REPORT OF PROFESSOR SIMON J. WILKIE

CONSUMER SOVEREIGNTY, DISINTERMEDIATION AND THE ECONOMIC IMPACT OF THE PROPOSED COMCAST/NBCU TRANSACTION

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I. INTRODUCTION

A. Qualifications

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

Journal of Communication. I have also been an Affiliated Scholar of the Milken Institute, and a Visiting Assistant Professor of Columbia University.

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

3. Over the past nineteen years, my academic research has focused on the areas of mechanism design, regulation, and game theory, with a particular emphasis on the telecommunications industry. I received a Bachelor of Commerce degree in Economics from the University of New South Wales, and M.A. and Ph.D. degrees in Economics from the University of Rochester.

B. Assignment

4. I have been asked by EarthLink to review, from an economic perspective, the additional effects of the proposed Comcast/NBCU transaction. [1] More

[1] This transaction would give Comcast a significant broadcasting services and programming portfolio in addition to its considerable service provision infrastructure. Thus, Comcast will

specifically, I have been asked to analyze possible anti-competitive consequences of such a transaction on the emerging online video market and Internet service providers ("ISPs"). Under the structure of the proposed transaction, Comcast will have clear business incentives that are not aligned with consumer interests. In addition, Comcast has a history of punitively limiting the bandwidth of competitive content, which raises obvious anti-competitive concerns. The acquisition of NBCU by Comcast would not only increase Comcast's incentives to act anti-competitively, but would give it a natural set of content to promote, further increasing Comcast's ability to act anti-competitively. EarthLink has proposed pro-competitive structural remedies, which I will also comment on.

C. Summary of Conclusions

- The nascent market for online video programming distributor services ("OVPD"), including the provision of broadcast and cable content, is rapidly growing and developing.
- Online content providers and aggregators have powerful economic incentives to cooperate with independent ISPs to develop substitute online video services platforms to compete with traditional multichannel video programming distributor ("MVPD") services.
- The merged Comcast/NBCU entity will have strong incentives to discriminate in favor of its own programming.

control not just the consumer access point, but also a considerable portion of the content that arrives through that access point. The major focus of the merger analysis appears to be the anti-competitive effects in the broadcast market. As such, a great deal of attention appears to be centered on possible anti-competitive activities related to the withholding of broadcast content.

- The merger of NBCU and Comcast would likely increase Comcast pricing of stand alone broadband offerings.

- The nascent nature of this market makes it important for the Commission to take actions to prevent likely anti-competitive effects.

- EarthLink's low-cost structural remedy – requiring independent ISPs to have access to Comcast customers – ensures that, if Comcast engages in discriminatory activities that degrade consumer welfare, consumers will have the option to switch to another ISP.

- This condition was imposed on the AOL/Time Warner transaction and, subsequently, Time Warner Cable has not been found to engage in such discriminatory practices. Moreover there appears to be no negative impact on investment due to the imposition of the proposed remedy.

- Implementing the rule could be done through commercial negotiation or using a simple imputation test.

D. Outline of Report

5. Section II explores the current state of the market for online video services. Section III discusses and analyzes the incentives to discriminate against unaffiliated online distributors and content that would result from the Comcast/NBCU merger, and some of the basic pitfalls associated with analyzing the Comcast and NBCU merger within such a context. Section IV explores the role of antitrust and regulation within these nascent markets. Section V applies the Commission Staff model to the Comcast/NBCU merger. Section VI explores the impact of the merger on pricing. Section VII analyzes EarthLink's proposed pro-competitive structural remedy for the merger.

II. NASCENT MARKETS FOR ONLINE VIDEO SERVICES[2]

6. The landscape of MVPD services has changed significantly over the last decade. Advancements in technology and access to information continue to bring consumers more targeted and individually-specific media content. Consumer choice in terms of how and when traditional television programming is delivered has increased rapidly. In the home, digital video recorders ("DVRs") give consumers the ability to isolate and time-shift traditional MVPD content, but Internet speeds have increased sufficiently to make watching television online, ostensibly anytime and anywhere, a viable option for most consumers. Indeed, widening access to broadband Internet has led many consumers to question the need for traditional content intermediaries, such as MVPD service providers.

7. The disintermediation of media content began in earnest in 1999 with the introduction of TiVo. TiVo, like DVRs subsequently offered by MVPDs, allows users to record user selected programming and view it at times other than that of the live broadcast.[3] Therefore, while consumers still pay a flat fee for a stream of continuous MVPD programming, they are able to actively select and capture specific content to watch at their

[2] At the highest level, I am distinguishing online video services from traditional MVPD services in the same way that consumers currently do. Namely, whether broadcast and/or cable content is delivered via a broadband internet subscription. Consumers of online video services, therefore, would include every individual household with access to broadband internet.

