

# ATTACHMENT A

**THE FAIR MARKET VALUE  
OF LOCAL CABLE RETRANSMISSION RIGHTS  
FOR SELECTED ABC OWNED STATIONS**

BY

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## EXECUTIVE SUMMARY

The analysis examines the fair market value of local cable retransmission rights for ABC owned broadcast television station signals in three DMAs—Philadelphia, Flint, and Toledo.<sup>1</sup> (These stations will be referred to individually as an “ABC Owned Station” and collectively as the “ABC Owned Stations.”) The analysis is based on three benchmarks. The first benchmark begins with an estimate of the retail price charged for the ABC Owned Station signals by DirecTV and DISH Network and works back to a corresponding license fee. The second benchmark begins with an estimate of what a local cable operator in each area charges its subscribers for the ABC Owned Station signal, and works back to a corresponding license fee. The third benchmark starts with an econometric analysis of the relationship between the license fees of basic cable networks and what those networks spend on programming, and then estimates the license fees that the ABC Owned Station signals would have commanded, given ABC’s expenditures on programming, had they been basic cable networks. Using the average of the estimates produced by the benchmarks in each market, the fair market value of the retransmission right for the ABC Owned Station signals in the markets considered ranges from \$2.00 to \$2.09 per subscriber per month.

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<sup>1</sup> These markets were selected for analysis by ABC. The three markets include one large market, Philadelphia, and the two smallest markets in which ABC owns stations.

## INTRODUCTION

Local broadcast stations, especially network affiliates, are an important part of the services provided by cable systems. Indeed, cable television got its start more than 50 years ago by offering improved reception of local broadcast station signals. Although cable systems now offer many other services, local broadcast station signals remain a key source of consumer demand for cable. This is not surprising. Local broadcast stations carry popular local news, weather and sports programming. Also, the national network entertainment, news and sports programming carried by network affiliates remains among the most popular programming on television. Actual and potential cable subscribers place a high value on this programming.

Cable carriage of local broadcast station signals produces revenues for cable operators. A cable operator may charge a higher subscription price for a package of programming networks if local broadcast station signals are included in the package. Alternatively, at any given subscription price, there will be more subscribers and more subscription revenue if local broadcast station signals are carried. Further, having more subscribers means that the cable operator can generate more revenue from the sale of local advertising and other services. In these respects, local broadcast station signals play a role similar to popular cable networks and other sources of cable content.

In order to generate subscriber and advertiser revenues, cable operators distribute cable networks, such as A&E, CNN, and Discovery, to their subscribers and pay monthly per subscriber fees to cable networks for such rights. Most cable networks sell advertising spots to national advertisers, and some also provide local ad availabilities to cable operators who in turn sell such local advertising spots to local advertisers.

Federal law establishes two methods by which cable systems carry local broadcast station signals—must carry and retransmission consent. Under must carry, cable systems are not required to pay local broadcast stations for the right to distribute the local broadcast station signals that they are required by federal law to carry. However, a local broadcast station may elect instead to exercise its right to grant retransmission consent. Under retransmission consent, cable systems are not required to carry the local broadcast

station's signal, but must negotiate with the local broadcast station if they decide to carry the broadcast station's signal.

Broadcasters and cable operators negotiate retransmission consent agreements under rules established by the FCC. The outcome of such bargaining may result in a complex agreement. Cable operators often choose to provide alternative consideration such as carriage of cable networks that are affiliated with the broadcaster in lieu of cash payment. Because the details of each negotiation vary from one cable operator to another, and because the specific details of these agreements are generally confidential, a market price for retransmission consent rights is not transparent.

