refusals to deal to enhance its monopoly power to the detriment of consumers.

D. Mr. Orszag Errs When He Suggests That the Appropriate Standard for Assessing the Anticompetitive Effects of Comcast's Conduct Is Whether MASN Remained Profitable

89. Mr. Orszag repeatedly avers in his declaration that competition has not been harmed because MASN remains profitable and has not been forced into a "precarious financial position."[86] This test does not make sense from an economic perspective; it does not focus on consumer welfare and does not flow from the FCC's economic interpretation of the Cable Act. Indeed, the Media Bureau has explicitly rejected the proposition that a network must be rendered unprofitable for foreclosure of an upstream programming rival to violate the program carriage rules.[87]

90. From an economic standpoint, the appropriate standard for resolving this carriage dispute is whether the foreclosure at issue has prevented MASN from disciplining Comcast's prices (license fees or advertising rates) in the short-term or will facilitate further monopolization of the market by impairing MASN's ability to successfully bid for sports programming in the short- or long-term. Mr. Orszag claims that MASN would be able to constrain the prices charged

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86. *Orszag Declaration*, ¶¶ 10, 26.

87. *See Order on Review*, ¶ 30 ("As a threshold matter, we disagree with TWC that Section 616 requires a showing that 'without carriage, [a complainant] cannot compete at all, *i.e.*, would exit the industry, operate at a loss, or suffer some similar major disadvantage.' Neither the text of Section 616, nor its legislative history, support such a restrictive interpretation. To the contrary, the language of Section 616 is broadly directed at conduct that has the 'effect of...restrain[ing]...the ability of a programm[er]...to compete fairly.' In addition, the legislative history indicates Congress' general concern about the incentive and ability of vertically-integrated MVPDs, like TWC, to favor their affiliated programming services by, among other things, bestowing on them 'more desirable channel position[s]' than other programmers. Thus, while a programmer's exit from the market or loss of significant revenue might be the most straightforward evidence of its inability to 'compete fairly,' we believe both the language and the policy underlying Section 616 compel a more expansive interpretation.").

by Comcast for RSN programming without achieving coverage in the contested areas.[88] This logic fails at two levels. *First*, it makes absolutely no sense to claim that MASN constrains the pricing offered to MVPDs and advertisers on Comcast's affiliated RSNs *in areas where MASN is not carried by Comcast*. Although the CSN-Philly and CSN-MA rate cards may be determined at more aggregated areas than the DMA, the Harrisburg DMA accounts for 58 percent of all potential subscribers contained within the CSN-Philly "Outer Zone," and the Tri-Cities and Roanoke-Lynchburg DMAs account for 93 percent of all potential subscribers within the CSN-MA Zone 4. Accordingly, these geographic areas are sufficiently large to affect Comcast's pricing at the zone level. With respect to local advertising rates, because CSN's arrangements with advertisers are determined on a case-by-case basis and may pertain to a particular DMA, Comcast could easily impose a price increase in the contested areas as a result of its discriminatory conduct.

91. *Second*, MASN's ability to constrain prices throughout its entire footprint has been reduced by Comcast's conduct. What Mr. Orszag has repeatedly refused to acknowledge in his discussion of "efficiency" is that economics has established that when efficiency improvements are driven by either increased economies of scale or lower marginal costs in the supply of a product, a firm will respond by offering lower prices to undercut competitors everywhere.[89] Despite numerous reports, Mr. Orszag has been unable to rebut the evidence I have offered demonstrating that Comcast's conduct has deprived MASN of economies of scale and increased its marginal cost of supplying sports programming.

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88. *Orszag Declaration*, ¶ 26.

89. Steven C. Salop & David T. Scheffman, *Raising Rivals' Costs*, 73 AMERICAN ECONOMIC REVIEW 270 (1983) ("These two effects generally work in opposite directions, of course, because increases in marginal cost cause price increases.").