[3] A similar, albeit more primitive, functionality has been provided by VCRs since the early 1980's.

choosing. In the last several years, TiVo has expanded the functionality of its products to incorporate a larger amount of broadband content. [4]

8. The desire to acquire specific content coupled with high speed Internet access to media makes alternative formats increasingly attractive to consumers. This past year the FCC Media Bureau Chief Bill Lake stated publicly that the separation of the TV and the Internet is "coming to an end" and expressed the general view that the convergence of broadband and television is approaching. This is seen in the more than 800,000 US households that have moved from traditional MVPD service to receiving their video programming online over the last two years, and another 800,000 are estimated to do the same in 2010.[5] While online video distribution and programming are rapidly growing and developing, it is considered a nascent market in the sense that it is still small in comparison to traditional MVPDs and there is still quite a bit of uncertainty about the future structure of this market.

9. Currently, there are numerous models for media distribution, including online broadcaster controlled content (*e.g.* full length television episodes offered by NBC.com, CBS.com, etc.), online content aggregators (*e.g.* full length episodes and movies offered by Hulu.com, TV.com, Netflix, etc.), and full service providers who both aggregate content and provide the

[4] Spangler, T. "Can TiVo Reinvent Itself?", Multichannel News, (12/14/09).

[5] Schonfeld, E. "Estimate: 800,000 U.S. Households Abandoned Their TVs For the Web", Techcrunch.com, (4/13/10).

distribution infrastructure (*e.g.* broadcast and cable offerings of traditional MVPD service providers, as well as newer products offered by AT&T U-verse, Verizon FiOS, etc.).[6] Taken independently, these models of media distribution will compete for both consumer and advertising revenues. Online content providers and aggregators have powerful economic incentives to cooperate with independent ISPs to develop substitute online video services platforms to compete with traditional MVPD services.[7] This is the case regardless of how quickly the transition away from more traditional media delivery formats takes place or which new type of format establishes itself in the coming years.

10. According to a report from The Diffusion Group, revenue from the delivery of Internet video to television sets will grow nearly six-fold in the next five years, from a meager $1 billion in 2009 to $5.7 billion in 2014. The report posits that in 2009, pay-per-view services will account for 96% of this revenue stream. By 2014, however, annual Internet delivery subscription revenue will have grown 50-fold and account for 31% of global over-the-top TV revenue.[8]

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[6] These categories by no means capture all forms of online video distribution. For example, Sezmi combines online video distribution with an over-the-air tuner.

[7] For example, Netflix offers online content delivered by ISPs that can directly compete with broadcast and/or cable content provided by MVPDs. This is true of any website or Internet application offering broadcast and /or cable content.

[8] *See* http://tdgresearch.com/blogs/press-releases/archive/2009/09/14/over-the-top-tv-revenue-to-top-5-6-billion-by-2014.aspx

11. The study points to current hardware trends as fueling this growth, specifically the ongoing shift to broadband-enabled TVs and the rapid diffusion of ancillary web-enabled platforms such as game consoles, Blu-ray players, and hybrid set-top boxes. Widespread penetration of such platforms will set the stage for a rapid uptake of Internet-to-TV video services, both pay-per-view and subscription-based.

12. The Diffusion Group finds that "As these platforms more widely diffuse and consumers become more comfortable with using Internet-based TV services, the market will be primed for the arrival of full-fledged PayTV replacement services."[9] There will be revenues associated with both pay-per-view and subscription video services, as well as the diffusion of broadband-enabled TVs and a variety of web-enabled video platforms.[10]

III. COMCAST'S POTENTIAL FOR ANTI-COMPETITIVE BEHAVIOR

A. Comcast's Incentives To Engage In Anti-Competitive Behavior

13. When firms integrate their economic incentives can change dramatically. Firms will often merge when they believe a single decision-making body will align their interests in a way that would be difficult to achieve through independent negotiations. Therefore, the merged entity will have different combined incentives than if each firm were operating independently. The

[9] Ibid.

[10] These include game consoles, Blu-ray players, hybrid set-top boxes, Internet extenders, and others. Indeed, in recent weeks we have seen ESPN sign deals with Playstation and X-Box as both game systems move to become video distribution platforms.

resulting entity would develop pricing policies, distribution methods, and overall firm strategy in order to efficiently reposition itself in the market. However, it is not necessarily the case that the incentives of the merged entity will align with consumer welfare.[11]

14. Integrated firms, such as the proposed Comcast/NBCU, will build market power as result of their content and infrastructure control by restricting output (in terms of both content and quality), raising prices, or both. In the current case, Comcast will have an incentive to restrict output in such a way as to favor the revenue-maximizing distribution of its owned content. This favoritism can take the form of content exclusionary practices, as is addressed by Israel and Katz, or more subtle content discrimination through transmission degradation or even outright blocking.