The Walt Disney Company requested us to examine two related questions arising from these circumstances. First, what is the relationship between a cash payment that a cable operator might pay for retransmission consent rights and the terms of alternative arrangements to which a local broadcast station owner and a cable operator might agree? As the next section explains, there are several ways that a local broadcast station owner that is affiliated with a cable network or cable networks can be compensated for retransmission consent rights. Second, since the market price for retransmission consent rights is not transparent, what is the estimated fair market price for the retransmission consent rights of the ABC Owned Station signals? By fair market price we simply mean the price that would be observed if retransmission consent rights were traded in cash-only transactions. Using only public or third-party data, we take three approaches:

- First, we observe the retail prices currently charged by DirecTV and DISH Network, two leading satellite operators, for their packages of local broadcast signals in each market, and we work backwards to estimate a license fee for the ABC Owned Station signal that is part of that package. Estimates range from \$0.97 to \$1.23 per subscriber per month.
- Second, we observe the retail price currently charged by a local cable operator in each of the markets for the tier of programming that includes local broadcast station signals, and we again work backwards to estimate a license

fee for the applicable ABC Owned Station signal, which is part of that tier. This estimate ranges from \$1.90 to \$3.06 per subscriber per month.

- Third, we observe the relationship between what cable operators in general pay in monthly per subscriber license fees for basic cable networks and the value of basic cable networks as measured by what each spends on programming. After adjusting for the ability of the cable operator to generate revenues from local ad availabilities on certain cable networks, we use the license fee/program cost relationship to estimate what the license fee would have been for the selected ABC Owned Station signals in 2003 if they were basic cable networks. That estimate is \$2.27 per subscriber per month.

Taking an average of the benchmark estimates for each market yields a fair market valuation of the retransmission rights for the selected ABC Owned Station signals ranging from \$2.00 to \$2.09 per subscriber per month.

## CASH OR CARRIAGE?

Under the retransmission consent rules, cable operators and direct broadcast satellite distributors (collectively, multichannel video programming distributors or “MVPDs”) and local broadcast television stations negotiate the terms under which MVPDs will retransmit the applicable television station(s)’s signal(s). Congress created retransmission consent rights as part of the Cable Television Consumer Protection and Competition Act of 1992. When the first transactions concerning these rights were negotiated, leading cable operators insisted that they would make no cash payments to broadcasters and subsequently initiated discussions related to launching new cable networks as possible consideration for retransmission consent rights in lieu of cash payments. Eventually, agreements were reached between the broadcast networks and the major cable operators that provided for the cable operators to carry various new broadcast network-owned cable programming services in return for retransmission consent rights to local broadcast station signals. Today, cable operators carrying cable networks as consideration for retransmission consent rights is a common practice. The FCC noted this practice in a 2000 order, and also observed that the practice is presumptively lawful.<sup>2</sup>

According to ABC officials, ABC offers cable systems the right to retransmit the signals of its owned stations for approximately \$0.70 to \$0.80 per subscriber per month. Cable operators usually decline ABC’s cash offer and instead negotiate a customized deal that compensates ABC while meeting the operators’ particular needs. We understand that ABC is open to any options that provide ABC with fair consideration for its owned station signals, and ABC works with cable operators to determine what form that consideration may take if the cash option is not accepted by the cable operators.

To illustrate, the following are some of the alternatives ABC has used in order to address the particular circumstances of individual operators: (a) a cable operator may

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<sup>2</sup> FCC, First Report and Order, In the Matter of Implementation of the Satellite Home Viewer Improvement Act of 1999 and Retransmission Consent Issues: Good Faith Negotiation and Exclusivity, CS Docket No. 99-363, released March 16, 2000, ¶ 56, point 3.

## ESTIMATED FAIR MARKET PRICE

*Using DirecTV and DISH Network prices as a benchmark*

DirecTV and DISH Network are the two major direct broadcast satellite (DBS) providers in the United States, with a current combined total of over twenty million subscribers. Legislation enacted in 1999 gave DirecTV and DISH Network the right to carry local broadcast stations. Both companies compete with cable television operators for subscribers, and both carry many of the same networks as cable systems. We therefore assume that DirecTV and DISH Network subscribers are representative of cable subscribers in their valuation of local broadcast signals, and that the relationship between wholesale and retail prices for such programming on DirecTV and DISH Network is indicative of the corresponding relationship for cable systems, and vice versa.

Any subscriber to DirecTV in a market where DirecTV provides local signals can add a package of local broadcast channels for \$6.00 per month.<sup>3</sup> DirecTV currently offers such local programming in Philadelphia and Flint.<sup>4</sup> A subscriber to DISH Network in those markets with a local signal package can add the package for \$5.99 per month. DISH Network also currently offers a local programming package in Philadelphia and Flint. Given the competitive importance to DBS services of offering local channels, DBS providers may provide these packages at reduced rates to spur subscribership.<sup>5</sup> If so, our estimates based on this benchmark will understate the fair market value of retransmission rights.