E. Mr. Orszag Erroneously Claims that MASN and CSN-MA/CSN-Philly Are Not Similarly Situated and Do Not Compete

92. Mr. Orszag incorrectly asserts that MASN does not compete with CSN-MA and CSN-Philly. Of all the networks on television, MASN's programming is the most similar to that shown on CSN-MA and CSN-Philly. No other network consistently shows sports programming of regional interest on a daily basis. To claim that MASN does not compete with the two affiliated Comcast sports networks *operating in the same geographic area* is to say that RSNs can never compete. Not only does common sense indicate that this proposition is wrong, but the Media Bureau has already found that RSNs with programming line-ups like the networks at issue, and that operate in the same geographic area, can and do compete. Indeed, in *TCR v. Time Warner*, the Commission found that MASN and CN8, Time Warner's affiliated network showing Charlotte Bobcats games, were similarly situated in North Carolina.

93. Curiously, Mr. Orszag maintains that MASN is not similarly situated to Comcast's affiliated sports networks, despite admitting that the two RSNs are "close competitors" in the acquisition of programming.[90] Because *ex ante* competition for programming is the primary mode of competition between firms in industries where contracts are by definition exclusive and non-divisible, Mr. Orszag's position is economically untenable. In fact,

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90. *See* Deposition of Jonathan Orszag at 104 ("I have yet to see any evidence that shows that Comcast SportsNet Philly and MASN are direct competitors, that they are close competitors. I have yet to see any evidence to suggest that they're close competitors. In any market. Q. What about CSN-MA? A. The only market I'm aware there's evidence that they are *close competitors* is in the acquisition of programming space where they both were competing for various programming assets.") (emphasis added); *id.* at 130 ("Q. Do you therefore, conclude that CSN-MA and MASN are close competitors because of the content competition? A. In the market for content, they have competed against each other. I haven't done the statistical or other analysis about the degree of closeness of the competition, but they have competed against each other.").

competition for programming was one of the main factors cited by the Commission in the Adelphia Order as requiring protection:

> Accordingly, post-transaction Time Warner and Comcast will have an increased incentive to deny carriage to rival unaffiliated RSNs with the intent of forcing the RSNs out of business or discouraging potential rivals from entering the market, thereby allowing Comcast or Time Warner to obtain the valuable programming for its affiliate RSNs.[91]

Mr. Orszag's admission that CSN-MA competes for programming against MASN is tantamount to an admission that the networks are similarly situated.

94. In further support of his erroneous contention that MASN and CSN are not similarly situated, Mr. Orszag claims that Comcast's denial of carriage is based on insufficient demand for MASN in the contested areas. However, the carriage decisions of other MVPDs in the Harrisburg, Roanoke-Lynchburg, and Tri-Cities DMAs belie Mr. Orszag's claim. The following table shows MASN's penetration among non-Comcast MVPDs in the contested areas.

TABLE 8: MASN NON-COMCAST PENETRATION BY DMA

DMA	Total Non-Comcast MVPD Subs on MVPDs that have Launched MASN	Total Non-Comcast MVPD Subs	MASN Penetration Rate
Harrisburg-Lancaster-Lebanon	155,851	202,355	77.0%
Roanoke-Lynchburg	242,358	297,206	81.5%
Tri-Cities	103,700	130,005	79.8%

Sources: Cable Operator Data from MASN Subscriber Census, ADS data from TV-B Local Cable Reach Guide, July 2008.

91. *See Adelphia Order*, ¶ 189.

This table indicates that the MVPDs serving the vast majority of MVPD subscribers in each DMA have elected to carry MASN, presumably because those MVPDs believe that their subscribers in the contested areas value MASN's programming.[92] Indeed, approximately 80 percent of MVPDs other than Comcast in the contested areas, when weighted by their number of subscribers, carry MASN. And these MVPDs are paying the same [redacted] per subscriber that MASN has asked Comcast to pay in the contested areas, because demand for MASN programming in the contested areas is sufficient to justify the cost of carriage.