15. A merged Comcast/NBCU entity will have strong incentives to discriminate in favor of its own programming regardless of the future structure of the online video content market. If, as Israel and Katz would have us believe, online video programming and MVPD services are, and will continue to be, complements, Comcast/NBCU may not want to foreclose access to content entirely, but they will still have incentives to behave anti-competitively.[12] For example, the merged entity will have an

[11] For example, if the merged entity has greater market power it may raise prices, reduce output, and/or degrade the quality of its goods/services, all of which are standard outcomes of increased market power.

[12] Several MVPDs, including Comcast, are currently working to position online video services and programming as a complementary service, such as TV Everywhere. This augments, but does not

incentive to promote online distribution of its own content, from which it receives revenues, over that of others. Comcast could achieve this by selectively degrading the transmissions of non-affiliated distributors on its infrastructure network. [13] This may result in Comcast/NBCU having the ability to bully these non-affiliated distributors into licensing and carrying Comcast/NBCU content. Indeed, Comcast/NBCU may even be able to bully affiliated distributors into paying an anti-competitive price to carry the Comcast/NBCU programming so that Comcast will not discriminate against its other programming.

16. Alternatively, online video services and programming may, in the future, increasingly be viewed as a substitute for traditional MVPD services by many households, directly competing with, or even replacing, cable or satellite TV.

17. As online video services and programming begin to take on a competitive relationship with MVPD services going forward, the current transaction will increase Comcast/NBCU's incentive to favor their own online video programming. The merged entity will have an incentive to block access to or degrade rivals' online product (e.g., Fox, CBS, etc.) in order to (1)

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necessarily replace, traditional MVPD services. Clearly, Comcast has an incentive to promote online video programming as a complement that would not replace profit generating MVPD services. Based on this market structure, Israel and Katz argue that Comcast/NBCU would not find it profitable to engage in exclusionary conduct relative to programming content. Israel and Katz focus on only one type of exclusionary conduct, namely the refusal to license NBCU content to competitors in an attempt to thwart the development of online video programming.

[13] This could be achieved by discriminatory network management, such as selective capacity allocation.

encourage consumers to continue to purchase their traditional MVPD services, and (2) promote and maximize revenue from NBC programs.[14] Further, Comcast/NBCU will have an incentive to degrade the quality of *all* rival online video products, not necessarily just those that do not license NBCU content. [15] It could also be the case that Comcast as an ISP will have an incentive to favor delivery of its own NBCU content via NBC.com, Comcast's online television companion service "Fancast Xfinity," and other online video services which have NBCU licensed content. This would result in the degradation of delivery service for non-NBCU affiliated content or other discriminatory practices. In either case, Comcast/NBCU has incentives that are not aligned with the interests of consumers.

18. Thus, Comcast will have incentives to engage in anti-competitive signal degradation regardless of whether or not online video products are complementary or competitive. Such an outcome is, in fact, likely given that Comcast has engaged in this type of anti-competitive behavior in the past. The market-structure distinction of complement and substitute only dictates whom the anti-competitive activity would be directed against, not

[14] It should be noted that already vertically integrated multiple system operators favor their own channels over competitors to a degree that cannot be explained by economic efficiency. (*See* paper commissioned by FCC, "Vertical Integration and the Market for Broadcast and Cable Television Programming", by Austan Goolsbee, April 2007).

[15] The exact nature of these incentives will depend on the nature of Comcast's revenue streams from infrastructure vs. programming. Comcast has produced some data which may contain this information, but I have not had an opportunity to review the data. In light of this, I reserve the right to adjust my opinions.

its presence in the market.[16] Any analysis of this transaction needs, therefore, to recognize Comcast/NBCU's unique position and incentives to engage in anti-competitive conduct while, as argued by Israel and Katz, nascent online video programming is still largely complementary to MVPD services.

19. Indeed, if viewing a program online and through traditional channels are complements, in that watching clips online reinforces the fan and builds the audience for the MVPD program, then incentives to favor ones' own content could be particularly acute. This is because the price paid by advertisers tends to be *convex* with the audience. That is, a program that garners double the ratings will command more than double the advertising price for a given slot. In particular, "must see TV" commands a large premium.[17] It is particularly noticeable that the pricing for top rated programming commands a significant premium even though the absolute share of the audience held by top rated shows has fallen over time. Thus, if by favoring affiliated programming online through high quality distribution (e.g., less jitter, high quality images, etc), Comcast could improve the relative rating of NBCU programming then the returns could

[16] For example, owned vs. un-owned, affiliate vs. unaffiliated, MVPD vs. online video programming.

[17] See, for example, Ronald Goettler "*Advertising Rates, Audience Composition, and Competition in the Network Television Industry,*" Carnegie Mellon GSIA WP #1999—E28.

be significant. Significantly, Comcast, as the largest MVPD in the country, is the most likely to benefit from this behavior of its broadband offerings.

