

Before the
COPYRIGHT ARBITRATION ROYALTY PANELS
Library of Congress

ORIGINAL

Copyright Arbitration Royalty Panels)	
Satellite Carrier Royalty Rate)	Docket No. 96-3 CARP SRA
Adjustment Proceeding)	

DIRECT CASE OF PUBLIC TELEVISION

VOLUME I

GENERAL COUNSEL
OF COPYRIGHT

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Direct Testimony of PBS Witnesses

Linda McLaughlin
John Wilson

and

PTV Exhibits 1 - 10

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December 2, 1996

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Satellite Carrier Royalty Rate)
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Docket No. 96-3 CARP SRA

**INTRODUCTION TO THE
DIRECT CASE OF PUBLIC TELEVISION**

On behalf of the Public Television Claimants, the Public Broadcasting Service ("PBS") hereby respectfully submits its direct case in the Satellite Carrier Royalty Rate Adjustment Proceeding. The case is presented principally through the testimony of two witnesses: Linda McLaughlin, an economist with the National Economic Research Associates ("NERA"), who has prepared an estimate of the minimum value of all types of retransmitted broadcast signals for satellite operators; and John Wilson, a programming executive with PBS, who discusses the reasons that public television signals have substantial and unique value for the satellite operators who retransmit them.

PBS requests that the royalty rates for satellite carrier retransmission of network and superstation signals be set at the level of 35 cents per subscriber per month for 1997, 36 cents per subscriber per month for 1998, and 38 cents per subscriber per month in 1999. For purposes of the satellite carrier royalty rates, public television signals are included in the definition of network signals.

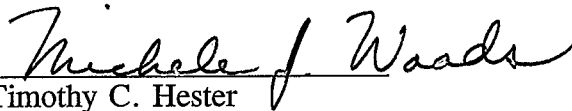
The principal elements of PBS's case can be briefly summarized:

- Using license fees paid for the carriage of cable networks, a benchmark rate can be derived that establishes a minimum estimate of the fair market value of all types of broadcast signals retransmitted by satellite carriers. This benchmark rate can be projected to result in an average rate of 27 cents for 1997-99. This analysis does not take into account any additional factors that make broadcast signals more valuable than basic cable channels, and thus worth more than the minimum rate calculated based on cable license fees.
- The benchmark minimum value for all broadcast signals is the same for retransmitted network (including PBS) and superstation signals. There is no basis for setting different minimum rates for the two types of signals.
- Public television signals are uniquely valuable to satellite carriers retransmitting public television programming to subscribers in "white areas": they provide highly desirable, diverse programming that simply is not available from any commercial programming source.
- The value of public television signals is far greater than both the current network royalty rate and the cable network programming aimed at imitating certain aspects of public television programming. Objective and subjective indicia of value show that retransmitted public television signals are clearly worth more to satellite operators than many basic cable networks, thus reinforcing the conclusion that the rates paid for cable networks establish the minimum benchmark for satellite royalty rates.

Volume I of PBS's direct case includes the testimony of its witnesses and certain documentary exhibits. Volume II includes additional exhibits that highlight and illustrate the points addressed in Mr. Wilson's testimony. Immediately following this

introduction is a list of excerpts of the records from prior proceedings that PBS hereby incorporates by reference.

Respectfully submitted,



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DESIGNATION OF PRIOR RECORD EVIDENCE

As part of their 1996 satellite rate proceeding direct case, the Public Television Claimants hereby incorporate by reference the written and oral testimony provided by the following witnesses. The Public Television Claimants reserve the right to designate additional prior testimony should the need arise during this proceeding.

1989 Cable Distribution Proceeding

Peggy Charren -- PBS

Sharon Percy Rockefeller -- PBS

Charles McC. Mathias -- PBS

Marsha Leopard -- PBS

1990-92 Cable Distribution Proceeding

Robert Sieber -- Program Suppliers --

excerpt at PTV Exhibit 20

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**AN ESTIMATE OF THE MINIMUM COMPULSORY
FEE FOR SATELLITE-RETRANSMITTED
BROADCAST STATIONS**

Prepared by

Linda McLaughlin

National Economic Research Associates, Inc.

November 27, 1996

I. QUALIFICATIONS AND SUMMARY

I am an economist and a Vice President of National Economic Research Associates, Inc. I have conducted research on broadcast, cable and satellite television and copyright licensing issues for the past twenty years. My recent research projects include the likely performance of a start-up satellite service, the effect of proposed FCC rules concerning cable rates and broadcast television network-affiliate relations, the competitive impact of cable system advertising representative agreements, and the characteristics of local television stations added to cable systems as a result of the must-carry law. A detailed statement of my qualifications is set out in Attachment A.

Counsel for PBS asked me to assess the current compulsory fee for the retransmission of broadcast stations by satellite carriers to home satellite dish owners, including the retransmission of network and PBS stations in white areas,¹ and to determine a minimum compulsory fee for 1997-99 in accord with the statutory criteria.

I conclude that the current fees are less than the fair market value of the signals. The retransmitted stations have equal or greater value than the popular basic cable networks with which they compete for distribution to satellite homes. In 1992, the average license fee for a group of 12 popular basic cable networks was 18 cents per subscriber per month, approximately the same as the maximum compulsory fee. The average license fee for these networks increased to 24 cents in 1995 and is expected to increase further to an average of 27 cents in 1997-99. The market value of all types of broadcast stations retransmitted to satellite homes—network and PBS stations and superstations—is at least as high as the average license fee for these competitive networks. This average license fee is a minimum value for the compulsory fee that does not take into account attributes of the retransmitted broadcast signals that suggest their higher market value.

