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Admitted in the District of Columbia

November 8, 2010

Via ECFS

Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Room TW-A325
Washington, DC 20554

Re: American Cable Association (“ACA”) Notice of Ex Parte Filing; *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licenses*; MB Docket No. 10-56.

Dear Ms. Dortch:

On October 25, 2010, Comcast Corporation submitted an economic study by Drs. Mark Israel and Michael L. Katz¹ (“Israel Katz II”) responding to certain arguments made by American Cable Association’s economic expert, Dr. William P. Rogerson during the Commission’s economist workshop regarding the calculation of savings from the reduction or elimination of double marginalization.² The attached filing, authored by Dr. Rogerson, responds to the analysis contained in Israel Katz II and calculates the magnitude of the consumer harms previously identified by Dr. Rogerson.³ In particular, Professor Rogerson discussed his findings as to the magnitude of net horizontal consumer harms the proposed

¹ Letter from Michael H. Hammer, Counsel for Comcast Corporation, to Marlene H. Dortch, Secretary, FCC, *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licenses*; MB Docket No. 10-56.

² See Letter from William D. Freedman, Associate Chief, Media Bureau, to Marlene H. Dortch, Secretary, FCC, , *In the Matter of Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. for Consent to Assign Licenses or Transfer Control of Licenses*, MB Docket No. 10-56 (Aug. 30, 2010) (summarizing economist workshop).

³ Dr. Rogerson’s previous studies submitted in this docket are attached to ACA’s Comments filed June 21, 2010 and its Reply filed Aug. 19, 2010. See *In the Matter of Applications of Comcast Corporation, General Electric Company, and NBC Universal, Inc., to Assign and Transfer Control of FCC Licenses*, MB Docket No. 10-56, Comments of the American Cable Association (filed June 21, 2010) (“ACA Comments”), Exhibit A, William P. Rogerson, “Economic Analysis of the Competitive Harms of the Proposed Comcast-NBCU Transaction” (“Rogerson I”); Reply of the American Cable Association (filed Aug. 19, 2010) (“ACA Reply”), Attachment A, William P. Rogerson, “A Further Economic Analysis of the Proposed Comcast-NBCU Transaction” (“Rogerson II”).

transaction poses for subscribers of MVPDs who purchase “must have” programming assets owned by the Applicants and the net vertical consumer harms for subscribers of those MVPDs who both purchase Comcast-NBCU programming and compete in downstream distribution markets with Comcast.

Professor Rogerson also detailed his analysis of the quantifiable cost reductions Comcast could expect post-transaction, which shows that Comcast has vastly overestimated the savings that it will realize through joint ownership of NBCU programming assets. Even taking account of the factors Comcast’s economic experts have identified arising from savings resulting from the reduction of double marginalization, the savings, and consequently any potential consumer cost reductions, are swamped by the quantifiable vertical and horizontal consumer harms resulting from the transaction that ACA has identified.

The significant results Professor Rogerson reported from his third study indicate that:

- the combination will result in \$2.4 billion in net consumer harms over a 9 year period;
- the quantifiable consumer harms of the transaction (\$2.57 billion) are more than 10 times greater than the quantifiable consumer benefits (\$204 million) claimed by the Applicants;
- the horizontal harm (\$1.14 billion) is nearly as great as the vertical harm (\$1.43 billion);
- failure to bring NBCU national cable programming networks within the scope of license transfer conditions would leave a sizeable portion of transaction-specific harms (\$1.56 billion) unremedied; and
- the quantifiable consumer harms of the transaction will be felt by consumers across the county, but especially so in Philadelphia, PA, Chicago, IL, San Francisco, CA, Washington, DC, and Hartford, CT, which are served by both an NBC O&O and Comcast RSN, and Comcast has a significant cable presence.

If you have any questions, or require further information, please do not hesitate to contact me directly. Pursuant to section 1.1206 of the Commission’s rules, this letter is being filed electronically with the Commission.

Sincerely,



Barbara S. Esbin

Enclosure

**AN ESTIMATE OF THE CONSUMER HARM THAT WILL RESULT FROM THE
COMCAST-NBCU TRANSACTION***

November 8, 2010

by

William P. Rogerson**

* **Prepared for the American Cable Association.**

** **Professor of Economics, Northwestern University. FCC Chief Economist, 1998-99.**

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I. INTRODUCTION AND SUMMARY

The Comcast-NBCU transaction will result in competitive harm to consumers because it will allow Comcast-NBCU to raise programming fees to other multichannel video programming distributors ("MVPDs") and these fee increases will be substantially passed through to subscribers in the form of higher subscription prices. In two previous reports filed in this proceeding (Rogerson I and Rogerson II),¹ I described two different theories of competitive harm - a theory of vertical harm and a theory of horizontal harm - that provide two different reasons why the transaction will result in higher programming fees. These reports provided dollar estimates of the likely magnitude of increases in programming fees that will result, depending on both the type of programming being purchased and type of MVPD purchasing the programming. This report (Rogerson III) will provide an estimate of the total annual increase in programming costs that will result from the transaction by multiplying the estimated fee increase for each programming/MVPD pair by the number of affected subscribers, and then summing across all programming/MVPD pairs. Since these cost increases will be substantially passed through to subscribers in the form of higher subscription prices, this can be interpreted as a measure of the total consumer harm that will result from the transaction.²

¹See "William P. Rogerson, "Economic Analysis of the Competitive Harms of the Proposed Comcast-NBCU transaction," June 21, 2010, ("Rogerson I"), *In the Matter of Applications for Consent to the Transfer of Control and Licenses, General Electric Co. Transferor, to Comcast Corporation, Transferee*, MB Docket No 10-56 ("Comcast-NBCU Proceeding"), and William P. Rogerson, "A Further Economic Analysis of the Proposed Comcast-NBCU Transaction," August 19, 2010, ("Rogerson II"), Comcast-NBCU Proceeding.

²There are two countervailing factors affecting the relationship between the total increase in programming fees paid by MVPDs and the total increase in consumer subscription payments, which is the correct definition of consumer harm. First, to the extent that not all programming fees are passed through to consumers, total consumer harm will be less than the total increase in programming fees paid by MVPDs. However, when Comcast raises the programming fees it

According to this report's estimate, the vertical competitive effects of this transaction will result in consumer harm of \$176.5 million per year and the horizontal competitive effects of this transaction will result in consumer harm of \$140.3 million per year for a total consumer harm of \$316.8 million per year. Over a nine year period (which is the amount of time that the ACA recommends that conditions be applied) the total discounted present value of consumer harm will be \$2.6 billion.³

Of course the potential consumer harm of this transaction needs to be weighed against its potential consumer benefit in order to arrive at an assessment of the net effect of the transaction on consumers. The important point to note in this regard is that, while Comcast-NBCU and its economic experts have asserted that the transaction will produce a wide variety of different benefits, the only benefit that they have even attempted to provide any quantitative estimate for is the benefit of reduced double marginalization.⁴ In Rogerson II, I showed that their calculation of the magnitude of this benefit was incorrect because of a basic error in economic reasoning and that, when this error was corrected, the magnitude of the benefit of reduced double

charges to some MVPDs in a market, this will provide "headroom" for other MVPDs in the market who are not subject to programming fee increases, including Comcast itself, to raise their own subscription prices. Because of this factor, the total increase in customer payments may actually be larger than the total increase in MVPD programming fees. Given that there are two countervailing factors, it is reasonable to interpret the total increase in programming fees as being an approximate measure of the total consumer harm.

³The harm is calculated using an interest rate of 5%. Since the annual fee increase should be expected to increase with the rate of inflation, the appropriate discount rate to use is the real discount rate and 5% is a relatively high value to use for the real interest rate. The resulting net present value figure can therefore be interpreted as a conservative estimate.