20. In a world with a plethora of broadband providers to choose from, this threat may not be a concern. However, the changing nature of competition in this industry should be a consideration of the highest priority given the industry's unique structure. Currently, most consumers of traditional MVPD services have a choice between a single cable provider, a couple of satellite providers, and possibly other specialty providers such as AT&T U-verse (a DSL provider with over 2 million users) or Verizon FiOS (a high-speed cable system with over 3 million users).[18,19]

21. As the nascent market for online video distribution and programming continues to grow, and "whenever/wherever" programming becomes more prevalent, cable distribution of traditional MVPD services will have a significant competitive advantage relative to other platforms. Satellite providers may be disadvantaged because they can offer only television programming without the additional complementary online content provision that cable can "bundle" in. DSL providers also will be disadvantaged because they do not have the capacity to provide multiple

[18] Chuang, T. "AT&T U-Verse Hits 2 million Users Today, no O.C. updates", OCregister.com, (12/9/09).

[19] O'Neill, J. "Verizon Earnings Tumble, but FiOS Growth Continues, Topping 3 Million", fierceiptv.com, (4/22/10).

simultaneous high-definition streams to a household.[20] As such, consumer choice in many markets across the U.S. may become more and more limited to a single cable service provider.[21]

22. Ideally from the consumer's point of view, online video content would become a truly competitive force in the market. To do so, two underlying conditions must be met. First, for consumers to be sovereign they must have the ability to divorce online services and programming from the traditional MVPD platform without restriction in content. This point has already been made in the current proceedings, and is addressed by Israel and Katz in some detail. Second, and the main focus of this analysis, online video content must not be discriminated against, in part or in whole, in terms of distribution and distribution quality, so that it is a truly equal-quality substitute in the market.

23. The market is moving in this direction in interesting ways. In particular, consider a product like Slingbox, which enables consumers to watch the video content from the MVPD that they subscribe to over any broadband connection. Although the original intent of Slingbox was to enable a subscriber to watch their preferred subscription programs on the road, it essentially has broken the link between the programming package and the

[20] Katz and Israel make this point in their discussion of network congestion. "…telcos' standard DSL networks may lack sufficient bandwidth to individual households to support more than one high-definition video stream at a time.…" (Israel and Katz Report, p. 22 (5/4/10)).

[21] Or there may be two service providers in the limited large metropolitan markets where Verizon FiOS can compete on all these dimensions with the local cable station.

pipe. That is, one could subscribe to DirecTV's programming package and watch it at home over an Internet connection purchased from Comcast. Thus, a subscriber in a Comcast franchise area need not be limited to Comcast's MVPD offerings. This has the potential for further disintermediation and competition in the industry. Thus, the OVPD model may provide greater competition even for the pricing of existing MVPD programming bundles if open access is allowed. An independent ISP would of course not have any incentive to favor one source of packaged programming over any other, but allow the consumer to pick their most preferred package and vendor. In contrast, the vertically integrated Comcast/NBCU would have an incentive to favor its own offerings and packages.

24. This latter point is of particular concern in the current transaction for two reasons. First, Comcast has a history of discrimination in its Internet distribution that would limit the extent to which online video service and programming can become a truly competitive force in the marketplace. Second, the current transaction only serves to increase Comcast's incentives to engage in such activity, as it will now have a more natural set of content to promote (NBCU or NBCU-affiliated content), and a more natural set of content to discriminate against (all other content).

B. Comcast Has Historically Engaged In Anti-Competitive Behavior

25. Comcast has a history of degrading rivals' online products. On August 1, 2008, the FCC formally ruled that Comcast had illegally throttled BitTorrent traffic.[22] BitTorrent protocol was being utilized by several companies including Warner Bros., Viacom, PBS, and Paramount Pictures to distribute online media content. As the general counsel for Vuze, one of the initiators of the FCC inquiry, put it, "Comcast is a competitor to all of us who deliver high-quality video content."[23] Comcast also drew public scrutiny for purposely degrading signal quality in an attempt to find more economical ways to provide service.[24]

26. It has also been suggested that Comcast has selectively applied recompression to HDTV signals that would affect the viewing quality. The data on this issue as reported by the AVS Forum is reproduced below. [25]

[22] McCullagh, D. "FCC Formally Rules Comcast's Throttling of BitTorrent Was Illegal", CNET News, (8/1/08).

[23] McCullagh, D. "BitTorrent Firms: Comcast Throttling Is Anticompetitive", CNET News, (2/14/08).

[24] Williams, C. "Cable TV Under Fire for Degrading HD Quality", MSNBC.com, (4/21/08).

[25] *See* http://www.avsforum.com/avs-vb/showthread.php?t=1008271

TABLE 1:

Average bitrates were obtained by comparing the size of each recording, in total bytes, and dividing by the total number of seconds reported by VideoRedo. Multiplied by 8 to convert Mbps to Mbps.