¹ White-area homes are those not served by a network or PBS station over the air or via cable within the last 90 days.

In addition, I conclude that a fee at least as high as the average rate charged for these popular basic cable networks will not have a significant adverse effect on the ability of satellite carriers to retransmit the stations nor curtail the availability of secondary transmissions to the public.

II. A BASIC CABLE NETWORK BENCHMARK

In this section, I explain why I use the average price of popular basic cable networks as a minimum benchmark for the compulsory license fee for all types of satellite-retransmitted stations. My approach is based on the fair market value of the satellite-retransmitted stations. In summary:

- Satellite retransmission of broadcast stations is a secondary market. Prices in such secondary markets are based on the demand for the programming given the prices and attractiveness of alternative programming. For satellite homes, the closest alternative programming is popular basic cable networks.
- Consumers value network and PBS stations and superstations at least as highly as popular basic cable networks, and watch them at least as much. As a result, satellite distributors would be willing to pay at least as much for the retransmitted network and PBS stations and superstations as they pay for the popular basic cable networks.
- The average license fee for popular basic cable networks is a good estimate of the minimum price satellite distributors pay for the programming rights to basic cable networks, rights that are comparable to the compulsory license. There is no need to adjust for extra satellite carrier distribution cost or the availability of advertising inserts in order to estimate the value of the compulsory license. The only adjustment needed is a projection to the future time period covered by the compulsory fee.

A. Prices in Secondary Programming Markets

Satellite retransmission is a secondary market for the affected stations. Secondary markets for program rights are common; examples include theatrical motion pictures sold to television networks or network TV series sold in syndication. Program prices in

secondary markets are determined by demand in the secondary market.² This does not mean that any revenue from the secondary market has no effect on the supply of programming. Initially, the quantity and quality of the retransmitted broadcast stations, including programming decisions, depend on conditions in the primary broadcast market. However, once the secondary market is established, the station's subsequent programming decisions are affected by expected revenues from the secondary market as well as the primary market.

The secondary market demand for the retransmitted stations depends on the other alternatives available to satellite homes, the relative attractiveness of those alternatives and their prices. Basic cable networks are the closest alternative programming available to satellite homes in the white areas where network and PBS stations are retransmitted.³ Basic cable networks compete with broadcast stations retransmitted to satellite homes at the consumer level (when dish owners are choosing programming services) and at the distributor level (when satellite carriers and other distributors are selecting the programming to resell to consumers). The satellite homes choose which basic cable networks and retransmitted stations to purchase and then choose from among both sources of programs in deciding what programs to watch at a particular time.

B. Relative Values of Retransmitted Stations and Popular Basic Cable Networks

Surveys of relative attractiveness show that consumers typically value broadcast stations as highly or more highly than popular basic cable networks. For example, based on a 1993 survey that asked consumers to split a dollar figure between broadcast stations and basic

² The only supply-side consideration in most secondary programming markets is the additional cost of distribution to the secondary market, an amount that is typically small relative to the demand-side value of the programming. The role of distribution cost in establishing programming prices in the satellite market is discussed below.

³ Stations retransmitted by cable are not alternatives to network and PBS stations retransmitted to satellite homes. Satellite carriers are permitted to retransmit network and PBS stations only to white-area homes which are unlikely to have the option of subscribing to cable. Moreover, to the extent that there is competition between cable systems and satellite services, the cable systems are likely to offer local, rather than distant, network and PBS stations. As a result, cable compulsory rates for distant signals are not relevant to any such competition. Further, negotiated rates for cable retransmitted local stations are likely to be influenced by their ability to be received over the air, a situation not applicable in white areas.

cable networks,⁴ consumers assigned a value of \$2.04 per station, on average, for stations affiliated with the three major networks, a primary PBS station and superstation WTBS versus \$1.69 per network, on average, to the five popular basic cable networks reported.⁵ (See Table 1.)

Although the highest-rated networks and stations are not necessarily those consumers value most highly in making their subscription decisions, I note that ratings for network affiliates, PBS stations and superstations are also as high or higher than popular basic cable networks. For example, in cable homes—which have a choice of basic cable networks and broadcast stations—total-day ratings for the major network affiliates, public stations and reported superstations equal or exceed the average ratings of the 12 basic cable networks with near-universal cable distribution.⁶ (See Table 2.)

Given these consumer preferences, satellite homes would likely value retransmitted broadcast stations—whether network or PBS stations or superstations—at least as highly as popular basic cable networks, and satellite distributors would likely be willing to pay at least as much for the retransmitted broadcast stations as they do for popular basic cable networks. In fact, these consumer data suggest that the retransmitted stations (and particularly the network and PBS stations) are valued more highly than popular basic cable networks.

Under the current compulsory license scheme, satellite carriers pay six cents per subscriber per month for retransmitted network and PBS stations, and 17.5 cents for superstations.⁷ In considering the fair market value of broadcast station signals, I have found no

⁴ For these purposes, it does not matter whether the survey revealed the amount consumers were willing to pay to receive local broadcast stations via cable (rather than over the air) or whether it revealed the exact value of the broadcast stations and basic cable channels. What is relevant is the relative value of each type of programming.