⁴See Gregory L. Rosston, "An Economic Analysis of Competitive Benefits from the Comcast-NBCU Transaction," May 4, 2010, Comcast-NBCU Proceeding ("Rosston (May 4, 2010)"); and Mark Israel and Michael L. Katz, "Economic Analysis of the Proposed Comcast-NBCU-GE Transaction," July 20, 2010, Comcast-NBCU Proceeding, ("Israel Katz I").

marginalization is very small. In a subsequent report,⁵ Comcast-NBCU's economic experts acknowledged this error in their initial report, but argued that the benefit of reduced double marginalization might still be non-trivial if the effects of two previously unconsidered factors were included in the calculation. In this report I will explain why the two new factors identified make very little difference to the harm calculation. I show that, even considering these two new factors, a reasonable estimate of the annual dollar benefit that the transaction will create due to reduced double marginalization is \$25.2 million per year with a present discounted value over nine years of \$204.1 million. Because the present discounted value of the consumer harm of the transaction over this same period is \$2.6 billion, this means that the harm of this transaction is more than ten times as large as the benefit. The present discounted value of the net consumer harm of the transaction, calculated by subtracting the benefit from the harm, is \$2.4 billion.

The paper is organized as follows. Section II provides a brief overview of the transaction and the two theories of harm. Section III calculates the estimated annual increase in total programming fees due to the vertical competitive harm. Section IV calculates the estimated annual increase in total programming fees due to the horizontal competitive harm. Section V sums the two together to yield the total estimated annual increase in programming fees and then calculates the discounted present value of the total annual increase over a 9 year period. Section VI considers the arguments that Comcast-NBCU's economic experts have raised in an attempt to resurrect their claim that the transaction will produce significant quantifiable consumer benefits and shows why these arguments are unconvincing. Section VII provides a calculation of the quantifiable consumer benefits that the transaction could reasonably be projected to produce and

⁵See Mark Israel and Michael L. Katz, "Response to Professor Rogerson's Comments on Double

Section VIII then subtracts the projected benefits of the transaction from the projected harms to calculate the projected net consumer harm from the transaction. Section IX draws a brief conclusion.

II. OVERVIEW

In this section I will provide a very brief overview of the nature of the transaction, the lines of business of the two parties to the transaction, and the nature of the two theories of harm. Readers interested in more detail should refer to my two earlier reports. Under this transaction Comcast will essentially take over NBCU to form a single company which I will refer to as Comcast-NBCU.⁶ The transaction involves two vertically related industries - the upstream MVPD programming industry, which provides the networks that are carried by MVPDs, and the MVPD industry, which distributes these networks to consumers. NBCU operates only in the upstream programming industry and is a major participant in this industry. Its most significant programming assets consist of ten NBC owned and operated (O&O) local broadcast television stations, which control retransmission consent for their signals in the designated market areas (DMAs) in which they operate,⁷ and a large number of the most popular national cable networks,

Marginalization,” October 25, 2010, Comcast-NBCU Proceeding (“Israel Katz II”).

⁶The actual transaction is slightly more complicated than a simple merger. In particular, Comcast and GE, which owns NBCU, will form a joint venture that includes all of NBCU’s lines of business and all of Comcast’s programming business. This joint venture will be 51% owned by Comcast and 49% owned by GE, and be managed by Comcast. Comcast will retain 100% ownership of its cable business. However, as discussed in detail in Rogerson I (footnote 6 on page 3 and the discussion on pages 18-20), the economic effects of the transaction will be essentially the same as those that would occur under a simple merger. Therefore, for purposes of simplifying the discussion in this paper, I will speak of the transaction as though it was a simple merger.

⁷At the moment NBCU does not negotiate retransmission consent agreements on behalf of its independently owned affiliates. For purposes of calculating the consumer harm from the

including USA (1),⁸ Syfy (18), Bravo (22) and MSNBC (26), mun2, Oxygen and CNBC.

Comcast is a significant participant in both the upstream programming and downstream distribution industries. Comcast's most significant programming consists of nine regional sports networks (RSNs). In the downstream MVPD industry, Comcast is the largest cable operator in the country, providing service to 23.8 million customers in 39 states.

Comcast and NBCU each possess significant amounts of market power because of the video programming assets they own. The Commission itself has repeatedly concluded that the signals of the "Big 4"¹⁰ network local broadcast stations and RSNs are "must have"¹¹ programming and that this conveys considerable market power to the owners of this programming. As I argued in my previous reports,¹² because the block of NBCU's national cable networks has very comparable ratings to those of a Big 4 broadcast network, this suggests that this suite of programming, considered as a single block, is also "must have" programming, and that NBCU has significant market power with respect to this block of programming.

transaction I assume that NBC affiliates will continue to independently negotiate their own retransmission consent agreements, which means that the competitive harms of the transaction on retransmission consent fees are restricted to the NBC O&Os. If NBCU began to negotiate retransmission consent deals on behalf of its affiliates, the competitive harm would spread to all local NBC broadcast stations and the total consumer harm would be much larger.

⁸The Nielsen prime time ranking is reported in brackets for networks in the top 30. Rankings for the week of March 8-14, 2010. See Kevin Allocao, *Cable Network Rankings*, TVNEWSER, March 16, 2010, "*Cable Network Rankings (2010)*". Available at: http://www.mediabistro.com/tvnewser/ratings/cable_network_rankings_fnc_2_msnbc_26_cnn_32_hln_37_in_prime_155302.asp.

¹⁰The "Big 4" broadcast networks are NBC, ABC, FOX, and CBS.

¹¹ That is, if this programming was withheld from an MVPD, it would have a competitively significant effect on the MPVD through a material loss of customers.

¹²See Rogerson I at pages 9-10.

The transaction combines ownership of NBCU's "must have" programming (its ten NBC O&Os and its block of highly-rated national cable networks) with Comcast's "must have" programming (its nine RSNs) and its cable business. From an economic perspective, this means that we can view this transaction as really consisting of two different parts. The first part of the transaction is the vertical combination of NBCU's "must have" programming with Comcast's cable television distribution business. The second part of the transaction is the horizontal combination of NBCU's "must have" programming with Comcast's "must have" programming. Each of these parts of the transaction creates a different type of competitive harm. The vertical competitive harm is that combined ownership of NBCU's "must have" programming and Comcast's cable business will enable Comcast-NBCU to raise the fees it charges to MVPDs that compete with Comcast for NBCU programming, and these fee increases will be largely passed through to consumers in the form of higher subscription prices. The horizontal competitive harm is that combined ownership of NBCU's and Comcast's "must have" programming will increase Comcast-NBCU's market power over this programming and allow it to raise programming fees to all MVPDs that purchase the programming and these fee increases will be passed through to subscribers in the form of higher subscription prices.

III. CALCULATION OF THE VERTICAL CONSUMER HARM

The MVPDs that compete with Comcast's cable distribution systems can be divided into two groups. The first group consists of the four MVPDs with a national presence - the two DBS providers, DirecTV and Dish, and the two national telcos, AT&T and Verizon. I will refer to these as the "national MVPDs." The second group consists of regional cable overbuilders. In this section I will restrict myself to calculating the total programming cost increase that the

transaction will cause for the national MVPDs.¹³ I will calculate the cost increase for each of the ten local NBC O&O's and for the block of NBCU national cable networks and sum these together to yield the total programming cost increase.¹⁴

For each type of programming, the total cost increase is equal to the fee increase multiplied by the number of affected subscribers. In my previous reports¹⁵ I showed that the formula for calculating the fee increase that the transaction will cause is given by

$$\Delta P = \alpha d \pi / 2 \tag{1}$$

where ΔP denotes the monthly fee increase, π denotes the monthly profit that Comcast earns on a single cable subscriber, d denotes the fraction of customers that will leave the MVPD if the

¹³This simplifies the calculation without significantly altering the result. Since a vastly greater number of subscribers are served by the four national MVPDs than by the regional cable overbuilders that compete with Comcast, the total fee increase paid by all MVPDs that compete with Comcast would not likely be much higher than the estimate of the total fee increase paid by the four national MVPDs. Note however, that this does *not* in any way imply that the problems this transaction will create for regional cable overbuilders and their subscribers are trivial or unworthy of Commission consideration. First, cable overbuilders may well exert significant competitive discipline in the markets in which they operate and this effect will be diminished to the extent that their programming costs increase and they become less competitive. Second, dollar magnitudes that appear “small” at the national level can still be extremely significant at the local level where the effects occur, and part of the Commission’s mandate is to consider such regional effects. Third, the programming cost increases can be larger for cable overbuilders than the national MVPDs to the extent that Comcast serves a higher percentage of the cable overbuilders’ footprint.