Average Bitrates on FiOS v. Comcast

Code:

	FiOS	Comcast	Difference
AETV HD	18.66 Mbps	14.48 Mbps	-28.9%
Discovery HD	14.16 Mbps	10.43 Mbps	-35.8%
Discovery HD Theater	17.45 Mbps	12.60 Mbps	-38.5%
Food Network HD	14.32 Mbps	13.73 Mbps	-4.3%
HGTV HD	14.76 Mbps	12.43 Mbps	-18.7%
MHD	17.73 Mbps	13.21 Mbps	-34.2%
National Geographic HD	13.40 Mbps	11.92 Mbps	-12.4%
Universal HD	12.72 Mbps	11.01 Mbps	-15.5%
HBO HD	8.87 Mbps	8.81 Mbps	-0.7%
Cinemax HD	11.40 Mbps	10.77 Mbps	-5.8%
Starz HD	11.93 Mbps	9.76 Mbps	-22.2%
CNN HD		11.42 Mbps	
History HD		10.40 Mbps	
SciFi HD		12.59 Mbps	
USA HD		12.48 Mbps	

27. The above table suggests that Comcast, indeed, has the ability to selectively degrade online video content and has done so in the past. While this may have been done for legitimate network management reasons, post-merger Comcast will be operating with a new and powerful incentive to favor NBCU content over non-NBCU content in the online distribution channels.

28. On a forward-looking basis, absent more competitive choices, it would be difficult to monitor such discriminatory behavior and determine if it was motivated by legitimate network traffic management concerns. Even if a household were to successfully detect discriminatory behavior, the costs of

seeking recourse are too high for the household to bear individually.[26] EarthLink, and other independent ISPs, can collectively represent the interests of these households, allowing marketplace and consumer choice to discipline behavior, as discussed in Section VII.

29. In contrast, Time Warner Cable, which is subject to pro-competitive discipline from competitive ISPs, has not engaged in such behavior. In light of this, it is interesting to note that EarthLink's proposed pro-competitive structural solution was implemented successfully in the AOL/Time Warner merger, as discussed in detail below.

IV. THE ROLE OF REGULATION AND ANTITRUST IN NASCENT MARKETS

30. From a regulatory and antitrust perspective, the proposed transaction would cause a substantial change in the structure of the relevant markets. Because of the nascent nature of the market for online video distribution and programming, this change in market structure would fundamentally change the future course of this market. As a result, the transaction may affect consumer behavior by stifling the emergence of online video and foreclosing online video as a substitute service.

31. Traditional MVPDs have every incentive to try to appropriate as much of the emerging market as possible. Given this overall strategy by industry players, the presence of substantial barriers to entry means that the

[26] For example, individual households could seek recourse in the form of litigation for punitive or injunctive relief.

evolution of the market structure during the nascent phase of these markets will have its effects magnified over time. Development and guidance of the market structure at this critical moment in the evolution of these markets will determine long-run performance. Once the "eggs are scrambled" by the joint venture, regulatory and antitrust enforcement will only become more difficult, for example, in the (likely) later event that Comcast seeks to acquire the remaining portion of NBCU.[27]

32. If one accepts the current case of the complementary nascent market for online video services and programming, Comcast's obvious strategy is to (1) channel the growth and development of online video distribution toward complementary product positioning, which will help to protect its current profit margins by managing any direct competition in the marketplace, and (2) restrict access to the content they can control and/or discriminate against the content they can't control.

33. Israel and Katz conclude that the nascent nature of the complementary markets for online video distribution and programming means that the Commission should proceed with great caution, if at all, regarding any structural or regulatory measures designed to mitigate anti-competitive

[27] Further, from day one of the transaction, Comcast has majority ownership and makes the decisions for NBCU. It can be expected to use that control to maximize Comcast's private interests. As a sophisticated conglomerate, GE knows what it is getting into as a minority investor and will be compensated for the sale of control. No regulator should reasonably rely upon Comcast being restrained from acting in its self interest based on a perceived legalistic "duty" to GE, as suggested by Israel and Katz.

effects.[28] I disagree. In fact, the nascent nature of the markets makes it more—not less—important for the Commission to take actions to prevent likely anti-competitive effects.

34. Whether online video programming is a complement or substitute to MVPD services, the merger will cause permanent changes in the evolution of markets for online video distribution and programming, and there is a substantial likelihood that online video programming will become a substitute to MVPD services. This is true especially given that the likely anti-competitive effects have been a standard practice of a party to the transaction in the past. Once the transaction has been approved, Comcast's incentive to continue with, or even increase, its anti-competitive behavior will certainly not decrease.