95. Mr. Orszag attempts to support his contention that the demand for MASN is too low to justify carriage in the contested areas based on data provided by Comcast's industry expert, Larry Gerbrandt. Mr. Orszag contends that a series of online and telephone surveys conducted by Mr. Gerbrandt demonstrate that few residents in the contested areas have an interest in watching Orioles and Nationals games.[93] However, the survey conducted by Mr. Gerbrandt provides no insight into the television viewing habits of residents in the contested areas. Rather, as reported by Mr. Gerbrandt, the survey focused on questions like "Which one Major League Baseball team, if any, do you tend to follow the most."[94] There are two clear problems with questions of this nature. *First*, by forcing respondents to name only one team, the survey does not account for people who follow a number of teams. *Second*, Mr. Gerbrandt does

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92. Nielsen data demonstrate that Baltimore Orioles games shown on CSN-MA in the Harrisburg DMA recorded ratings of [redacted] for 2003, 2004, and 2005, respectively, based on the July sample. These data also indicate that Orioles games on CSN-MA in the Roanoke-Lynchburg DMA received ratings of [redacted] for 2003, 2004, and 2005, respectively. The Roanoke-Lynchburg ratings were very similar to the ratings in the Richmond and Norfolk-Newport News DMAs, where there is no carriage dispute. No data were available for the Tri-Cities DMA. *See* Orioles Nielsen Summaries, July Reports. A Nielsen rating point of [redacted] in 2004 implies that [redacted] percent of all households in the Harrisburg DMA were tuned into the Orioles telecast in July, regardless of whether their televisions were turned on.

93. Orszag Declaration, ¶ 13.

94. Expert Report of Larry Gerbrandt, MB Docket No. 08-214, Mar. 18, 2009, ¶ 23.

not provide any information on how his findings relate to television ratings. Mr. Orszag also cites Mr. Gerbrandt's statistics demonstrating that merchandise sales for the Orioles and Nationals are relatively lower than other teams in the contested areas as evidence that there is little demand for televised Orioles and Nationals games.[95] Again, however, Mr. Gerbrandt provides no insight onto how merchandise sales relate to television ratings. Thus, it is impossible to infer any information from these findings that is relevant to this proceeding.

96. Mr. Orszag claimed at his deposition that DBS carriers cannot be included in this calculus because they have "different economics"—that is, Mr. Orszag would have us believe that Comcast's failure to carry MASN is based on capacity constraints that are uniquely faced by Comcast.[96] In support of this proposition, Mr. Orszag and Comcast have cited to Appendix A of Mark Wyche's declaration, which shows the bandwidth associated with each Comcast system that does not carry MASN in the contested areas. However, the exhibit contains no data indicating the amount of bandwidth actually used on the system or the amount of free capacity on the system. Thus, it is misleading to claim that this exhibit provides any indication that Comcast faces capacity constraints on the systems at issue. Time Warner attempted to proffer this exact defense in its carriage dispute with MASN in North Carolina. But the Media Bureau rejected Time Warner's "opportunity-cost" argument because Time Warner was unable to

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95. Orszag Declaration, ¶ 13.

96. *See* Deposition of Jonathan Orszag at 23 ("Similarly, when one observes other MVPDs in that area, not DirecTV and Dish because the economics of those are different with regard to that area, one observes the same pattern. Very few of those MVPDs carry the programming in those areas.").

demonstrate that it had more compelling uses for this space or even to quantify the opportunity cost relative to the direct cost of carriage.[97]

97. Mr. Orszag also claims that Comcast's decision (after having carried the Orioles for nearly a decade on CSN-MA in Harrisburg) to stop showing the Orioles and pull CSN-MA from its channel-line up in Harrisburg in 2005 is definitive proof of insufficient demand for MASN in that geographic area.[98] The irony of this assertion is that Comcast's decision to replace CSN-MA with CSN-Philly in Harrisburg in 2005 clearly demonstrates Comcast's discriminatory intent. In 2004, the Orioles informed Comcast that they would be forming their own RSN, MASN, in 2006, and they would not renew their exclusive contract with CSN-MA. This announcement presumably caused Comcast to pull Orioles programming from the Harrisburg DMA in order to discourage Orioles viewership and drive Harrisburg baseball fans towards the Phillies, whose games remained available on CSN-Philly. Because of NBA telecast rules, the non-Orioles content on CSN-MA (Washington Wizards) was largely blacked out in the Harrisburg DMA. Accordingly, beginning in 2005, the impending loss of Orioles programming meant that CSN-MA would not have any significant sports programming in Harrisburg on a going-forward basis.