⁵ The average value for other basic cable networks, although not separately reported, was apparently below that of the five popular cable channels based on reported aggregate value for the two groups and the number of channels on the targeted cable systems. (Norman Hecht Research, Inc., "Cable Subscribers' Valuation of Broadcast and Cable Channels on Two Cable Systems," April, 1993.)

⁶ The table compares broadcast station viewing with that of 12 widely distributed basic cable networks because these 12 are likely to be available to the typical cable and satellite home. The same conclusion would apply to a comparison with the five popular basic cable networks included in the Hecht survey, a subset of these 12.

⁷ There is also a separate 14 cent rate for "syndex-proof" superstations.

basis that supports a lower value for network and PBS stations than for superstations. The benchmark I establish applies to all categories of broadcast signals as a minimum value.

C. The Appropriate Price for Use as a Benchmark

Because the compulsory fee at issue here covers only the right to retransmit broadcast station programming and not the actual retransmission of the signals (which is performed by the satellite carriers), the benchmark basic cable network price for purposes of this analysis should also cover programming rights and not the distribution of the basic cable networks to satellite homes. An estimate of such a benchmark price exists. When basic cable networks sell to satellite distributors, the networks incur extra costs of distribution and pass on these extra costs to the satellite distributors. The price to satellite distributors before these (and any other) extra costs is approximately the same as the price to cable operators.⁸

Satellite carriers have subscriber volumes in the range of an average-size cable operator.⁹ Thus, an estimate of the satellite distributor price for the basic cable programming rights should be based on the average price of the basic cable networks which principally reflects the price charged to average-size cable operators, and not the top-of-the-rate-card price paid by small cable operators.

Moreover, the extra cost of basic cable network distribution to satellite homes is similar to the cost of retransmitting broadcast stations to satellite homes.¹⁰ Thus, if the compulsory fee for satellite retransmission rights were set at the average basic cable network

⁸ The 1992 Cable Act prohibits discrimination by vertically integrated cable networks; that is, it prohibits different prices other than those due to differences in costs or volume. Satellite distributors complained that they were being charged discriminatorily high prices but the FCC recognized that pricing differentials with respect to home satellite distributors may be justified, particularly due to distribution cost differences. The FCC referred the distributors to its case-by-case complaint procedure. (FCC CS Docket No. 94-48, First Report, September 28, 1994, Par. 183.) Most of the 12 basic cable networks were vertically integrated between 1992 and 1995, and so presumably charged satellite distributors prices in excess of cable operator prices by an amount explained by cost and volume differences, including incremental satellite distribution cost.

⁹ According to CDC data, individual satellite carriers had 500,000 to two million subscribers at the end of 1995. This is equivalent to the seventh through twenty-first largest cable operator, larger than the many cable operators with far fewer subscribers but smaller than the top four operators which serve over half the cable subscribers. (*The Cable TV Financial Data Book*, 1996, pp. 10, 16 and 17.)

¹⁰ See summary of comments of satellite carriers and cable programmers, both of which are subject to the same nondiscrimination provision, concerning cost of satellite distribution. (FCC MM Docket No. 92-265, First Report and Order, April 30, 1993, Appendix C, Pars. 48-50.)

price, satellite distributors would be paying at least as much for the basic cable networks (average price plus extra charge for extra distribution cost) as for the retransmitted stations (compulsory fee plus satellite carrier distribution cost).

In establishing a benchmark price for satellite retransmission of broadcast signals, there is no need to reduce the fee satellite distributors pay for programming rights to basic cable networks to take account of advertising inserted by either the network or the distributor. First, both basic cable networks and retransmitted commercial stations contain national advertising. Any gain of extra advertising revenue due to additional measurable audience from distribution to satellite homes is already reflected in the basic cable network price. No further adjustment is necessary to pick up any value to the retransmitted stations of reaching a slightly wider audience.¹¹

Second, neither basic cable networks nor retransmitted stations typically contain advertising inserted by the satellite distributor.¹² The lack of satellite-distributor-inserted advertising on basic cable networks is unlikely to mean that satellite distributors pay lower prices for the networks. While cable operators benefit from the ability to insert advertising (which would increase their willingness to pay higher basic cable network prices), they also suffer from the requirement to provide expensive cable system capacity in order to distribute the basic cable network (which would reduce their willingness to pay). On balance, cable operators likely have a higher net cost of distributing a basic cable network to consumers than satellite distributors do.

¹¹ Basic cable networks that have not yet achieved widespread cable penetration offer lower, promotional prices because of the value of additional audiences to sell to their advertisers and the reputational value of increased carriage. For the same reason, the price for Fox Net, the basic cable network version of Fox network programming for areas with no local Fox affiliate, is likely to be promotional. Promotional prices are not a good benchmark for the compulsory rate. Setting a fee based on regular prices rather than promotional prices will not discourage broadcast stations that want to expand distribution via satellite because they are free to negotiate rates below the compulsory level. Therefore, new and growing networks (and FoxNet) are not included in the basic cable network benchmark used here.

¹² This may be changing in both cases. Earlier this year Direct Broadcast Satellite operators were negotiating to insert their own national advertising in the "local" advertising availabilities provided by basic cable networks. (*Cable TV Programming*, February 29, 1996, p. 1.) In addition, I understand that one satellite carrier is permitted to insert its own ads on WRAL and WNBC in return for sharing the ad revenue with the stations.