V. Application of the Commission Staff Model

35. These conclusions, and my fundamental disagreement with Israel and Katz, are based on economic rationality, but I note that they are not inconsistent with the Commission Staff model for several reasons. First, Israel and Katz readily acknowledge that critical parameters in the Commission Staff model are highly uncertain. The reliability of these parameters is the basis for the Israel and Katz conclusion that the proposed transaction will not harm consumer welfare. It must also follow, then,

[28] Israel and Katz place great weight on the current joint venture structure of the proposed Comcast/NBCU transaction. In particular, they use that current ownership structure to argue that it limits Comcast's incentives to engage in exclusionary conduct.

from the same uncertainty surrounding the parameters that there is a substantial probability that the proposed transaction will harm consumer welfare.[29] Given this uncertainty, as well as the nascent nature of the relevant markets, the prudent regulatory and antitrust policy is for the FCC to take a cautious approach and explore remedies that would effectively eliminate those albeit uncertain outcomes that would be harmful to consumer welfare.

36. It is also worth noting that Israel and Katz fail to examine an important issue in the transaction: the competitive implications of bundling by Comcast, i.e., bundling its MVPD video service with its cable Internet service, as in "Fancast Xfinity." They merely state: "In order for a household to view video programming delivered over the Internet, the household must purchase Internet access."[30] As discussed below, however, the ability (or inability) to bundle services will affect the structure of the market significantly.[31]

37. In light of these issues, it is difficult to rely too heavily or exclusively on the results presented by Israel and Katz based on the Commission Staff model. EarthLink has proposed an additional low-cost structural remedy for the Commission to consider in conjunction with the Israel and Katz

[29] This is true even assuming, *arguendo*, the basic analysis used by Israel and Katz is correct.

[30] Israel and Katz Report, p. 3 (5/4/10).

[31] At its most basic level, of course, this will affect whether and how soon consumers begin to view online video services and programming as a competitive substitute to the traditional MVPD format.

results, which more specifically addresses the issue of Comcast's incentives to discriminate in terms of online content distribution. I turn to an analysis of this proposed remedy in Section VII.

VI. MERGER IMPACT ON PRICING

38. Mixed bundling, selling a bundle of services at a price below the sum of the prices of the individual service components, "is an extremely effective means of indirectly price discriminating."[32] Mixed bundling is also indicative of market power (*e.g.,* as seen in the bundling practices of Microsoft Office) and is a common strategy in this industry where "triple play" packages for provision of video, voice and broadband Internet are prevalent.

39. The merger of NBCU and Comcast must have an impact on pricing. Consider the price of stand-alone broadband access from Comcast today. In setting the current price, Comcast balances lost revenues from higher stand-alone prices (which some consumers will choose not to buy at the higher price) with the added revenues from customers with higher profit bundled services.[33] Therefore, at the margin, the post merger Comcast entity will have the incentive to raise the price of stand-alone broadband service absent other competitive pressures.

[32] R. Preston McAfee *"Competitive Solutions: The Strategists Toolkit,"* Princeton, 2002, p. 277.

[33] However, post merger, Comcast will now have a higher profit margin on customers who choose the bundle due to the increased number of subscriptions to NBCU channels.

40. In particular, consider the case of two products, "cable" and "broadband" both of which have a marginal cost of zero, (this is just a normalization). Suppose that consumers have a reservation vale for each broadband service, x and cable service, y, with a joint distribution *F(x,y)* with density *f(x,y)*. The monopolist optimal mixed bundling prices ($p^*_x, p^*_y\ p^*_b$) satisfy the condition that for an increase in the price of broadband, p^*_x, by ε, it must be that $-Ap^*_x + B\varepsilon + C(p^*_b - p^*_x) = 0$ where A is the measure of the set of customers who drop broadband service, B is the measure of those remain just with broadband, and C is the measure of the set who switch to the bundle. Now consider a MVPD broadband provider is vertically integrated with an advertising supported programming channel, and obtains and increase in advertising revenues from the programming entity of δ per video subscriber. Then, we now have the impact of increasing the price of broadband by ε, is: $-Ap^*_x + B\varepsilon + C(p^*_b - p^*_x + \delta) = C\delta > 0$. Thus, it will be profitable for the vertically integrated firm raise price above the optimal price of the un-integrated firm. The size of this effect depends on C and δ. Thus, the larger the footprint of the MVPD MSO and the larger the holdings of the programming entity the greater this effect will be.

41. Sufficient competitive choices, such as an independent ISP like EarthLink could provide, would mitigate the harm to consumers who wished to remain with a stand-alone broadband provider at the old prices. This is

because the availability of sufficient neutral provider choices would serve to discipline Comcast's ability to raise prices.