¹⁴Note that there is no vertical harm for RSNs. This is because Comcast already owns the RSNs and therefore any competitive harm caused by the joint ownership of the Comcast RSNs and Comcast’s cable business already exists prior to the transaction. In this report I only consider harms caused by the transaction.

¹⁵See Rogerson I at page 29.

programming is withdrawn, and α denotes the fraction of switching customers that will choose Comcast as their new MVPD. I argued that a plausible value of π is \$42.98 and that a plausible value of d for the NBC signal or for the block of NBC networks is .05.¹⁶ Substituting these values into equation (1) yields

$$\Delta P = \alpha \times \$1.07 \quad (2).$$

Finally, I also explained¹⁷ that for any of the four national MVPDs, that the formula for α is given by

$$\alpha = s_C / (1-s_R) \quad (3)$$

where s_C denotes the market share of Comcast and s_R denotes the market share of the rival MVPD. Substitution of (3) into (2) yields

$$\Delta P = \frac{s_C \times \$1.07}{(1-s_R)} \quad (4).$$

The total annual cost increase for any given type of programming is given by

$$H = 12 \times \Delta P \times N \quad (5)$$

¹⁶See Rogerson I at pages 30-31.

¹⁷See Rogerson I at pages 33-35.

where H denotes the annual cost increase (or harm), ΔP denotes the monthly fee increase and N denotes the number of subscribers.

According to equations (4) and (5), in order to calculate the total annual cost increase for any type of programming we need to know the market share of Comcast and the market share of the rival MVPD over the area where the programming is sold, and the total number of subscribers for the programming. The necessary data to calculate H for the ten NBC O&Os and the block of NBCU national cable networks is provided in Tables 1 and 2.¹⁸ Table 1 provides MVPD subscribership data for the 10 DMAs served by an NBC O&O broken down into the following categories: Comcast, Other Cable, Total Cable, DirecTV, DISH, Verizon, AT&T, and Total. It also provides the same information for the country as a whole. Table 2 presents the same subscribership data for each type of service as a percentage of the total number of MVPD subscribers in the DMA. The DMAs are ordered from highest to lowest according to Comcast's market share.

First consider the block of NBCU national cable networks. Since these networks are sold over the entire nation, the relevant geographic area is the country as a whole. Table 3 presents the calculation. Each of the four rows presents the calculation for one of the four national MVPDs. The first column of the table gives the identity of the national MVPD being considered. The second column gives the value of Comcast's market share, s_C . This is the same for each MVPD and, from Table 2, is equal to .236. Column 3 gives the value of each MVPD's market share, s_R , which is also taken from Table 2. Column 4 gives the value of the monthly fee

¹⁸These tables were originally provided as Tables 1 and 2 in Rogerson I.

increase ΔP , calculated according to equation (4). Column 5 gives the number of subscribers for each MVPD, N , which is taken from Table 1. Finally, Column 6 reports the value of the total cost increase, H , using the formula in equation (5). The bottom row in column 6 reports the total cost increase. For each of the four national MVPDs the total cost increases are given by: DirecTV - \$69.6 million, DISH - \$51.5 million, Verizon - \$9.4 million and AT&T - \$7.2 million. The total increase summed across all four MVPDs is equal to \$137.7 million per year. This is the total programming cost increase for the NBCU national cable networks caused by the vertical aspect of the transaction.

Next, consider the ten NBC O&Os. The relevant geographic area for each NBC O&O is the DMA in which it provides service. Tables 4A, 4B, 4C and 4D present the calculation for each of the four different rival MVPDs. Each of the ten rows presents the calculation for one of the NBC O&Os. Column 1 gives the name of the DMA in which the NBC O&O operates. Column 2 gives Comcast's market share, which is taken from Table 2. Column 3 gives the rival's market share, s_R . Column 4 gives the fee increase, ΔP , calculated according to equation (4). Column 5 column gives the number of subscribers for each MVPD, N , which is taken from Table 1. Finally column 6 reports the value of the cost increase, H . The bottom row in column 6 reports the sum of the ten cost increases. For each of the four national MVPDs these are given by: DirecTV - \$19.7 million, DISH - \$9.8 million, Verizon - \$6.0 million, and AT&T - \$3.3 million. The total increase summed across all four MVPDs is \$38.8 million.

In summary then, the vertical aspects of the transaction will cause the annual cost of the NBCU national cable networks to increase by \$137.7 million and the annual cost of the NBC O&Os to increase by \$38.8 million for a total annual cost increase across all programming types

of \$176.5 million.

IV. CALCULATION OF THE HORIZONTAL CONSUMER HARM

The horizontal competitive harm is that combined ownership of NBCU's and Comcast's programming will increase Comcast-NBCU's market power over programming. Horizontal harm will occur in regions of the country where MVPDs currently purchase significant amounts of programming from both NBCU and Comcast. Recall that NBCU's most important programming is its block of national cable networks, which are sold nationally, and its ten NBC O&Os, each of which is sold in the DMA it serves. Comcast's most important programming consists of its RSNs, which are each sold in a different region of the country.^{18A} Therefore the horizontal harm will occur in all regions of the country served by one of the Comcast RSNs. The fees charged for the Comcast RSNs and the NBCU national cable networks will increase over these regions. In addition, to the extent that NBC O&Os operate in regions served by Comcast RSNs, the fees charged for retransmission consent of NBC O&Os will also increase.

In my previous reports I argued that the best available evidence suggests that combined ownership of multiple blocks of "must have" programming causes programming fees to increase by 22%.¹⁹ I will use this value for calculating the total increase in programming costs that will be caused by this transaction. I will consider each of the three major types of programming separately. The formula that I will use to calculate the total increase in programming costs for each type of programming is given by

^{18A}Comcast actually owns nine RSNs. However, two of them, CSN Southwest and CSN Southeast, appear to be less ubiquitously carried than the other seven. To err on the side of producing a conservative estimate of the harm, I will only calculate the harm caused by the seven more ubiquitously carried RSNs.

¹⁹See Rogerson I at pages 14-16.

$$H = 12 \times .22 \times f \times N \quad (6)$$

where H denotes the total annual cost increase (or harm), f denotes the currently monthly programming fee, and N denotes the number of non-Comcast subscribers to the programming that will be affected by the price increase. This formula is very intuitive. Since it assumed that fees will rise by 22%, the increased monthly fee per subscriber is simply equal to .22 multiplied by f. Multiplying by 12 provides the annual fee increase per subscriber. Then multiplying by the number of subscribers provides the total annual increase in programming costs. An important point to notice is that N is the number of non-Comcast subscribers to the programming, i.e., it is the number of subscribers to the programming that do *not* have MVPD service provided by Comcast. This is because Comcast will not purchase carriage of Comcast-NBCU programming in an arms length transaction and therefore will not necessarily be subject to any fee increases itself.²⁰

The cost increase for each type of programming can now be calculated. For each type of programming we need to determine the correct values of f and N to substitute into formula (6).

Tables 5 and 6 list the data that will be used to calculate the number of subscribers for each type of programming. Table 5 provides data from Bernstein Research²¹ on the total number of subscribers for each of the Comcast RSNs. To calculate the number of subscribers affected by

²⁰Of course the fact that all of its competitors are being charged more for programming will likely cause its competitors' prices to rise and thus provide Comcast's cable systems with "headroom" to raise their own prices. See footnote 2 for a further discussion of the significance of this point.