If basic cable networks were not prohibited from charging differential prices based on the costs and benefits to the distributor of carrying the network, they would charge higher prices to satellite distributors.¹³

D. The Benchmark Cable Network Price

Taking all these factors into account, I have calculated a basic cable network benchmark price and used it to estimate a minimum compulsory fee for satellite-retransmitted broadcast stations. The average license fee of the 12 popular basic cable networks was 18 cents in 1992¹⁴—when the maximum satellite compulsory rate was 17.5 cents—and has risen to 24 cents in 1995, an annual increase of ten percent per year.¹⁵ (See Table 3.) The license fees for these 12 basic cable networks are forecast to increase to an average of 26 cents in 1997, 27 cents in 1998 and 28 cents in 1999.¹⁶ This suggests that the compulsory rate for satellite-retransmitted stations should increase at least correspondingly with the average prices for basic cable networks, to average at least 27 cents in the 1997-99 period. The amount satellite distributors pay for popular basic cable networks is a minimum benchmark, not adjusted for the extra value of the retransmitted stations relative to basic cable networks.

¹³ For example, vertically integrated cable programmers wanted to claim that satellite distributors had lower costs in order to justify higher prices for satellite distributors. The FCC recognized that satellite distributor costs might be lower than cable operator costs but did not allow this type of cost justification. (FCC MM Docket No. 92-265, First Report and Order, April 30, 1993, Par. 107.)

¹⁴ While the 18 cent rate is similar to the rate the Arbitration Panel cited in its March 2, 1992 decision, the two numbers were calculated in different ways. The primary difference is the number of basic cable networks included. The Panel number is the average license fees for four basic cable networks (TNT, Nickelodeon, USA and A&E) in 1993, less an estimated five cents for the value of insertable advertising. The number shown on Table 3 is the average for 12 basic cable networks (the four used by the Panel plus eight others) in 1992, with no deduction for insertable advertising as explained above. In addition, average license fee data in Table 3 are calculated based on paying subscribers, rather than all reported subscribers which were apparently used in the calculation cited by the Panel.

¹⁵ The average price for the five popular basic cable networks included in the Hecht survey was somewhat higher but increased at the same rate: from 24 cents per subscriber per month in 1992 to 31 cents in 1995, an annual increase of ten percent.

¹⁶ The 1998 and 1999 forecast is based on the projected annual growth rate for all basic cable network license fees per subscriber per month between 1997 and 1999, about five percent per year. In prior years (i.e., 1992 to 1997) the average annual growth rate in license fees for the 12 popular basic cable networks was approximately the same as for all basic cable networks. (*Cable TV Programming*, September 30, 1994, p. 2, September 30, 1995, p. 2, and September 30, 1996, p.2.)

III. IMPACT OF HIGHER FEES ON SATELLITE CARRIERS AND AVAILABILITY OF SECONDARY TRANSMISSIONS

In addition to the factors I considered in determining the basic cable network minimum benchmark, the statute establishing the compulsory license for satellite retransmission of broadcast signals lists other factors to consider in looking at fair market value. In particular, the statute mentions the impact of the fees on satellite carriers and on the continued availability of secondary transmission to the public. In this section, I show why the increase in the compulsory fee to an average of 27 cents in 1997-99 is unlikely to harm satellite carriers or restrict the availability of secondary transmissions. In summary:

- The growth in the number of satellite homes has been, and will continue to be, an important influence on satellite carriers and their retransmission of broadcast stations, and on satellite distributors and their carriage of basic cable networks. Because of this growth, neither the May 1992 increase in the compulsory fee, nor the 1992-95 increase in license fees for popular basic cable networks, had any significant adverse effect on satellite carriers or consumers. Similarly, because of expected growth, an increase in the compulsory license fee to the level set by the basic cable network benchmark should have no significant adverse effect on the continued willingness of satellite carriers to retransmit broadcast signals and on their continued ability to profit from these retransmissions.
- An increase in the network and PBS compulsory license fee to the general rate level would have no significant adverse effect on satellite carriers or consumers. Retail prices of popular basic cable networks are similar to those of retransmitted network and PBS stations, despite the license fee differences. Further, expansion of network and PBS station transmissions, and other transmissions with limited audiences, shows that no special discount is needed to account for the limited size of the white areas.

A. Growth in Satellite Homes, Retransmissions and Profits

An increase in the compulsory license fee should not slow the rapid growth of the satellite industry. The number of satellite subscribers has grown rapidly since 1989, when the satellite compulsory rate was first established, and it is expected to continue to grow through

1999, the end of the compulsory rate period. (See Table 4.) Initially, the growth was spurred by better encryption technology, which served to convert more C-Band dish owners into subscribers. More recently, the growth was due to the establishment of direct broadcast satellites (DBS) such as PrimeStar, DirecTV and Echostar. In the future, the number of DBS subscribers is expected to continue its rapid growth, while the number of C-Band subscribers declines slightly. This growth has thus more than offset any negative impact of the increase in satellite compulsory rates in May 1992 and basic cable license fees between 1992 and 1995. It is likely also to overwhelm any adverse effects from an increase in compulsory rates to 27 cents in 1997-99.

The May 1992 increase in compulsory satellite license fees had no apparent adverse effect on the availability of secondary transmissions. There were no changes in the number of stations retransmitted to satellite homes in the second half of 1992 or the first half of 1993. (See Table 5.) Further, the number of subscribers to retransmitted stations increased commensurately with satellite homes in 1992 and 1993. (See Table 6.) Moreover, the May 1992 increase in fees apparently had no adverse effect on satellite carriers. United Video Satellite Group, the parent of UVTV (a carrier of retransmitted stations to cable and satellite homes) and Superstar (a distributor of retransmitted stations and cable networks to satellite homes), reported increased sales and operating profits for both these divisions. (See Table 7.)