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<sup>3</sup> Beginning in March 2004, if a subscriber purchases a DirecTV package with local channels, the subscriber gets a \$3 bundling discount. But if the subscriber only had Select Choice or some kind of special package or a complimentary package, and wanted to add the local channels, then the additional cost would be \$6. See copy of a June 2004 DirecTV monthly statement attached as Appendix A.

<sup>4</sup> DirecTV plans to begin offering local signals in Toledo in 2004.

<sup>5</sup> The FCC noted that the growth in DBS subscribers is, in part, attributable to the authority granted to them to distribute local broadcast television stations. FCC, *Tenth Annual Report: Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket 03-172, ¶¶8, 65.



In each market, both the DirecTV and DISH Network packages include programming from several local stations. It is unlikely, however, that the signals have equal value, either to subscribers or to DirecTV or DISH Network in attracting subscribers. For purposes of our analysis we assume that the value of the stations included in either the DirecTV or DISH Network local package is proportional to the stations' shares of local audience.<sup>6</sup> Using data from the May 2004 sweeps, we determine the total day viewing share of each programming service included in each market's local channel package.<sup>7</sup> We then compute each ABC Owned Station signal's share of viewing relative to all services in the package.

We attribute to each ABC Owned Station signal a percentage of the retail value of the local channel package based on its relative share of viewing of services in the package. The results are presented in Table 1. The implied retail value for an ABC Owned Station signal ranges from \$1.64 to \$2.08 based on the DISH Network price and from \$1.65 to \$2.09 based on the DirecTV price.

**Table 1: Estimated retail value of ABC Owned Station signals based on DBS fees**

Market	DISH Network (\$5.99/mo.)		DirecTV (\$6.00/mo.)	
	ABC Owned Station	Attributed Value	ABC Owned Station	Attributed Value
	Viewing Share		Viewing Share	
Flint	34.8%	\$2.08	34.8%	\$2.09
Philadelphia	27.5%	\$1.64	27.5%	\$1.65
Toledo	n.a.	n.a.	n.a.	n.a.

To derive an estimate of market value for local broadcast retransmission rights, we need to translate this retail value into a corresponding wholesale value or license fee.

<sup>6</sup> Viewers' demand or willingness to pay for programming is not the same as ratings or viewing shares. In theory, programming with a relatively small audience that is intensely interested may command higher revenue than programming that attracts a larger but less interested audience. Lacking direct measures of viewer willingness to pay for individual broadcast networks, we use ratings and viewing shares as an approximation.

<sup>7</sup> Underlying data are from Nielsen.

To do this, we make use of the relationship between wholesale license fees and subscriber prices observed for other programming. In 2002, wholesale revenue for premium services was about 59 percent of retail revenue for such services.<sup>8</sup> Applying this percentage implies that the wholesale value to ABC Owned Station signals would range from \$0.97 to \$1.23, based on both the DISH Network prices and the DirecTV prices. See Table 2. This percentage is equivalent to a retail markup over wholesale of about 70 percent. Since DBS providers would likely apply a very low or no markup to the license fee given the competitive importance of local signals to DBS services, as noted above, the actual retail markup may well be lower than 70 percent and therefore the wholesale values are likely to be higher than estimated here.

**Table 2: Estimated wholesale value of ABC Owned Station signals based on DBS fees**

Market	DISH Network	DirecTV
Flint	\$1.23	\$1.23
Philadelphia	\$0.97	\$0.97
Toledo	n.a.	n.a.

*Using the local cable operator's basic tier price as a benchmark*

Our second approach to estimating a fair market value for retransmission of the ABC Owned Station signals is to look at the retail price a local cable operator charges for the service tier that includes the ABC broadcast station and then work backwards to an implied wholesale value.<sup>9</sup>

Most cable operators provide a Basic Service Tier that functions primarily as a "reception" package. The tier is typically composed of local broadcast television stations and government access channels. Most likely, as with the satellite local signal packages, this price is below fair market value. Although some cable television prices have recently

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<sup>8</sup> Kagan World Media, *The Pay TV Newsletter*, July 31, 2002, p. 3. Kagan estimated that the wholesale percentage of retail revenue was 59.1 percent in 2002 and would be about 59.5 percent in 2004.