²¹See Bernstein Research, *Comcast: Enter the Peacock. We Don't Like the Deal, but We Do Like the Stock. Raise TP to \$20*, March 4, 2010, ("Bernstein Research (March 4, 2010)"), Exhibit 15, page 15.

fee increases for the various types of programming, it will be necessary to have finer breakdowns of the RSN subscriber data. That is, for all of the calculations it is, at a minimum, necessary to have RSN subscribership broken down according to whether the RSN subscriber receives MVPD service from Comcast or from some other MVPD. This is because the programming fee increases will only be directly experienced by MVPDs other than Comcast itself. Furthermore, for the case of retransmission consent fees for the NBC O&Os, it is also necessary to have RSN subscribership data separately for each of the DMAs served by an NBC O&O. Unfortunately, this further breakdown of the RSN subscribership data was not available. To compensate for this problem, I have obtained MVPD subscribership data broken down according to DMA and Comcast versus Non-Comcast subscribers for each of the DMAs served by any of the RSNs. This data is presented in Table 6. The shares according to which the MVPD subscribership is distributed across various categories as determined in Table 6 will then be applied to the total RSN subscribership data from Table 5 to estimate the RSN subscribership across various categories. The precise calculations used to calculate the number of RSN subscribers for each of the three types of programming considered will be described in more detail below.

First, consider the RSNs. In its recent analysis of the Comcast-NBCU transaction, Bernstein Research reported that the current average fee for Comcast RSNs is equal to \$2.29 per subscriber per month.²² Therefore I will assume that f is equal to this value. Bernstein Research also reported the total number of subscribers for each Comcast RSN, which totals 25.1 million, and is reported in Table 5. However, N is defined to be the number of non-Comcast RSN subscribers to this programming. In order to estimate the share of non-Comcast RSN

²²See Bernstein Research (March 4, 2010), Exhibit 16, page 16.

subscribers, I will assume that the share of non-Comcast MVPD subscribers among all MVPD subscribers in the regions served by Comcast RSNs is equal to the share of non-Comcast RSN subscribers among RSN subscribers. In particular, from Table 6 it can be seen that in the regions served by Comcast RSNs there are 14.5 million Comcast MVPD subscribers and 16.3 non-Comcast MVPD subscribers for a total of 30.8 million MVPD subscribers. Therefore, the share of non-Comcast MVPD subscribers among all MVPD subscribers is equal to 53%. Accordingly, the value of N that I will use is 53% of 25.1 million or 13.3 million. Substituting these values into equation (6) yields

$$H = 12 \times .22 \times \$2.29 \times 13.3 \text{ million} \quad (7)$$

$$= \$80.4 \text{ million} \quad (8).$$

The amount that MVPDs (other than Comcast itself) pay for Comcast RSNs as a result of the horizontal aspects of this transaction, therefore, will increase by \$80.4 million per year.

Now consider the NBCU national cable networks. Using the Kagan estimate that I used in my previous reports, I will assume that f is equal to \$1.56 per subscriber per month.²³ Since the increase in fees for national cable networks will only occur when Comcast-NBCU sells the NBCU national cable networks together with Comcast RSNs, the correct number of subscribers to use is the number of non-Comcast RSN subscribers calculated above. Therefore the value of

²³See Rogerson I, footnote 46 which cites Kagan data as reported in Peter Kafka, "Hate Paying for Cable? Here's Why," *All Things Digital*, <http://mediamemo.allthingsd.com/20100308/hate-paying-for-cable-heres-the-reason-why/>. This data indicates that 2009 per subscriber per month subscription fees for the NBCU national cable networks were: USA - \$.55, CNBC - \$.29, SyFy - \$.21, Bravo - \$.19, MSNBC - \$.16, Oxygen = \$.10, and mun2 - .06, for a total of \$1.56.

N that I will use is once again 13.4 million. Substituting these values into equation (6) yields

$$H = 12 \times .22 \times \$1.56 \times 13.3 \text{ million} \quad (9)$$

$$= \$54.8 \text{ million} \quad (10).$$

The amount that MVPDs (other than Comcast itself) pay for the NBCU national cable networks because of the horizontal aspects of this transaction, therefore, will increase by \$54.8 million per year.

Finally consider the NBC O&Os. Most analysts and industry observers predict that, without any further structural changes in the environment, that retransmission consent fees for the Big 4 network broadcast stations are likely to rise to at least \$.50 per subscriber per month over the next few years.²⁴ Following my previous reports, I will use a value of f equal to \$.50 per subscriber per month for this case. For this case, the value of N for each NBC O&O should be set equal to the number of non-Comcast RSN subscribers in the DMA served by each O&O. Table 6 provides the total number of non-Comcast MVPD subscribers in each DMA. I convert this to the number of non-Comcast RSN subscribers by multiplying it by the ratio of RSN subscribers to MVPD subscribers for each RSN as a whole (which can be obtained from the data in Tables 5 and 6.) Table 7 provides a detailed explanation of the calculation. Five of the ten DMAs served by an NBC O&O are also served by a Comcast RSN. There are five rows in Table 7 corresponding to these five DMAs. Column 1 of Table 7 lists the name of the DMA. Column

²⁴See, for example, Bernstein Research, *U.S. Cable and Satellite Broadcasting & U.S. Media: Sizing Up the "Retrans" Battle Royal*, April 14, 2010 ("Bernstein Research (April 14, 2010)"), Exhibits 18-20, pages 13-15.

2 lists the RSN that serves the DMA. Column 3 provides the total number of non-Comcast MVPD subscribers in the DMA, which is taken from Table 5. Column 4 provides the total number of subscribers to the RSN which is taken from Table 6. Column 5 provides the total number of MVPD subscribers in the region served by the RSN, which is taken from Table 5. Column 6 provides the ratio of the entry in column 4 to the entry in column 5. Column 7 is the estimated number of non-Comcast RSN subscribers in the DMA which is obtained by multiplying the total number of non-Comcast MVPD subscribers in column 3 by the ratio in column 6. Finally the last row of column 7 reports the sum of these values which is equal to 3.9 million. Substituting $N=3.9$ million and $f = \$0.50$ into equation (6) yields

$$H = 12 \times .22 \times \$0.50 \times 3.9 \text{ million} \quad (11)$$

$$= \$5.1 \text{ million} \quad (12).$$

Therefore the amount that MVPDs (other than Comcast itself) pay for retransmission consent for the NBC O&Os because of the horizontal aspects of this transaction will increase by \$5.1 million per year.

In summary then, the horizontal aspects of the combination will cause the annual cost of Comcast RSNs to increase by \$80.4 million, the annual cost of NBCU national cable networks to increase by \$54.8 million and the annual cost of the NBC O&Os to increase by \$5.1 million for a total cost increase across all programming types of \$140.3 million.

V. CALCULATION OF THE TOTAL CONSUMER HARM

Table 8 presents a summary of all of the harms that have been calculated above in the

previous two sections. The vertical harm is \$176.5 million per year and the horizontal harm is \$140.3 million per year for a total harm of \$316.8 million per year. Notice that both types of harm are relatively equal in magnitude. Another interesting way to split the total harm is according to the type of programming that experiences the cost increases. Table 8 shows that the transaction will cause \$192.5 million of harm through its effect on the fees charged for NBCU national cable networks, \$80.4 million dollars of harm through its effect on the fees charged for Comcast RSNs and \$43.9 million dollars of harm through its effect on the retransmission consent fees charged for NBC O&Os. In particular, my estimates show that nearly two thirds of the harm caused by the transaction will occur because it will allow Comcast-NBCU to raise the fees that it charges for the NBCU national cable networks. Therefore, although the Commission has not imposed conditions on national cable networks in some past transactions that it determined to be anti-competitive,²⁵ my estimates show that such an approach would clearly leave much of the problem unaddressed in the case of this particular transaction.

Another important point to recognize is that the above figures simply provide the annual level of harm created by the transaction. Since the harm will likely occur many years into the future, the present discounted value of the total harm created by the transaction is of course much larger. Table 9 presents the present discounted value of the various annual harm figures in Table 8 calculated over a nine year time horizon using an interest rate of 5%.²⁶ The nine year period is

²⁵For example, the binding arbitration conditions that the Commission imposed in both the DirecTV-News Corp. and Adelphia-Time Warner-Comcast license transfers applied only to RSNs and retransmission consent for local broadcast stations, but did not apply to national cable networks.