Similarly, the increase in the satellite distributors' programming rights cost for the 12 popular basic cable networks between 1992 and 1995 had no apparent adverse impact on their availability to satellite homes. All these basic cable networks were available to satellite homes throughout the 1992-1995 period¹⁷ and their subscribers grew due to the rollout of DBS service. Further, while United Video reports that programming costs accounted for an increased portion of Superstar's revenue between 1992 and 1994, it also reports increased profits due to increases in subscribers.¹⁸ Forecasts of future increases in basic cable network prices have not

¹⁷ If anything, they are more widely available today since they are included in more popular packages. For example, today these 12 networks are included in Netlink's "One Stop", Primetime 24's "AmericaPak" and Superstar's "SuperView" but in 1991 Netlink offered only ten of these networks, Primetime 24 only six and Superstar only nine. (*Orbit*, September 1996 and March 1991.)

¹⁸ United Video Satellite Group, SEC Form 10-K, 1994 (from Disclosure).

diminished forecasts of future growth in satellite homes and basic cable network subscribers among satellite homes.¹⁹ This suggests that a similar increase in compulsory satellite retransmission fees would not hurt the carriers or the availability of secondary retransmissions.

B. The Network and PBS Station Rate

An increase in the compulsory rate for retransmitted network and PBS stations to equal the general rate is consistent with an approach that sets license fees based on fair market value and would not unreasonably burden satellite carriers or curtail retransmissions. Despite the difference between the compulsory rate (6 cents) and license fees for the 12 popular basic cable networks (average of 24 cents in 1995), the retail prices of retransmitted network and PBS stations are not substantially lower than the retail prices for those basic cable networks. Satellite distributors generally offer consumers various program packages made up of different combinations of cable networks and broadcast signals. The "create-your-own" package option offered by National Programming Service (NPS) allows a focused comparison on these particular basic cable networks and retransmitted stations: NPS charges \$11.75 for the 12 basic cable networks included in my benchmark calculation (98 cents each)²⁰ and \$3.45 to \$3.60 (86 to 90 cents each) for the three network stations and one PBS station. (See Table 8.) Other satellite distributors sell the retransmitted network and PBS stations in broadcast station packages at prices ranging from 70 cents to \$1.10 per station.²¹ Superstar puts the 12 popular basic cable networks on an equal plane with the retransmitted network and PBS stations in its create-your-own package, which allows subscribers to choose any 12 of these (and other)

¹⁹ Paul Kagan Associates forecast both a five percent annual increase in basic cable license fees per subscriber between 1995 and 1999 and a more than doubling of satellite homes in the same period. (See sources on Table 3 and 4.) In addition, Kagan increased its forecast for the basic cable network sector due to the expansion of the new video delivery technologies including Direct Broadcast Satellite. (*Cable TV Programming*, July 31, 1995, p. 1 and September 30, 1995, p. 1.)

²⁰ Six additional basic cable networks (History, CNNi, VH1, The Learning Channel, Outdoor and Sci-Fi) are included for the same price. These channels are not included in the average.

²¹ Package prices range from \$3.50 to \$5.50 for the Denver 5 (three network, one PBS and one independent station) and from \$3.99 to \$5.00 for four network stations and one PBS station. Data are based on monthly prices supplied by DirecTV, Echostar, PrimeStar, Turner Home Satellite, Disney Channel Home Satellite Services, Superstar Satellite Entertainment, Showtime Satellite Services and Netlink over the telephone in late August and early September, 1996.

channels for \$12.50.²²

One possible argument for having a lower compulsory license fee for network and PBS stations is that the satellite carriers are permitted to retransmit these signals only to white areas. I conclude that it would not be appropriate to discount the compulsory fee to take account of the white-area limitation on retransmission. Current rates are so low compared to demand that satellite carriers increased the number of network signals uplinked (e.g., the addition of Prime Time West) and the number of uplinkers for the same station (e.g., Netlink and Primetime 24 both uplinking the PBS station KRMA) despite the increase in their fixed uplinking cost to do so. (See Tables 5 and 5A.)

Moreover, limited DBS subscribership is not associated with low programming rights fees relative to retail prices. Other optional satellite services that are chosen by only a portion of DBS subscribers, like premium cable networks and pay-per-view services, have higher license fees relative to their retail prices than retransmitted network and PBS signals. For example, Morgan Stanley estimates DirecTV's and Echostar's pay-per-view programming expenses at 50 percent or more of retail revenues and their premium programming expenses at 60 percent of retail revenues.²³ In contrast, the minimum benchmark fee I suggest for the retransmitted network and PBS stations is only about 30 percent of current retail prices. (See Tables 3 and 8.)

Further, the number of white-area subscribers is not so small when compared to the total number of cable and satellite subscribers obtained by long-carried "regional"

²² The 12 popular cable networks and retransmitted network, PBS and independent stations are also offered in larger packages containing other, less popular cable networks, at prices that average out to 40 to 55 cents per network. For example, Netlink's One Stop provides 43 channels for \$19.50 (45 cents each) for white-area homes or 37 channels for \$19.50 (53 cents each) for homes not receiving the retransmitted network and PBS stations and Fox Net. (Ads in *Orbit*, September 1996.)