<sup>9</sup> The cable operators selected were identified as serving the named city.

been deregulated at the federal level, basic tier prices remain regulated by state and local authorities. Such tiers are often offered at a discount for regulatory or public relations reasons, to satisfy agreements with local agencies or to improve relations with the FCC or franchise authorities. Historically, few cable subscribers have opted for only this basic service. Therefore, cable operators lose little by offering a low price. Nevertheless, we assume that the Basic Service Tier price reflects market value. If the retail price is below fair market value, our estimate of the corresponding wholesale price again understates the fair market value of retransmission rights.

We again assume that the value attributable to an individual channel on this tier is proportional to its ratings relative to all the channels on the tier.<sup>10</sup> See Table 3.

**Table 3: Estimated value of ABC Owned Station signals based on cable operator fees**

Market	Operator	Rate	Number of Channels	ABC Owned Station Viewing Share	Attributed Retail Value	Estimated Wholesale Value
Flint	Comcast	\$12.75	19	33.3%	\$4.25	\$2.51
Philadelphia (19132)	Comcast	\$15.60	32	27.5%	\$4.28	\$2.53
Philadelphia (19102)	Comcast	\$20.00	34	25.9%	\$5.19	\$3.06
Toledo	Buckeye	\$12.15	19	26.5%	\$3.22	\$1.90

Based on the relative share of viewing in each market, approximately 20 percent to 30 percent of the value of the basic service tier is attributable to the ABC Owned Station signal. The retail value attributed to the ABC Owned Station signals ranges from \$3.22 to \$5.19. We again assume that the wholesale value is 59 percent of the retail value. This implies a wholesale value, or retransmission license fee, ranging from \$1.90 to \$3.06 for the ABC Owned Station signals.

<sup>10</sup> See note 6. Many services on the basic service tier have no ratings reported by Nielsen. The absence of ratings data generally implies that the audiences are too small to be measured accurately. We assumed that these services had a zero share.

*Using cable network license fees as a benchmark*

Our third approach to the question of estimating the fair market value of local cable retransmission rights to the ABC Owned Station signals relies on what cable operators pay for various cable networks. The economic foundation of basic cable networks is the cable operators' ability to distribute cable networks to viewers for monthly subscription fees as well as to deliver audiences to advertisers. Cable operators pay license fees to distribute cable networks, such as ESPN or CNN. These license fees (wholesale prices) are determined by free market competition.

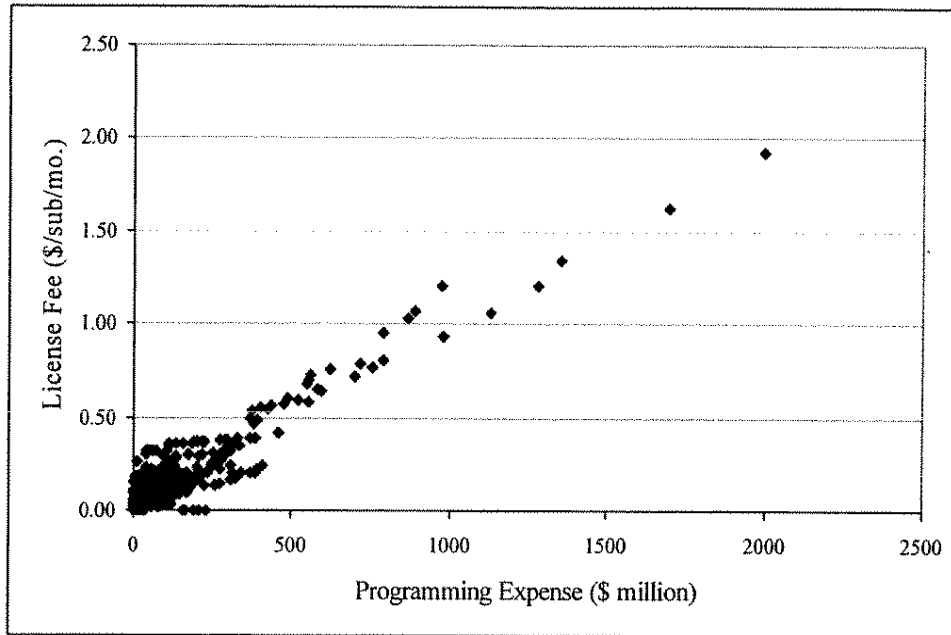
There is a strong correlation between the license fees paid by cable operators to cable networks and the level of programming expenditure by those cable networks. See Figure 1.<sup>11</sup> It is not surprising to find that more popular, expensively-produced cable networks have higher license fees than do less popular cable networks. We rely on this relationship between cable network programming expense and cable network license fees to project the value of broadcast station signal retransmission consent rights based on broadcast network programming expenses.<sup>12</sup>