²⁶The present discounted value of \$1 over 9 years using an interest rate of 5% is \$8.1. Therefore the figures in Table 9 are calculated simply by multiplying the figures in Table 8 by 8.1.

chosen because this is the length of time that the ACA has recommended that conditions to prevent the harms of the transaction imposed by the Commission remain in effect. Since the harms will likely grow at the rate of inflation over time, it is appropriate to use the real interest rate in calculating the present discounted value of these harms. An interest rate of 5% is a relatively high value to use for the real interest rate and thus produces a relatively conservative (i.e., low) estimate of the present discounted value of the harm. The present discounted value of the total harm caused by the transaction is \$2.6 billion.

VI. REVIEW OF THE NEW REDUCED DOUBLE MARGINALIZATION ARGUMENTS OF DRS. ISRAEL AND KATZ

1. Review of the Debate

For purposes of describing the debate among economic experts in this proceeding over the issue of reduced double marginalization and the calculation of the magnitude of the reduced double marginalization effect, I will continue to assume that the total subscription price that NBCU charges for its national cable networks is \$1.56 per subscriber per month. It is generally thought that the magnitude of advertising revenue earned by programmers is roughly equal to the magnitude of subscription revenues that they earn.²⁷ For purposes of my discussion and calculations in this and subsequent sections, I will assume that NBCU earns advertising revenue exactly equal to \$1.56 per subscriber per month. Therefore I will assume that the total revenue earned by NBCU on its national cable networks is \$3.12 per subscriber per month.

In Israel Katz I,²⁸ Comcast's economic experts, Drs. Israel and Katz, note that Comcast

²⁷See, for example, Charles B. Goldfarb, *The Proposed Comcast-NBC Universal Combination: How it Might Affect the Video Market*, Congressional Research Services Report R41063, February 2, 2010, page 9.

²⁸See Israel and Katz I, pages 52-53.

will view its marginal cost of providing cable service as being reduced by \$1.56 per subscriber per month after the transaction because the payment of \$1.56 per subscriber per month for NBCU's national cable networks will now simply be a transfer payment between divisions. They argue that Comcast will pass through some of this cost reduction to its subscribers in the form of lower subscription prices and that this benefit of the transaction must be weighed against competitive harms of the transaction that result in programming cost increases for other MVPDs. I will refer to this benefit as the benefit of "reduced double marginalization."

In Rogerson II²⁹, I show that Drs. Israel and Katz's calculation of the magnitude of this cost reduction is incorrect because of a basic error in economic reasoning and that, when this error is corrected, the magnitude of the benefit of reduced double marginalization is very small. In particular, although Drs. Israel and Katz are correct that, after the vertical transaction, Comcast will view its true marginal cost of providing NBCU programming to its subscribers as being zero, the basic error in their analysis is to ignore a new opportunity cost that Comcast will now take into account after the transaction. The new opportunity cost is created by the fact that the joint venture charges \$1.56 per subscriber per month not only to Comcast but also to all MVPDs that compete with Comcast. Furthermore, since the marginal cost to the joint venture of providing this programming to an additional viewer is essentially zero, this entire fee of \$1.56 per subscriber per month represents profit to the joint venture. Now suppose that Comcast lowers its subscription price slightly in an attempt to attract more customers. The critical point to recognize (which is the point that Drs. Israel and Katz fail recognize in their analysis) is that to the extent that these new customers are customers that switch from some other MVPD, this will

²⁹See Rogerson II, pages 7-12.

cause the joint venture to lose \$1.56 per subscriber per month in programming profit. In particular, if 100% of the customers that Comcast would attract are customers that would switch from some other MVPD, then the opportunity cost of attracting new customers is exactly equal to \$1.56 per subscriber per month. This is because, when Comcast attracts a new customer, it loses a profit of \$1.56 on sales of NBCU programming to the MVPD that the customer switches from. More generally, if we let θ denote the share of newly arriving customers that are “switchers” from some other MVPD, then the true reduction in marginal cost due to the transaction is only $(1-\theta) \times \$1.56$ per subscriber per month. I argue in Rogerson II that since the share of TV households that do not subscribe to an MVPD is both very low and has remained relatively stable over time, that this likely suggests that θ is very close to 1. This in turn implies that the reduction in marginal cost due to the reduced double marginalization effect is likely very low. For example if θ is equal to .97 then the reduction in cost due to the reduced double marginalization effect is equal to $.03 \times \$1.56$ or \$.05 per subscriber per month.

In Israel Katz II, Drs. Israel and Katz concede that the analysis in Rogerson II is correct.³⁰ However, they go on to argue that two additional factors ought to be taken into account and that these new factors will significantly increase the magnitude of the reduced double marginalization effect. In the remainder of this section I will describe each of these two factors and explain why neither of them is likely to have a significant impact of the magnitude of the reduced double marginalization effect.

2. Advertising Revenues

³⁰See Israel Katz II at page 3, which states: “We agree with Professor Rogerson’s theoretical framework for measuring double marginalization effects and, specifically, that the opportunity costs should be included.”

Drs. Israel and Katz first argue that, after vertical integration, Comcast will also take NBCU upstream advertising revenues into account and that the correct magnitude of the cost drop due to the transaction is therefore $(1-\theta)$ multiplied by the sum of subscription revenue per subscriber and advertising revenue per subscriber. In particular, then, if advertising revenue is also equal to \$1.56 per subscriber per month then, the correct magnitude of the reduced double marginalization effect when this factor is taken into account is $(1-\theta) \times \$3.12$.

I agree with this observation of Drs. Israel and Katz. However, so long as θ is close to 1, the magnitude of the reduced double marginalization effect, while somewhat larger, will still be very small. For example, 3% of \$3.12 is still only \$.09.

3. Limited Basic vs. Expanded Basic

The second factor that Drs. Israel and Katz argue should be taken into account is the fact that a small fraction of MVPD subscribers subscribe to a tier of service that only includes the local broadcast stations and some public interest stations. I will refer to this tier of programming as the “limited basic” tier. The next smallest tier of service that MVPDs offer is much larger and typically includes at least 60-70 additional cable networks, including all of the most popular national cable networks as well as the local RSN(s) and all of the networks offered on the limited basic tier. I will refer to this as the “expanded basic” tier. Additional tiers of programming such as sports packages or premium networks are available at extra cost. However, subscribers to these additional tiers are generally required to also purchase the expanded basic tier. For the purposes of this section I will use the term “limited basic subscriber” to refer to a subscriber that only receives the limited basic tier of service and the term “expanded basic subscriber” to refer to a subscriber that receives the expanded basic tier of service and may or may not subscribe to

additional packages of programming.

Table 10 presents data for the United States as a whole on the number of TV households, MVPD subscribers, and the number of subscribers to the five major NBCU national cable networks - USA, CNBC, SyFy, MSNBC, and Bravo. Although I am not aware of any publicly available data that explicitly attempts to identify the number of expanded basic MVPD subscribers vs. the number of limited basic MVPD subscribers, the number of USA network subscribers is very close to the total number of expanded basic subscribers. This is because the USA network is likely carried on the expanded basic tier by essentially all MVPDs. Note that the number of subscribers to the other major NBCU national cable networks indicates that they too must be carried by almost all MVPDs on the expanded basic tier.