VII. EARTHLINK'S PROPOSED STRUCTURAL REMEDY IS PRO-COMPETITIVE

A. Proposed Structure

42. EarthLink has proposed that the Commission apply the same remedy used in the AOL/Time Warner merger, namely that "[Comcast/NBCU] shall not restrict the ability of any current or prospective ISP customers to select and initiate service from any unaffiliated ISP which, pursuant to a contract with [Comcast/NBCU], has made its service available over [Comcast/NBCU's] cable facilities ("Participating ISP"). [Comcast/NBCU] shall allow customers to select a Participating ISP by a method that does not discriminate in favor of [Comcast/NBCU's] affiliates on the basis of affiliation," as well as other billing, technical, contracting and enforcement provisions the Commission provided in its remedy for the AOL/Time Warner merger.[34]

43. The FTC adopted certain non-discrimination requirements for the EarthLink agreement. These included: "A. Respondents shall not interfere in any way, directly or indirectly, with Content passed in either direction along the Bandwidth contracted for and being used by any Non-affiliated ISP in compliance with the Non-affiliated ISP's agreement with Respondents;" and "D. Respondents shall not discriminate on the basis of affiliation in the

[34] *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., to AOL Time Warner Inc.*, Memorandum Opinion and Order, 16 FCC Rcd. 6547 (2001).

transmission or modification of Content that Respondents have contracted to deliver to Subscribers over their cable systems."[35]

B. Rationale for Proposed Structure

44. The structural solution proposed by EarthLink ensures that, if Comcast engages in discriminatory activity that degrades consumer welfare, consumers will have the option to switch to another ISP that does not have the same incentives to discriminate against specific content because they do not have the same content-integrated structure as the Comcast/NBCU entity. In other words, consumers will have the ability to use the same infrastructure to download the same content without having to worry about whether some content will be purposefully delayed or degraded. Having independent ISPs on their network, which will allow consumer choice, will discourage Comcast from engaging in deceptive network management practices similar to the BitTorrent activity because independent ISPs are less likely to be complicit. Regardless of whether particular online video *content* is a substitute or a complement in relation to Comcast/NBCU broadcast and/or cable products and/or service, the provision of Internet service by an independent ISP is *always a substitute* for the provision of Internet service by Comcast.

[35] America Online, Inc. and Time Warner Inc., FTC Docket No. C-3989, Decision and Order, File No. 001 0105, 11 (FTC) (proposed Dec. 14, 2000).

45. Moreover, because these competitor ISPs do not own the major content sources such as Comcast combined with NBCU, they will not have incentive to discriminate against the same content as Comcast. Furthermore, ISPs such as EarthLink with no owned content will not have an incentive to discriminate at all. Instead, they will try to provide the best service they can in an attempt to be competitive. Secondly, because they are independent and do not own traditional broadcast or MVPD distribution channels, they have no incentive to favor one distribution channel over another.

46. This remedy mitigates the potential harm to consumers by ensuring they will have a choice of ISPs, even if they choose to use Comcast's cable TV and/or voice service. Allowing consumers to "break the bundle" if they so choose promotes competition and disciplines Comcast pricing of Internet service provision. On a forward-looking basis as noted above, this may become even more of an issue as cable modem speeds improve over DSL. Sufficient competition may not be offered by DSL competitors due to bandwidth constraints and, thus, may not be considered a disciplining alternative. Thus, the competition provided by Verizon FiOS (for consumers in those geographic markets where FiOS is deployed), or possibly over-builders who have also deployed a fiber or hybrid fiber/coax network, are likely the only competition that exists in the relevant product

market. So the question remains: will the limited geographic scope and depth of this competition be enough to constrain the possible harms?

47. This remedy has the added benefit of indirectly encouraging the further development of online video programming by "leveling the playing field." By making it difficult for content-integrated ISPs to discriminate against non-affiliated programming, this solution will promote the growth and health of these programmers, giving consumers more diversity in online content. This will put pressure on Comcast to continue to invest in, and expand, their broadband network. It will also diminish the incentive of Comcast/NBCU to paralyze online video programming with unaffiliated content, as there would be a real marketplace "penalty" imposed upon them by upset customers who will switch to another ISP.

48. In a nascent market, the Commission should move with a not undue preponderance of caution, recognizing the gravity of their actions in creating long term structural shifts in the market for online video programming. The costs of denying or regulating the proposed merger must be outweighed by the perceived benefits to consumers in terms of increased competition, choice, and quality. For the online video services and programming market, the EarthLink proposal passes this cost/benefit test. The costs are minimal, requiring only a pro-competitive structural arrangement. Moreover, Comcast would still make a profit even when a consumer uses EarthLink, as EarthLink would still pay a wholesale rate to

Comcast for the service. On the other hand, the expected potential benefits of allowing for a market-based correction mechanism to prevent Comcast/NBCU from engaging in anti-competitive behavior are large.