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97. *Order on Review*, ¶ 36 ("With regard to TWC's claim that analog carriage of MASN would impose a substantial opportunity cost by foreclosing TWC's ability to carry other services of greater interest to North Carolinians...*TWC has put forth no evidence purporting to quantify such cost* or to demonstrate that the next revenue derived from carriage of MASN would be less than the opportunity cost imposed by TWC's ability to offer more desirable programming services, including HD services.") (emphasis added).

98. *See* Deposition of Jonathan Orszag at 22 ("I ask the question of well, for example, in Harrisburg, if we want to take that as an example, Comcast decided itself not to carry the programming when it still had access to the Orioles. It decided to drop its own programming, it's own channel in Harrisburg.")

98. Finally, in support of his argument that the networks are not similarly situated, Mr. Orszag claims that I have failed to demonstrate that MASN and CSN-MA/CSN-Philly are part of the *same antitrust product market*. This argument is a straw-man. I did not go through the exercise of defining an antitrust product market (and performing the associated SSNIP test) for the simple fact this is not an antitrust case. Rather, the appropriate test in a carriage complaint is whether the networks at issue are similarly situated with respect to programming, advertisers, and viewers. I have provided an abundance of evidence that MASN is similarly situated to the Comcast-affiliated RSNs at issue in the contested areas.

G. Mr. Orszag Draws a Distinction Between Outer and Core Markets That Is Irrelevant to the Economic Issues in the Current Proceeding

99. Mr. Orszag contends in his declaration that, because the foreclosure at issue affects only the outer markets served by MASN, Comcast's conduct does not violate the economic standards underlying the program carriage rules. For instance, Mr. Orszag contends that the economic theory I cite applies only to programming in core markets.[99] This proposition is uneconomic. The theoretical articles that isolate the conditions under which foreclosure of rivals will result in harm to consumers are not tailored to a specific industry. As for the applied articles that address the vertical foreclosure in the cable industry, Mr. Orszag is simply wrong. None of these articles contains any language even hinting that their results apply to foreclosure in inner markets only. Indeed, Mr. Orszag fails to reference in his report any paper I have cited in this proceeding.

100. Mr. Orszag also cites to previous declarations I submitted to the FCC during the Adelphia proceeding. He claims these filings support the notion that outer markets are

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99. *Orszag Declaration*, ¶ 32.

insignificant. Because Mr. Orszag fails to contextualize my statements appropriately, his summary of the opinions I expressed during the Adelphia proceeding is misleading at best. One must consider that the Adelphia proceeding involved an economic inquiry into the competitive effects of a merger between two cable operators, Comcast and Adelphia—the effect of which was to consolidate significantly Comcast's downstream footprint in the Washington, D.C. DMA. Comcast's attempts in that proceeding to divert the Commission's attention away from the competitive effects in the Washington, D.C. DMA were inappropriate then, and with the luxury of two years of additional experience, are still inappropriate. A nascent team like the Washington Nationals could not simply trade households in distant DMAs with households in their core market (the Washington D.C. DMA). Accordingly, the relevant geographic areas in that case have little to do with the relevant geographic markets here.

H. Mr. Orszag's Contention That I Advocate a *Per Se* Carriage Dispute Standard For Any Vertically Integrated MVPD Is Meritless

101. Mr. Orszag's contention that I advocate a *per se* standard for resolving carriage disputes is false. Rather, I embrace the Commission's standard that a programming network seeking carriage by a vertically-integrated MVPD must prove that (1) its programming is similarly situated to that of the vertically-integrated MVPD, (2) it has been discriminated against, and (3) that the unaffiliated programming network's ability to compete has been impaired. Furthermore, I believe that legitimate efficiency defenses provided by the MVPD warrant consideration, which directly contradicts the notion of a *per se* rule.