Drs. Israel and Katz correctly point out that a perfectly correct calculation of the parameter θ should take account of the fact that the NBCU national cable networks are not offered on the limited basic tier. More formally, suppose that Comcast lowers its subscriber price for the expanded basic tier in an attempt to attract more customers. Now there are four different groups that new subscribers to Comcast expanded basic may come from. These are:

- Group 1: previously subscribed to no MVPD
- Group 2: previously subscribed to the limited basic tier through Comcast
- Group 3: previously subscribed to the limited basic tier through some other MVPD
- Group 4: previously subscribed to the expanded basic tier through some other MVPD

Drs. Israel and Katz correctly point out that the opportunity cost of losing programming fees paid

by rival MVPDs only applies to Group 4. Therefore the true reduction in Comcast's marginal costs due to the reduced double marginalization effect is still given by $(1-\theta) \times \$3.12$, where θ is now defined to be the share of the newly arriving customers that are in Group 4. Formally, if we let g_i denote the number of newly arriving customers in group i , then the formula for θ is given by

$$\theta = \frac{g_4}{g_1 + g_2 + g_3 + g_4} \quad (13).$$

This formula for θ can of course simply be viewed as a generalization of the formula I originally provided for θ in the simpler model which didn't consider limited basic subscribers. If there are no limited basic subscribers then g_2 and g_3 are equal to zero and formula (13) becomes

$$\theta = \frac{g_4}{g_1 + g_4} \quad (14)$$

which is the formula I provided.

While I agree with Drs. Israel and Katz that formula (13) is the correct formula for calculating θ when the existence of limited basic subscribers is taken into account, I disagree completely with their argument that this new consideration suggests that the value of θ is likely to be significantly lower because of this. Once again, consider the hypothetical situation where Comcast lowers the price of expanded basic in an attempt to attract new customers. Taking account of limited basic subscribers will only have a significant effect on θ if a substantial

fraction of the new customers that are attracted by this price decrease are “upgraders” from limited basic.

Drs. Israel and Katz offer only one argument to support their contention that the value of θ is likely to be significantly less than 1 when the existence of limited basic subscribers is taken into account and this argument relies on a completely unsupported and implausible assertion. To explain their argument and pinpoint its flaw will require me to introduce some additional notation. Once again, consider the hypothetical case where Comcast lowers the price of expanded basic in order to attract new customers. Let h_i denote the total number of households in each of the four groups defined above that are available to potentially switch to Comcast expanded basic and let α_i denote the share of this total number that actually switch. Recall that g_i denote the number of households in each group that actually switch. We can express g_i as

$$g_i = \alpha_i h_i \tag{15}.$$

Since data exists on the value of the h_i variables, the relative magnitudes of the various g_i variables can be determined by the relative magnitudes of the α_i variables. From equation (13) note that θ will only be close to 1 if and only if g_4 is much larger than g_1 , g_2 , and g_3 . Drs. Israel and Katz attempt to argue that θ is not close to 1 by arguing that α_2 is much larger than α_4 , which implies that g_4 is not much larger than g_2 . They do this by making the following two claims.

Claim #1: α_2 is much larger than α_3

Claim #2: α_3 is equal to α_4

Obviously, if both claims were true, then it would follow immediately that α_2 is much larger than α_4 which is their desired result. There is no problem with Claim #1. It is very plausible and Drs. Israel and Katz provide evidence to support it. Claim #1 simply means that if Comcast were to lower the price of expanded basic, then limited basic subscribers of Comcast would be more likely to switch than limited basic subscribers of other MVPDs. The problem occurs with Claim #2. Claim #2 means that if Comcast were to lower the price of expanded basic then, among customers of other MVPDs, limited basic and expanded basic customers would be equally likely to switch to Comcast expanded basic. There is no reason to believe that this is true and Drs. Israel and Katz simply assert that it is true without providing any evidence of any sort to support the assertion. Thus the argument by Drs. Israel and Katz that θ is likely to be significantly less than 1 really amounts to constructing a complicated chain of logic that ultimately relies on the unsupported and implausible assertion that α_3 is equal to α_4 .

4. Summary

The correct formula for estimating the reduction in Comcast's marginal cost due to the reduced double marginalization effect is

$$\Delta C = (1-\theta)(f + a) \tag{16}$$

where ΔC denotes the reduction in Comcast's costs due to the reduced double marginalization effect, f is the fee that Comcast pays for the NBCU national cable networks, a is the advertising revenue that NBCU earns on its national cable networks, and θ is the answer to the following

question. “Suppose that Comcast were to lower the price of expanded basic by a small amount in order to try and attract new customers. What fraction of the newly arriving customers would be customers that switch from the expanded basic service offered by a rival MVPD? Given that the share of TV households that do not subscribe to any MVPD service or that subscribe only to limited basic MVPD service is both very small and stable, it seems very likely that θ is extremely close to 1. Drs. Israel and Katz have presented no evidence of any sort to contradict or disprove this argument. In the absence of any evidence that reductions in the price of expanded basic cause significant numbers of households that do not subscribe to any MVPD service or that subscribe to only limited basic service to switch to expanded basic service, the Commission should assume that θ is very close to 1 for purposes of evaluating the potential benefit of reduced double marginalization from this transaction.

VII. CALCULATION OF THE CONSUMER BENEFIT

While Comcast-NBCU and its economic experts have asserted that the transaction will produce a wide variety of different benefits, the only benefit that they have even attempted to provide any quantitative estimate for is the benefit of reduced double marginalization.³¹ In this section I will estimate the total magnitude of this claimed consumer benefit in order to compare it the estimates of consumer harm that I have already calculated.

The formula for the amount that Comcast’s marginal costs will be lowered by the transaction is given by (16). As described in the previous section, I will assume that both the subscription fee (f) and the advertising revenue (a) are equal to \$1.56 per subscriber per month. Also, as described in the previous section I believe that it is reasonable to assume that θ is very

³¹See Rosston (May 4, 2010) and Israel Katz I.

close to 1. For purposes of my estimation I will assume that $\theta = .97$.³² Substituting these values into equation (16) yields

$$\begin{aligned}\Delta C &= .03 (\$1.56 + \$1.56) \\ &= \$.09\end{aligned}\tag{17}.$$

The consumer benefit of the transaction is given by the formula

$$B = 12 \times \Delta C \times N\tag{18}$$

where B denotes the consumer benefit, ΔC denotes the cost reduction due to reduced double marginalization and N denotes the number of Comcast subscribers. From Table 1, the value of N is equal to 23.5 million. Substitution of $\Delta C = \$.09$ and $N = 23.4$ million into equation (18) yields

$$\begin{aligned}B &= 12 \times \$.09 \times 23.5 \text{ million} \\ &= \$25.4 \text{ million}\end{aligned}\tag{19}.$$

Therefore my estimate of the total quantifiable benefit from the transaction is \$25.4 million per year. The present value of this benefit over a nine year period using an interest rate of 5% is \$205.7 million or \$.2 billion.

³²It will be seen that with a value of θ equal to .97 that the consumer harm is vastly greater than the consumer benefit. This qualitative result would not change for values of θ within a moderate range of .97.

VIII. CALCULATING THE NET CONSUMER HARM

According to my estimates, the consumer harm caused by the transaction will be equal to \$316.8 million dollars per year with a present discounted value of \$2.6 billion over the next nine years. The consumer benefit caused by the transaction will be equal to \$25.4 million per year with a present discounted value of \$.2 billion over the next nine years. Therefore the consumer harm caused by the transaction will be more than ten times as large as the consumer benefit. The net consumer harm, calculated by subtracting the consumer benefit from the consumer harm is equal to \$291.4 million per year with a present discounted value of \$2.4 billion over the next nine years.

IX. CONCLUSION

The Comcast-NBCU transaction will result in competitive harm to consumers because it will allow Comcast-NBCU to raise programming fees to other MVPDs and these fee increases will be substantially passed through to subscribers in the form of higher subscription prices. I estimate that this transaction will cause consumer harm with a discounted present value of \$2.6 billion over the next nine years. While Comcast-NBCU and its economic experts have asserted that the transaction will produce a wide variety of consumer benefits, the only consumer benefit that they have even attempted to quantify is the benefit of reduced double marginalization. When correctly calculated, this benefit is less than one tenth the magnitude of the harm, with a discounted present value of only \$.2 billion over the next nine years. Therefore, the quantifiable consumer harm that will result from this transaction vastly exceeds the quantifiable benefit. In particular, the net consumer harm resulting from this transaction has a present discounted value equal to \$2.4 billion over the next nine years.