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<sup>11</sup> Data from Kagan Research, *Economics of Basic Cable Networks 2005: Key Spreadsheets*, June 2004. Programming expenses and license fees expressed in real 2003 dollars using the GDP implicit price deflator.

<sup>12</sup> The fee cable operators (and ultimately, viewers) are willing to pay for a program service depends on the quality or attractiveness of the programming provided. Higher perceived programming quality, in turn, is directly related to programming expense. This is so because competition among distributors drives up the prices of the most attractive program services. Therefore, one would expect that license fees per subscriber would increase as programming expenditures increase, other things equal. See B. Owen and S. Wildman, *Video Economics*, 144-150 (1992); B. Litman, *Predicting Success of Theatrical Movies: An Empirical Study*, 16 *Journal of Popular Culture* 159 (1983); and M. Blumenthal, *Auctions with Constrained Information: Blind Bidding for Motion Pictures*, 70 *Review of Economics and Statistics* 191 (1988).

**Figure 1: Cable network license fees versus programming expenses, 1992-2003**  
(in real 2003 dollars)



Although very important, program expense is not the only factor that explains the license fees commanded by cable networks. Many cable networks receive not just license fees from cable operators but also advertising revenues from national advertisers. Each cable network must decide how to trade off these two sources of revenue. Other things being equal, if a cable network's per subscriber wholesale license fee is lower, cable operators will provide it to more subscribers than more expensive cable networks. Such more widely distributed cable networks will accordingly be more attractive to advertisers and could result in greater advertising revenue. This tradeoff has become more important as the cable advertising marketplace has grown in the last decade. Our analysis takes this tradeoff into account.

A related issue in understanding cable network license fees is the availability of local advertising spots. A cable operator will be willing to pay more, other things being equal, for a cable network that provides opportunities for the cable operator to sell local advertising spots. In doing this, of course, the cable network gives up the opportunity to

sell such spots to national advertisers. Because local cable advertising has grown in importance, this effect must now also be taken into account for purposes of estimating the fair market value of broadcast retransmission rights.

Kagan Research's publication *Economics of Basic Cable Networks 2005* provides data regarding basic cable networks.<sup>13</sup> For purposes of our analysis, we use data on 94 cable networks for 12 years (not all cable networks were in operation in every year), as depicted in Figure 1.<sup>14</sup> We adjust these data for inflation and then use an econometric technique (regression analysis) to estimate the overall average relationship between license fees and programming expenditures. See Appendix B. We apply the resulting relationship to programming expenditures by the ABC network in 2003 as reported by Kagan Research.<sup>15</sup> The result is an imputed monthly license fee that the ABC network could command as a basic cable network.<sup>16</sup> That number is \$3.00 per subscriber per month.

As indicated above, economic analysis of the cable industry suggests that we should also take into account the growing importance of cable advertising revenue. In theory, this should tend to reduce license fees. We account for this by including for each cable network an estimate of its advertising revenue in each year. The result is that the imputed monthly license fee for the ABC network drops to \$2.81 for the year 2003.

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<sup>13</sup> The FCC regularly relies on the industry statistics and projections by Kagan Research in its rulemaking decisions and analyses of the video industry. See, e.g., FCC, *Tenth Annual Report, Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, MB-Docket 03-172.