102. Mr. Orszag claims that MASN could capture *any* license fee under my alleged *per se* rule:

> Dr. Singer's perspective can be summed up as follows: if Comcast is the most efficient distribution mechanism (*i.e.*, has the biggest footprint in the area), a cable network has economies of scale (which all cable networks have), Comcast

> carries its affiliated programming, and the programming is "similarly situated" to the programming offered by the vertically integrated MVPD, Comcast must carry the unaffiliated programming at any price. That is, under Dr. Singer's economic framework, if MASN wanted to charge $20 *per month*, Comcast would have to accept that price and carry MASN on the systems at issue, even if consumers did not want the programming.[100]

Indeed, if this was the case, I would not have gone through the exercise of estimating the appropriate per-subscriber rate at which Comcast should carry MASN. While it is true that my earlier submissions contained only a consideration of whether Comcast's conduct violated the program carriage rules, this is in keeping with the Commission's carriage-dispute structure that disconnects "Phase I" testimony (concerning liability) and "Phase II" testimony (concerning damages). Mr. Orszag's attempt to muddle this distinction and use it to criticize my analysis is disingenuous and further suggest that Comcast's economic arguments rest on shaky foundations.

CONCLUSION

103. Economic analysis and record evidence overwhelmingly demonstrate that Comcast's exclusion of MASN in the contested areas is based on affiliation and is anticompetitive. Nearly every major MVPD in the contested areas carries MASN, and they do so at the rate MASN seeks in this dispute. Because these MVPDs are similarly situated to Comcast except for their lack of ownership in the upstream regional sports programming market, their carriage agreements with MASN provide an appropriate benchmark with which to assess both the demand for MASN in the contested areas and the price that Comcast should pay for carriage. According to a standard benchmark used by industry experts to value RSNs, MASN's proposed terms represents fair market value and is below both the comparative rates charged by Comcast for its regional sports programming of its own affiliated RSNs in the contested areas. Finally, I

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100. *See Orszag Declaration*, ¶ 34 (emphasis in original).

assess the reasonableness of MASN's proposed terms by estimating the price that would arise from MASN's intrinsic characteristics—its product, its demographics, and its geography—but-for Comcast's conduct. The results from my hedonic regression suggest that the rate at which MASN is seeking carriage may be somewhat below the rate at which Comcast would volunteer to pay for MASN in the contested areas but for Comcast's discriminatory intent. As a result of the foreclosure at issue here, MASN has forgone licensing revenues of approximately [redacted].

* * *

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Hal J. Singer

May 8, 2009

APPENDIX 1: CURRICULUM VITAE

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CRITERION ECONOMICS, L.L.C., Washington, D.C.: President, 2004-2008. Senior Vice President, 1999-2004.

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AUTHORED BOOKS AND BOOK CHAPTERS

Valuing Life Settlements as a Real Option, co-authored with Joseph R. Mason, in LONGEVITY TRADING AND LIFE SETTLEMENTS (Vishaal Bhuyan ed., John Wiley & Sons 2009).

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JOURNAL OF RISK MANAGEMENT AND INSURANCE REVIEW

JOURNAL OF REGULATORY ECONOMICS

MANAGERIAL AND DECISION ECONOMICS

TELECOMMUNICATIONS POLICY

PERSONAL INFORMATION

American citizen, born March 31, 1972. Married to Ingrid Arraut Singer. Two daughters: Alexis and Kayla. Resident of Oakton, Virginia.