TABLE 1
MVPD SUBSCRIBERSHIP IN DMAs SERVED BY NBC O&Os
(thousands of customers as of 1st quarter of 2010)

DMA	Comcast	Other Cable	Total Cable	DirecTV	DISH	Verizon	AT&T	Total
Philadelphia	1663.4	226.1	1889.5	291.3	154.7	309.4	0	2644.9
Chicago	1886.9	141.0	2027.9	557.4	365.1	0	155.5	3105.9
San Francisco	1242.3	87.9	1330.2	435.2	272.6	0	132.8	2170.8
Miami	653.9	48.6	702.5	352.5	111.4	0	71.5	1237.9
Washington, DC	948.6	275.5	1224.1	394.7	222.5	278.3	0	2119.6
Hartford-New Haven	312.3	239.3	551.6	117.1	51.1	0	83.9	803.7
New York	678.4	4495.9	5174.3	660.6	344.4	932.8	29.9	7142.0
Los Angeles	0	2420.0	2420.0	1189.0	627.2	321.6	174.6	4732.4
Dallas Fort Worth	0	1037.6	1037.6	508.1	445.2	151.5	224.0	2366.4
San Diego	0	699.3	699.3	117.3	81.1	3.6	64.0	965.3
Total U.S.	23477.0	37682.6	61159.6	18660.0	14337.0	3029.0	2295.0	99481

Source: Media Business Corp.

TABLE 2
MVPD SUBSCRIBERSHIP IN DMAs SERVED BY NBC O&Os
AS A PERCENTAGE OF TOTAL MVPD SUBSCRIBERS IN EACH DMA

DMA	Comcast	Other Cable	Total Cable	DirecTV	DISH	Verizon	AT&T	Total
Philadelphia	62.9	8.5	71.4	11.0	5.8	11.7	0	100
Chicago	60.8	4.5	65.3	17.9	11.8	0	5.0	100
San Francisco	57.2	4.0	61.3	20.0	12.6	0	6.1	100
Miami	52.8	3.9	56.7	28.5	9.0	0	5.8	100
Washington, DC	44.8	13.0	57.8	18.6	10.5	13.1	0	100
Hartford New Haven	38.9	29.8	68.6	14.6	6.4	0	10.4	100
New York	9.5	63.0	72.4	9.2	4.8	13.1	0.4	100
Los Angeles	0	51.1	51.1	25.1	13.3	6.8	3.7	100
Dallas Fort Worth	0	43.8	43.8	21.5	18.8	6.4	9.5	100
San Diego	0	72.4	72.4	12.2	8.4	.4	6.6	100
Total U.S.	23.6	37.9	61.5	18.8	14.4	3.0	2.3	100

Source: Media Business Corp.

TABLE 3
CALCULATION OF VERTICAL COST INCREASES FOR NBCU NATIONAL CABLE NETWORKS

MVPD	s_c	s_R	ΔP (\$ per month)	N (millions)	H (millions of \$ per year)
DirecTV	.236	.188	\$.31	18.7	\$69.6
DISH	.236	.144	\$.30	14.3	\$51.5
Verizon	.236	.030	\$.26	3.0	\$ 9.4
AT&T	.236	.023	\$.26	2.3	\$ 7.2
Total					\$137.7

TABLE 4A
CALCULATION OF VERTICAL COST INCREASES FOR NBC O&Os: DIRECTV

DMA	s_C	s_R	Δ P (\$ per month)	N (thousands)	H (thousands of \$ per year)
Philadelphia	.629	.110	\$.76	291.3	\$2,656.7
Chicago	.608	.179	\$.79	557.4	\$5,284.2
San Francisco	.572	.200	\$.77	435.2	\$4021.2
Miami	.528	.285	\$.79	352.5	\$3341.7
Washington, DC	.448	.186	\$.59	394.7	\$2794.5
Hartford New Haven	.389	.146	\$.49	117.1	\$688.5
New York	.095	.092	\$.11	660.6	\$872.0
Los Angeles	0	.251	\$0	1,189.0	\$0
Dallas Fort Worth	0	.215	\$0	508.1	\$0
San Diego	0	.122	\$0	117.3	\$0
Total					\$19,658.8

TABLE 4B
CALCULATION OF VERTICAL COST INCREASES FOR NBC O&Os: DISH

DMA	s_C	s_R	Δ P (\$ per month)	N (thousands)	H (thousands of \$ per year)
Philadelphia	.629	.058	\$.71	154.7	\$1,318.0
Chicago	.608	.118	\$.74	365.1	\$3,242.1
San Francisco	.572	.126	\$.70	272.6	\$2,289.8
Miami	.528	.090	\$.62	111.4	\$828.8
Washington, DC	.448	.105	\$.54	222.5	\$1,441.8
Hartford New Haven	.389	.064	\$.44	51.1	\$269.8
New York	.095	.048	\$.11	344.4	\$454.6
Los Angeles	0	.133	\$0	627.2	\$0
Dallas Fort Worth	0	.188	\$0	445.2	\$0
San Diego	0	.084	\$0	81.1	\$0
Total					\$9,844.9

TABLE 4C
CALCULATION OF VERTICAL COST INCREASES FOR NBC O&Os: VERIZON

DMA	s_C	s_R	Δ P (\$ per month)	N (thousands)	H (thousands of \$ per year)
Philadelphia	.629	.117	\$.76	309.4	\$2,821.7
Chicago	.608	0	\$.65	0	\$0
San Francisco	.572	0	\$.61	0	\$0
Miami	.528	0	\$.56	0	\$0
Washington, DC	.448	.131	\$.55	278.3	\$1,836.8
Hartford New Haven	.389	0	\$.42	0	\$0
New York	.095	.131	\$.12	932.8	\$1,343.2
Los Angeles	0	.068	\$0	321.6	\$0
Dallas Fort Worth	0	.064	\$0	151.5	\$0
San Diego	0	.004	\$0	3.6	\$0
Total					\$6,001.7

TABLE 4D
CALCULATION OF VERTICAL COST INCREASES FOR NBC O&Os: AT&T

DMA	s_C	s_R	Δ P (\$ per month)	N (thousands)	H (thousands of \$ per year)
Philadelphia	.629	0	\$.67	0	\$0
Chicago	.608	.05	\$.68	155.5	\$1,268.9
San Francisco	.572	.061	\$.65	132.8	\$1035.8
Miami	.528	.058	\$.60	71.5	\$514.8
Washington, DC	.448	0	\$.48	0	\$0
Hartford New Haven	.389	.104	\$.46	83.9	\$463.1
New York	.095	.004	\$.10	29.9	\$35.9
Los Angeles	0	.037	\$0	174.6	\$0
Dallas Fort Worth	0	.095	\$0	224	\$0
San Diego	0	.066	\$0	64	\$0
Total					\$3,318.5

TABLE 5
SUBSCRIBERS TO COMCAST RSNs
(millions of subscribers for 2009)

RSN	Subscribers
CSN Bay Area	4.2
CSN California	3.4
CSN Chicago	4.7
CSN Mid-Atlantic	4.7
CSN New England	4.0
CSN Northwest	1.1
CSN Philadelphia	3.0
Total	25.1

Source: Bernstein Research, March 4, 2010, Exhibit 15, page 15.