²³ Morgan Stanley & Co., *Cable Television Metamorphosis—The Arrival of DBS and RBOC Competition*, September 15, 1995, pp. 25 and 35.

superstation WSBK. In 1995, both WSBK²⁴ and satellite-retransmitted PBS stations had 1.2 million subscribers. (See Table 6.)²⁵

In addition, white-area subscribers are projected to continue to grow as DBS service gains more subscribers in rural, noncabled areas. For example, Morgan Stanley estimated that about one-third of the homes in noncabled areas were C-Band or DBS home satellite subscribers (2.8 million subscribers) in 1995 and projected this penetration to rise to about half of the homes (4.4 million subscribers) by 1999. Accordingly, Morgan Stanley also projected that DirecTV's subscribers (which it expects to account for much of this increased penetration of noncabled areas) to retransmitted network stations would grow proportionately with DirecTV's total subscribers.²⁶ That is, as the number of DBS subscribers in white areas increases due to lower equipment prices and enhanced service offerings, more white-area homes will subscribe to retransmitted network and PBS stations.²⁷

For all these reasons, an increase in the compulsory rate for retransmitted network and PBS stations, as well as superstations, to at least an average of 27 cents for the 1997-99 period is consistent with the statutory fair-market-value criteria.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information and belief.

Nov 27, 1996
Date

Linda M. Lang
Signature

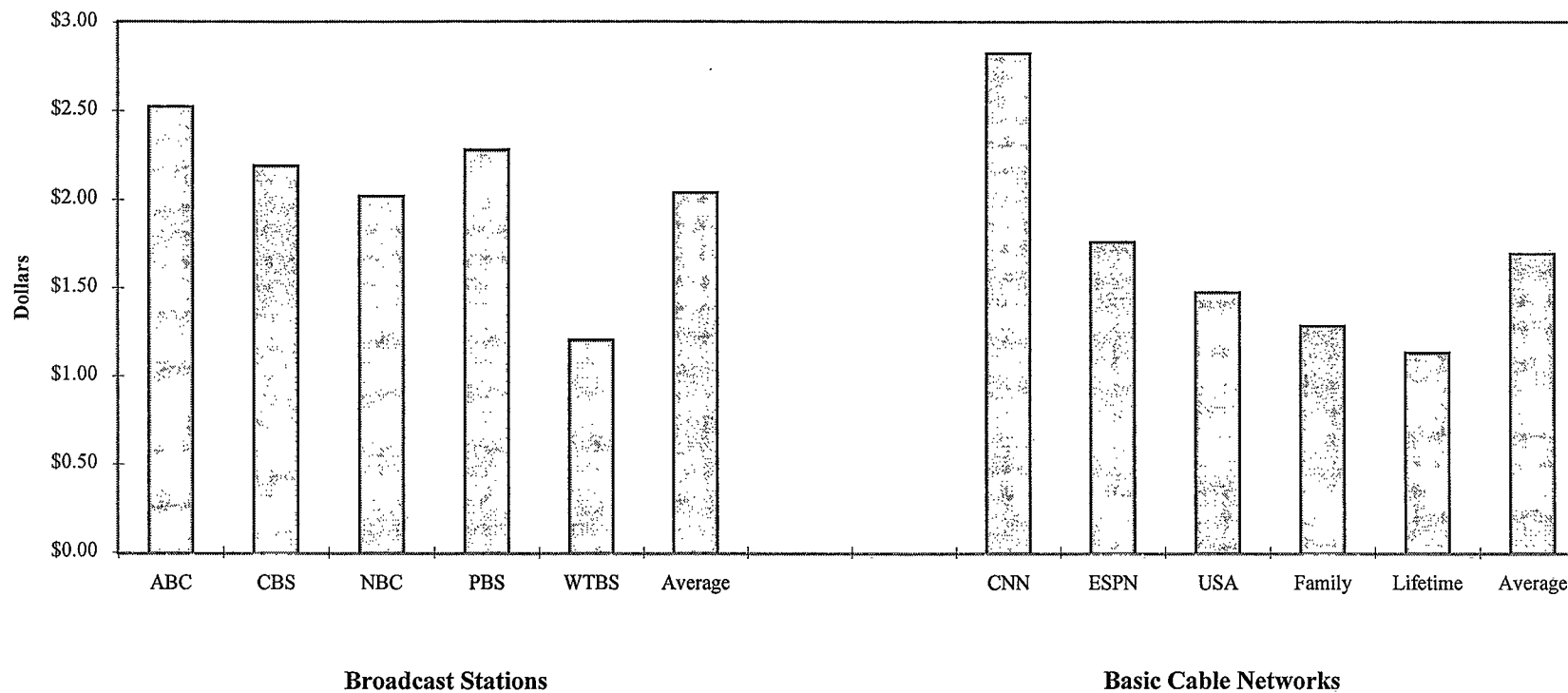
²⁴ *Cablevision*, June 5, 1995, p. 53.

²⁵ The subscribers to retransmitted PBS and network stations shown on Table 6 may include "illegal" subscribers outside white areas. Estimates of white-area households made in 1987-88 were about 800,000 to 1 million. (FCC GEN. Docket No. 86-336, Second Report, March 11, 1988, Par. 64 and footnote 41.)

²⁶ *Cable Television Metamorphosis*, pp. 83 and 86.

²⁷ If all current "illegal" subscribers were dropped, the total number of subscribers to retransmitted network and PBS stations might well decrease from current levels despite the increase in white-area subscribers.