May 8, 2009

APPENDIX 2: MATERIALS RELIED UPON

Academic Literature

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COMMASN_00006240

COMMASN_00006242

COMMASN_00006403

COMMASN_00006404

COMMASN_00005600

COMMASN_00005842

MASN_DPW_00000010_EF

MASN_DPWZ_0000005_EPQ

MASN_DPWZ_0000007_EPQ

MASN_DPWz_0000008_EPQ

MASN_DPW_0000009_EF

MASN_DPW_0000001_EPQ

MASN_DPW_00000013_EF

SEE 00043 - SEE 0045

COMMASN_00006403

COMMASN_00006432

Yes - Comcast Redacted Amendment No. 2. PDF

MASN_COM001126-1137

MASN_COM001210-1230

MASN_COM001277-1305

MASN_COM001231-1276

MASN_COM001343-1352

MASN_COM001379-1190

MASN_COM001408-1418

COMMASN_0005449

COMMASN_0005500

COMMASN_00006306

COMMASN_00006244

COMMASN_0000625

COMMASN_00006403-4

COMMASN_00005629-31

COMMASN_00005549

COMMASN_00005652

COMMASN_00005600-00005661

COMMASN_00005574 - 00005589

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APPENDIX 3: ALTERNATIVE REGRESSION RESULTS

I have also estimated my model on a sample that does not include observations for any MASN zones. This analysis is intended to explore the possibility that the prices Comcast pays in other MASN zones are "corrupted" by Comcast's challenged conduct. If the prices are indeed "corrupted," it would be appropriate to remove all MASN entries from the dataset. Removing all MASN observations leaves me with 52 usable 2008 observations. With these data, I estimated the same model as presented above in Section VI.B. The tables below present the results.

TABLE A1: DESCRIPTIVE STATISTICS OF ALTERNATIVE SAMPLE

	Mean	Standard Deviation	Minimum	Maximum
Fee ($/sub/month)	[redacted]	[redacted]	[redacted]	[redacted]
Total Games	216	87	66	370
Population (000s)	3,819	3,447	68	20,100
Population Density (per mi^2)	251	337	10	1,893
Median Household Income ($000s)	$42.51	$7.27	$32.02	$64.29
Distance to Venue (miles)	197	338	15	2,390
MLB Winning Percentage	0.50	0.04	0.41	0.59
NBA Winning Percentage	0.49	0.07	0.37	0.65
NHL Point Percentage	0.53	0.07	0.43	0.69
Inner Zone (discrete)	0.29	0.46	0	1

TABLE A2: REGRESSION RESULTS USING ALTERNATIVE SAMPLE

	Coefficient	Standard Error	P-value
Inner Zone (discrete)	0.3522	0.2416	0.152
Total Games	0.0015	0.0008	0.065
Population	-0.00004	0.00004	0.295
Distance to Venue (miles)	-0.0007	0.0002	0.000
Median Household Income	0.0181	0.0260	0.490
Population Density (per mi^2)	0.0009	0.0004	0.035
MLB Winning Percentage	-1.3555	2.7822	0.629
NBA Winning Percentage	3.1652	1.5189	0.043
NHL Point Percentage	2.3790	1.3770	0.091
Constant	-1.7790	1.7319	0.310
Sample Size	52		
Adjusted R-Squared	0.575		
F-Statistics (zero slopes)	11.68		

TABLE A3: PREDICTED COMCAST-MASN PRICE IN ZONE 4

Zone	Actual Fee (per Subscriber per Month)	Predicted Fee (per Subscriber per Month)	95 Percent Confidence Interval	
			Lower	Upper
4	[redacted]	[redacted]	[redacted]	[redacted]

My results are broadly consistent with the model presented in the text. A model without *any* MASN observations produces similar statistics (an adjusted R-squared of 0.575 versus 0.580) and predicts that Comcast would pay a price of [redacted] per subscriber per month to carry MASN in Zone 4 in 2008. This predicted price is greater than that estimated using the model presented in the text (which predicts a MASN Zone 4 price of [redacted] per subscriber per month in 2008). As a result, the results I presented in the text are conservative and likely understate the price that Comcast would be willing to pay for carriage of MASN in Zone 4 in 2008.