TABLE 6
MVPD SUBSCRIBERS IN REGIONS SERVED BY COMCAST RSNs
(thousands of subscribers for 1st quarter 2010)

DMA#	DMA	Comcast	Other	Total
CSN BAY AREA				
130	Chico-Redding, CA	48.7	125.0	173.7
195	Eureka, CA	0	42.2	42.2
124	Monterey-Salinas, CA	69.9	124.7	194.7
108	Reno, NV	0	231.8	231.8
20	Sacramento-Stockton-Modesto, CA	553.5	697.6	1,251.1
6	San Francisco-Oakland-San Jose, CA	1,242.3	928.5	2,170.7
55*	Fresno	238.3	272.0	510.3
	CSN Bay Area Total	2,152.7	2421.8	4574.6
CSN California				
125	Bakersfield, CA	0	176.9	176.9
189	Bend, OR	0	48.4	48.4
55	Fresno-Visalia, CA	238.3	272.0	510.3
124	Monterey-Salinas, CA	69.9	124.7	194.7
108	Reno, NV	0	231.8	231.8
20	Sacramento-Stockton-Modesto, CA	553.5	697.6	1,251.1
6	San Francisco-Oakland-San Jose, CA	1,242.3	928.5	2,170.7
130*	Chico, CA	23.4	60	83.4
	CSN California Total	2127.4	2539.9	4667.3
CNS Chicago				
88	Cedar Rapids-Waterloo-Iowa City-Dubuque, IA	0	266.4	266.4
84	Champaign and Springfield-Decatur, IL	111.6	210.3	321.9
3	Chicago, IL	1,886.9	1,219.0	3,105.9
99	Davenport, IA, Rock Island-Moline, IL	26	224.6	250.6
107	Ft. Wayne, IN	83.9	163.5	247.4
25	Indianapolis, IN	396.8	631.6	1028.4
191	Lafayette, IN	39.9	18.4	58.3
116	Peoria-Bloomington, IL	104.4	108.5	212.9
134	Rockford, IL	84	83.8	167.8
91	South Bend-Elkhart, IN	122.9	177.9	300.8
171*	Quincy, Keokuk, IA	14.8	52.3	67.0
153*	Mason City, IA	0	19.9	19.9
200*	Ottumwa, IA	0	25.5	25.5
72*	Ames, IA	0	73.4	73.4
	CSN Chicago Total	2,871.2	3,275.1	6,146.3

TABLE 5 (Cont'd)
MVPD SUBSCRIBERS IN REGIONS SERVED BY COMCAST RSNs
(thousands of subscribers)

DMA#	DMA	Comcast	Other	Total
CSN Mid-Atlantic				
27	Baltimore, MD	558.6	461.3	1,019.9
183	Charlottesville, VA	31.6	37.9	76.8
178	Harrisonburg, VA	38.9	37.9	76.8
43	Norfolk-Portsmouth-Newport News, VA	1.5	654.0	655.6
58	Richmond-Petersburg, VA	261.6	244.8	506.3
67	Roanoke-Lynchburg, VA	130.6	267.5	398.2
144	Salisbury, MD	64.1	76.4	140.5
9	Washington, DC, Hagerstown, MD	948.6	1171.0	2119.6
39*	York, PA	88.5	53.7	142.2
	CSN Mid-Atlantic Total	2,124.0	2,998.9	5,122.9
CSN New England				
154	Bangor, ME	0	112.6	112.6
7	Boston, MA, Manchester, NH	1363.6	772.5	2136.2
77	Portland-Auburn, ME	26.4	302.7	329.0
205	Presque Isle, ME	0	25.5	25.5
53	Providence, RI, New Bedford, MA	137.7	435.1	572.8
111	Springfield-Holyoke, MA	133.2	83.5	216.8
94*	Burlington, VT	57.8	135.8	193.6
30*	Hartford, CT	156.2	245.7	401.9
	CSN New England Total	1,874.9	2,113.4	3,988.3
CSN Northwest				
189	Bend, OR	0	48.4	48.4
119	Eugene, OR	76.9	122.4	199.3
22	Portland, OR	510.4	518.7	1,029.1
13	Seattle-Tacoma, WA	880.3	636.9	1517.2
75	Spokane, WA	101.3	253.0	354.2
	CNS Northwest Total	1,568.8	1579.3	3148.1
CSN Philadelphia				
39	Harrisburg-Lancaster-Lebanon-York, PA	38.9	37.9	76.8
4	Philadelphia, PA	1,663.4	981.5	2,645.9
54	Wilkes Barre-Scranton, PA	138.0	327.5	3,187.4
	CNS Philadelphia Total	1,840.4	1347.0	3187.4
Total for All RSNs (in millions of subs)		14.5	16.3	30.8

Notes for Table 6:

1. MVPD subscribership data by DMA from Media Business Corp.
2. The following rule was used to determine which DMAs were included in the market area for CSN Northwest and CSN Philadelphia. For DMAs with one named city in the DMA title, the TV Guide Network Channel Locator (<http://www.tvguide.com/channel/locator.aspx>) was used to determine if the RSN was offered by any MVPD in the lowest zip code belonging to the named city in the DMA title. The DMA was classified as being served by the RSN if and only if at least one MVPD was listed as providing the RSN in this zip code. For DMAs with two or more named cities in the DMA title, the same exercise was performed for each named city. When the same result was obtained for all named cities, the entire DMA was classified according to this result. If different results were obtained for different cities, the DMA was broken into parts, with the MVPD subscribership numbers prorated across parts of the DMA using U.S. census figures for the population of each named city. DMA with an asterisk (*) after the DMA number are DMAs that were broken into parts in this fashion.
3. The following rule was used to determine which DMAs were included in the market area for all other RSNs except for CSN Northwest and CSN Philadelphia. First the TV Guide Network Locator was used as described above in point 2 to determine if an MVPD other than one of the two DBS providers carries the RSN in the DMA. Second, the websites of the two DBS providers were also used in the same fashion as described above in note 2 to determine if the DBS providers carry the RSN in the DMA. A DMA was classified as being served by an RSN if and only if it was determined that at least one MVPD that was not a DBS provider *and* at least one of the two DBS providers carry the RSN. (The two DBS providers generally carry all of the Comcast RSNs except for CSN Northwest and CSN Philadelphia. Therefore for all RSNs except CSN Northwest and CSN Philadelphia the websites of the DBS providers could be used to provide an independent check on whether the RSN appeared to be generally offered in a DMA or not.)

TABLE 7
CALCULATION OF HORIZONTAL COST INCREASES FOR NBC O&Os

(1)	(2)	(3)	(4)	(5)	(6)	(7)
DMA	RSN	non-Comcast MVPD subs in the DMA (Thousands)	RSN subs (millions)	MVPD subs in region served by RSN (millions)	ratio of column (4) to column (5)	non-Comcast RSN subs in the DMA (thousands)
Philadelphia	PA	981.5	3.0	3.2	.94	922.6
Chicago	CH	1,219.0	4.7	6.1	.77	938.6
San Francisco	BA	928.5	3.4	4.7	.72	668.5
Washington, DC	MA	1,171.0	4.7	5.1	.92	1,077.3
Hartford	NE	245.7	4.0	4.0	1	245.7
Total						3,852.7

TABLE 8
SUMMARY OF THE HORIZONTAL AND VERTICAL HARM
(millions of dollars per year)

Programming Type	Vertical Harm	Horizontal Harm	Total Harm
NBCU national cable networks	\$137.7	\$54.8	\$192.5
Comcast RSNs	\$0	\$80.4	\$80.4
NBC O&Os	\$38.8	\$5.1	\$43.9
Total	\$176.5	\$140.3	\$316.8

TABLE 9
SUMMARY OF THE HORIZONTAL AND VERTICAL HARM
PRESENT DISCOUNTED VALUE OVER 9 YEARS
(millions of dollars)

Programming Type	Vertical Harm	Horizontal Harm	Total Harm
NBCU national cable network	\$1,115.3	\$443.9	\$1,559.3
Comcast RSNs	\$0	\$651.2	\$651.2
NBC O&Os	\$314.3	\$41.3	\$355.6
Total	\$1,429.7	\$1,136.4	\$2,566.1

TABLE 10
SUSCRIPTION TO NBCU NATIONAL CABLE NETWORKS, TOTAL MVPD
SUSCRIPTION AND TOTAL TV HOUSEHOLDS
(millions of households, 1st quarter 2010)

Bravo Subscribers	94.3
MSNBC Subscribers	94.9
Syfy Subscribers	97.9
CNBC Subscribers	98.5
USA Subscribers	100.5
Total MVPD Subscribers	105.2
Total TV Households	114.9

Notes:

1. NBCU network subscribers from Bernstein (March 4, 2010), Exhibit 11, page 11.
2. Total MVPD subscribers from Media Biz Corp.
3. Total TV Households from Nielsen,
http://blog.nielsen.com/nielsenwire/media_entertainment/number-of-u-s-tv-households-climbs-by-one-million-for-2010-11-tv-season/