<sup>14</sup> The *Economics of Basic Cable Networks 2005* lists subscriber, license fee and programming expense data for 120 cable networks. For various reasons, 26 networks were excluded from the analysis—8 had data starting only in 2004; 9 had only one year of usable data; 3 were premium networks for part of the time period; 5 were Spanish language; and 1 was a delayed feed of another.

<sup>15</sup> Kagan Research, "Broadcast Network Economics, 2001-2003," *TV Program Investor*, May 27, 2004.

<sup>16</sup> The prediction relates to the average fee paid by all cable operators. To apply this methodology to an individual cable operator we would need to know that operator's license fees for the cable networks it carries and that operator's local advertising revenues per network.

As explained above, cable operators derive local advertising revenue from some cable networks. Broadcast station signals do not afford such an opportunity, and other things being equal this reduces the value of broadcast station signals to cable operators relative to cable networks that offer local advertising availabilities. To account for the value of local advertising availabilities to cable operators, we include a variable that measures the value of local cable advertising attributable to each cable network. The effect of this adjustment is to reduce the imputed value of the ABC network monthly license fee to \$2.27 per subscriber.

The preceding analysis may understate the value of the ABC Owned Station signals because it does not take into account the value of local and other non-network programming. Our evaluation of the ABC network if it were a basic cable channel omits any consideration of the local content of the ABC stations' signals. The cable networks used to estimate the value of ABC retransmission rights generally do not offer local content. If it were possible to take this into account it would likely increase the license fee that an ABC Owned Station signal could command above the value associated with the ABC network programming.

## CONCLUSION

Table 4 summarizes the estimated values of the ABC Owned Station signals from each of the three methods.

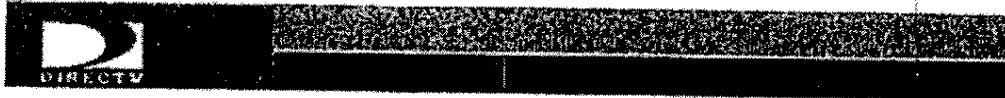
**Table 4: Summary of retransmission value estimates**

Market	DBS	Cable	Regression	Average
Flint	\$1.23, \$1.23	\$2.51	\$2.27	\$2.00
Philadelphia	\$0.97, \$0.97	\$2.53, \$3.06	\$2.27	\$2.01
Toledo	n.a.	\$1.90	\$2.27	\$2.09

If we give the average value of each method's estimate obtained within a market equal weight, we obtain the average valuation reported in the last column of Table 4. Using these averages, the fair market value of the retransmission right for the ABC Owned Station signals in the markets considered ranges from \$2.00 to \$2.09 per subscriber per month.



Appendix A: Sample DirecTV Monthly Statement



- [View Statements](#)
- [Payment History](#)
- [Customer Profile](#)
- [Payment Profile](#)
- [Terms and Conditions](#)
- [Logout](#)

**Monthly Statement**

**Billing Address:**  
 [REDACTED]  
 N  
 HERMOSA BEACH, CA  
 90254 [REDACTED]  
 [REDACTED]

**Service Address:**  
 [REDACTED]  
 [REDACTED]  
 HERMOSA BEACH, CA  
 90254 [REDACTED]



**Not Due**      **013937664**      **No payment due**

<b>Bill Statement Date</b>	<b>Previous Balance</b>	0.00
06/09/2004	( ) Payments and credits	15.98
	(+) Current charges and taxes	15.98
	<b>= AMOUNT DUE</b>	<b>\$0.00</b>

Access Card	Start	End	Description	Amount
			Previous Balance	0.00
	06/09/04		Payment - Thank You - VISA	-
<b>1405-353192</b>			<b>Subscriptions</b>	<b>15.98</b>
	06/08/04	07/07/04	Premier Bonus: You Save \$4.99 DIRECTV DVR	0.00
	06/08/04	07/07/04	Complimentary TOTAL CHOICE PREMIER	0.00
	06/08/04	07/07/04	Monthly Your Local Channels	6.00
<b>1382-142063</b>			<b>Subscriptions</b>	
	06/09/04		Additional Receiver	4.99
<b>1390-093225</b>			<b>Subscriptions</b>	
	06/09/04		Additional Receiver	4.99
			<b>AMOUNT DUE</b>	<b>\$0.00</b>