Average Allocation For Individual Broadcast Stations and Basic Cable Networks



Note: Includes primary ABC, CBS and NBC network and PBS stations in survey.

Source: Norman Hecht Research, Inc., *Cable Subscribers' Valuation of Broadcast and Cable Channels on Two Cable Systems*, April 1993, p. 8.

TABLE 2

AVERAGE TOTAL-DAY RATINGS
In Cable Homes <1
1992-1995

	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>Average</u> <u>1992-95</u>
<u>12 Popular Cable Networks</u>					
A&E <2	0.47	0.57	0.75	0.70	0.62
CNN	0.68	0.58	0.60	0.93	0.70
DSC <2	0.58	0.55	0.55	0.63	0.58
ESPN	0.83	0.80	0.75	0.79	0.79
FAM	0.63	0.63	0.55	0.60	0.60
HNews	0.35	0.33	0.30	0.31	0.32
Life <2	0.63	0.65	0.65	0.84	0.69
MTV	0.48	0.50	0.53	0.48	0.50
Nick <2	1.10	1.08	1.00	1.46	1.16
TNN <2	0.55	0.53	0.50	0.50	0.52
TNT	0.98	0.95	0.90	1.03	0.96
USA	1.20	1.13	1.10	1.10	1.13
Average	0.71	0.69	0.68	0.78	0.71
<u>Broadcast Stations</u>					
ABC	4.65	5.07	4.89	4.41	4.76
CBS	4.96	5.07	4.89	4.10	4.76
NBC	4.96	4.44	4.56	4.41	4.59
PBS	0.77	0.89	1.07	0.83	0.89
WTBS	1.38	1.35	1.25	1.18	1.29
WGN <3	0.70	0.73	0.60	0.60	0.66
Average	2.91	2.93	2.88	2.59	2.82

1> Each cable network and superstation is rated in its own cable universe,
 broadcast network and PBS stations are rated in all cable homes.

2> Less than 24-hour day, e.g. 8am-4am.

3> The first and second quarters of 1992 and the first quarter of 1995 are not available.

Source:

Cable (except WGN): *Cable TV Programming*, December 20, 1995, p. 6 and
 February 29, 1996, p. 11.

Broadcast: *Cable TV Facts*, 1993, p. 22; 1994, p. 20; 1995, p. 20; 1996, p. 15.

WGN: *Cable TV Programming*, Day Part Ratings Averages, various issues.

TABLE 3

**AVERAGE LICENSE FEE PER SUBSCRIBER PER MONTH
12 POPULAR BASIC CABLE NETWORKS
1992-1995, 1997-1999**

	1992	1993	1994	1995	Forecast		
					1997	1998 <1	1999 <1
A&E	\$ 0.09	\$ 0.12	\$ 0.12	\$ 0.16	\$ 0.17		
CNN & HN	0.27	0.31	0.35	0.36	0.37		
Discovery	0.11	0.11	0.13	0.14	0.17		
ESPN	0.53	0.58	0.65	0.67	0.68		
FAM	0.08	0.10	0.11	0.12	0.14		
Lifetime	0.08	0.09	0.10	0.11	0.12		
MTV	0.12	0.13	0.14	0.15	0.18		
Nickelodeon	0.14	0.15	0.17	0.19	0.23		
TNN	0.11	0.13	0.14	0.15	0.16		
TNT	0.40	0.45	0.46	0.51	0.54		
USA	0.22	0.24	0.26	0.31	0.35		
Average <2	\$ 0.18	\$ 0.20	\$ 0.22	\$ 0.24	\$ 0.26	\$ 0.27	\$ 0.28

Annualized Percent Change 1992-95

10%

Note: Networks were selected based on 1992 to 1995 cable penetration of 90 percent or greater with the exception of Headline News (83 percent penetration in 1992), which was included because the combined CNN/HN license fee is reported. See *Cable TV Programming*, February 29, 1996, p. 6.

License fees were computed based on average subscribers for the year adjusted for an estimated 8 percent of subscribers reported as illegal (nonpaying). See *Cable TV Programming*, September 30, 1995, p. 5.

1> 1998 and 1999 forecast is based on the projected annual growth for all basic network license fees per subscriber per month between 1997 and 1999 of 4.7 percent per year. See *Cable TV Programming*, September 30, 1995, p. 2.

2> Sum of the license fees divided by 12, i.e., CNN and Headline News are counted as two services in computing the average, although they are sold to satellite distributors and consumers together. If CNN and Headline News were counted as one service in computing the average (so that the sum of the license fees were divided by 11), the average license fee would be slightly higher.

Source:

License Fees: 1992-94: Kagan's *Economics of Basic Cable Networks*, 1996.

1995, 1997: *Cable TV Programming*, September 30, 1996, p. 2.

Subscribers: 1992-94: Kagan's *Economics of Basic Cable Networks*, 1996.

1995-97: *Cable TV Programming*, February 29, 1996, p. 4.

DIRECT BROADCAST SATELLITE AND C-BAND HOME SATELLITE SUBSCRIBERS
1989-1999

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>
						--(000)--					
DBS	nr	nr	nr	nr	<70	602	2,200	4,800	7,100	9,000	10,500
C-Band	640	720	764	1,023	1,612	2,178	2,500	2,400	2,200	2,000	1,900
Total	640	720	764	1,023	1,682	2,780	4,700	7,200	9,300	11,000	12,400

nr = not reported

Source:

1989-90: *The Kagan Media Index*, July 31, 1996, p. 14.