C. History of AOL/Time Warner Condition

49. The condition imposed in 2000 required that the parties negotiate in good faith for commercial contracts with three unaffiliated ISPs. As a condition of the merger closing, a commercial arrangement had to be reached with EarthLink. Since then, ten years have passed in which to examine if the condition has had any adverse side effects on investment or competition. As a threshold matter, it is worth pointing out that AOL/Time Warner is vertically integrated and has not been found to be engaging in the discriminatory practices that it has been alleged Comcast engaged in.

50. In Table 2 below, I present data on investment since 2001 for Comcast and Time Warner. As can be seen both on a per-subscriber basis and as percentage of revenues, Time Warner has invested more in its network than Comcast. This is true even though Time Warner was subject to the FCC access rules for 6 years and then voluntarily agreed to renew them on a negotiated basis.

TABLE 2:

Cable Infrastructure Expenditures

(in Millions, except subscribers)

MVPD Service Providers	Basic Video Subscribers [1]	2001-2009 Subscription Revenues	2001-2009 Capital Expenditures	Expenditure per Subscriber	Expenditure % of Revenues
Comcast Corporation	23,559,000	$165,550	$35,394	$1,502	21.4%
Time Warner Cable, Inc.	12,859,000	$94,438	$21,526	$1,674	22.8%

[1] As of Dec. 2009.

Source: http://www.ncta.com/Stats/TopMSOs.aspx
Comcast 10-K 2001, 2003, 2006, 2007, 2009
Time Warner Cable 10-K 2006, 2007, 2009
Time Warner Inc. 10-K 2002, 2003

51. Similarly, the presence of the AOL/Time Warner condition has not adversely affected costs and pricing, as Time Warner Cable stand-alone Internet pricing is actually lower than the comparable service of Comcast.[36] This is shown in Table 3.

[36] I compared Time Warner pricing for the Los Angeles area to pricing offered by Comcast for the closest comparable area, San Jose. Time Warner pricing is for the first 12 months of service. Subsequent pricing information was not made available on their website.

TABLE 3:

Standalone Cable Internet Monthly Pricing[1]

Time Warner Cable (Los Angeles)		Comcast (San Jose)	
Speed	**Price**	**Speed**	**Price**
up to 1.5Mbps	$29.99	up to 1.5Mbps	$43.95
up to 15Mbps	$49.99	up to 15Mbps	$62.95

[1] Includes monthly modem rental.

Source: www.timewarnercable.com
www.comcast.com

52. This is surprising. Given the higher degree of vertical integration in comparison to Comcast, I would expect higher pricing for stand-alone Internet service from Time Warner, as explained in Section VI. The above is consistent with the hypothesis that the AOL/Time Warner condition is pro-competitive.

53. Thus, the evidence suggests that AOL/Time Warner condition has essentially imposed no social costs and provided consumers with greater choice. In this case, it remains a very low cost (possibly a zero cost) option that provides protection against the putative harms identified above.

D. Implementation

54. The viability of the mechanism implemented in the AOL/Time Warner merger depends on the wholesale pricing for access to the cable provider's

infrastructure allowing for competitive entry of alternative ISPs. In other words, Comcast must not be able to create a "price squeeze" that makes entry impossible. In AOL/Time Warner the condition required that the three commercial contracts with independent ISPs be negotiated in order for the merger to be approved. This incentive to strike a deal on commercially viable terms provided pressure to thwart a price squeeze, at least at the outset.

55. However, even absent these pressures, it would be easy to benchmark what are reasonable terms based on industry practices. In particular, as EarthLink already has a commercial contract with Time Warner, a market benchmark has been established. This could be used in an arbitration proceeding following the FCC arbitration mechanism for programming that has been applied both in the News Corp./DirecTV transaction and the Adelphia/Comcast transaction.

56. Secondly, EarthLink has an industry benchmark in the case of wholesale sale of special access circuits. In particular, it has been common for special access pricing to be a 40% discount off the rack price if one signs a long term (5 year) contract. Thus, as the proposed condition is also for long term access, a natural benchmark would be 40% of the retail price.

57. A third approach is following a so-called "imputation test." That is, we could infer that the incremental cost of offering broadband is less than the incremental price of adding it to bundle and, thus, if we take this number

and subtract the avoided cost for ISP services and managing the customer relationship, then we can obtain an imputed cost which forms a reasonable basis for benchmarking a price. This approach, of course, ensures that Comcast cannot exploit an indirect price squeeze through the difference between the bundle pricing and the standalone broadband price offering.

VIII. CONCLUSION

58. Based on the foregoing analysis, it is clear that the proposed Comcast/NBCU transaction will provide the post-merger Comcast with strong incentives and abilities to interfere with emerging online video services and affect broadband pricing in a manner that is harmful to consumer welfare. EarthLink's proposed structural remedy as a condition of merger approval will be a low-cost and effective mechanism to improve significantly the public welfare results of the Transaction.