## Appendix B: A statistical model of television network license fees

The fees MVPDs (and ultimately, viewers) are willing to pay for programs depend on the quality of the programs provided. Higher perceived program quality, in turn, is directly related to program expense. Therefore, one would expect that license fees per subscriber would increase as program expenditure increases.<sup>17</sup>

An appropriate statistical model relates cable network license fees to their main determinants, program expenditures and network advertising revenues. Once this relationship is estimated, the estimated model predicts a fair market value fee for the broadcast networks. The general form of the statistical model is as follows:

$$\text{Fee}_{it} = \beta_0 + \beta_1 \cdot \text{Program Expense}_{it} + \beta_2 \cdot \text{Advertising Revenue}_{it} \\ + \beta_t \cdot \text{Year Dummy} + \varepsilon_{it}$$

where Fee is the average per-subscriber per-month licensing fee, Program Expense is the annual program expenditure, Advertising Revenue is the annual net advertising revenue,  $\varepsilon$  is a statistical error term, subscript  $i$  indicates network  $i$ , and subscript  $t$  indicates year  $t$ . The model allows for individual year-specific effects,  $\beta_t$ .

Two changes were made to this general form for the final version of the regression. First, since the license fee may depend on the ability of the cable operator to insert local advertising, a variable was included to account for local cable advertising revenue attributable to each network.<sup>18</sup> In addition, the intercept term,  $\beta_0$ , is allowed to

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<sup>17</sup> Data on license fees, program expenditures and the number of subscribers for 94 basic cable networks are obtained from Kagan Research, *Economics of Basic Cable Networks 2005: Key Spreadsheets*, June 2004. While Kagan provides data for 120 cable networks, 26 networks were excluded from the analysis. See footnote 13.

<sup>18</sup> Total local cable advertising revenue is from Paul Kagan Associates, *The Kagan Media Index*, September 30, 2000, and *Kagan Media Money*, August 29, 2003. The percentage of local ad revenue attributable to each cable network is from "Average Share of Local Cable Ad Revenue by Network," Paul Kagan Associates, *Broadband Advertising*, December 13, 2001. Data on the share of local cable ad revenue were available only through 2000. Shares for 2001, 2002, and 2003 are assumed to be the same as in 2000.

vary by network, using the assumption that the intercept will be a function of the average program expenditure of the network over the observed period.

The equation estimated is

$$\begin{aligned} \text{Fee}_{it} = & \beta_0 \cdot \text{Average Program Expense}_i + \beta_1 \cdot \text{Program Expense}_{it} \\ & + \beta_2 \cdot \text{Advertising Revenue}_{it} + \beta_3 \cdot \text{Local Advertising Revenue}_{it} \\ & + \beta_t \cdot \text{Year Dummy} + \varepsilon_{it} \end{aligned}$$

where Average Program Expense is the average program expense over the period for which there exist data for the network and Local Advertising Revenue is the average per-subscriber per-month local advertising revenue.

All variables are expressed in real 2003 dollars, using the GDP implicit price deflator. Standard (OLS) estimation of the model produces the following results:<sup>19</sup>

**Model estimation results**

F: 431.4		Pr > F: <.0001		
R <sup>2</sup> : 0.9007		Root MSE: 0.0574		
Parameter	Estimate	T-value for H <sub>0</sub> :Parameter=0	Pr >  T	Std. Error of Estimate
β <sub>0</sub>	0.0001765	4.74	<.0001	0.0000372
β <sub>1</sub>	0.0009072	26.55	<.0001	0.0000342
β <sub>2</sub>	-0.0003077	-12.35	<.0001	0.0000249
β <sub>3</sub>	0.3718	8.57	<.0001	0.04341
β <sub>2003</sub>	0.05161	8.34	<.0001	0.00619

<sup>19</sup> The last term in the model is an error term, which is the difference between the predicted results and the actual observation. OLS, ordinary least squares, is a procedure that minimizes the sum of the squares of the error terms—hence, the phrase “least squares.” The OLS estimator is a standard statistical procedure that gives the best, straight-line, unbiased estimate of the relationship between the variables.