1991-94: FCC, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, December 11, 1995, Table G-1.

1995-99: DBS: *The Kagan Media Index*, August 31, 1996, p. 2.

C-band: *The DBS Report*, August 11, 1995, p. 2.

SATELLITE RETRANSMITTED STATIONS
1989-1995

Type	Station	1989-1	1989-2	1990-1	1990-2	1991-1	1991-2	1992-1	1992-2	1993-1	1993-2	1994-1	1994-2	1995-1	1995-2
Independent	KTLA	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WGN	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WPIX	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	KTVT <1	X	X	X	X	X	X	X	X	X	X	X	X		
	WSBK	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WWOR	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WTBS	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	KWGN	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ABC Network	KUSA	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WABC	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WPLG											X	X	X	X
	KOMO												X	X	X
CBS Network	KMGH	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WBBM/WRAL<2	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WUSA											X	X	X	X
	KPIX												X	X	X
NBC Network	KCNC	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WXIA/WNBC<3	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WBZ/WHDH<4											X	X	X	X
	KNBC												X	X	X
PBS	KRMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	WHYY						X	X	X	X	X	X	X	X	X
Fox	KTVU				X	X	X	X	X	X		X	X	X	X
	KDVR	X										X	X	X	X
	WFLD												X	X	X
Total number of stations		16	15	15	16	16	17	17	17	17	16	21	25	24	24

1> Station dropped when switched from independent to network affiliate in 1995. See United Video Satellite Group, *SEC Form 10-K*, 1993 (from Disclosure).

2> Switched in 1992-1 from WBBM to WRAL.

3> Switched in 1995-2 from WXIA to WNBC.

4> WHDH was substituted for WBZ in 1995-1 when WBZ dropped its NBC affiliation and WHDH picked it up. See NAB, *Market-by-Market Review*, 1995.

Source: Cable Data Corporation, TVRO Systems, 1989-1995.

CARRIERS OF SATELLITE RETRANSMITTED STATIONS
1989-1995

Type	Station	First Carrier	Time Period		Second Carrier	Time Period		Third Carrier	Time Period	
			From	To		From	To		From	To
Independent	KTLA	UVTV	89-1	95-2	PrimeStar	90-2	93-2	Netlink	89-1	91-2
	WGN	UVTV	89-1	95-2	PrimeStar	90-2	94-1			
	WPIX	UVTV	89-1	95-2	PrimeStar	90-2	94-1			
	KTVT	UVTV	89-1	94-2 <1						
	WSBK	EMI	89-1	95-2	PrimeStar	90-2	93-1	DirecTV	94-1	95-2
	WWOR	EMI	89-1	95-2	PrimeStar	90-2	93-1			
	WTBS	SSS	89-1	95-2	PrimeStar	90-2	95-2			
	KWGN	Netlink	89-1	95-2						
ABC Network	KUSA	Netlink	89-1	95-2						
	WABC	Primetime 24	89-1	95-2						
	WPLG	Netlink	94-1	95-2	PrimeStar	94-1	95-2			
	KOMO	Primetime 24	94-2	95-2						
CBS Network	KMGH	Netlink	89-1	95-2						
	WBBM/WRAL<2	Primetime 24	89-1	95-2						
	WUSA	Netlink	94-1	95-2	PrimeStar	94-1	95-2			
	KPIX	Primetime 24	94-2	95-2						
NBC Network	KCNC	Netlink	89-1	95-2						
	WXIA/WNBC<3	Primetime 24	89-1	95-2						
	WBZ/WHDH<4	Netlink	94-1	95-2	PrimeStar	94-1	95-2			
	KNBC	Primetime 24	94-2	95-2						
PBS	KRMA	Netlink	89-1	95-2	Primetime 24	94-2	95-2			
	WHYY	PrimeStar	91-2	95-2						
Fox	KTVU	PrimeStar	90-2	95-2 <5						
	KDVR	Netlink	89-1, 94-1 <6	95-2						
	WFLD	Primetime 24	94-2	95-2						

1> Station dropped when switched from independent to network affiliate in 1995. See United Video Satellite Group, *SEC Form 10-K*, 1993 (from Disclosure).

2> Switch in 1992-1 from WBBM to WRAL.

3> Switch in 1995-2 from WXIA to WNBC.

4> WHDH was substituted for WBZ in 1995-1 when WBZ dropped its NBC affiliation and WHDH picked it up. See NAB, *Market-by-Market Review*, 1995.

5> Station not carried during 1993-2.

6> Station carried in 1989-1 and then from 1994-1 to 1995-2.

Source: *Cable Data Corporation*, TVRO Systems, 1989-1995.

TABLE SA

TABLE 6

**AVERAGE SUBSCRIBERS
SELECTED SATELLITE RETRANSMITTED STATIONS
AND TOTAL HOME SATELLITE
1989-1995**

	<u>PBS <1</u>	<u>ABC <2</u>	<u>WTBS</u>	<u>Total Home Satellite Subscribers</u>	<u>As A Percent of Total Home Satellite</u>		
					<u>PBS</u>	<u>ABC</u>	<u>WTBS</u>
1989	89,392	146,678	278,369	520,000	17%	28%	54%
1990	149,211	252,556	414,043	680,000	22%	37%	61%
1991	197,317	351,417	526,394	742,000	27%	47%	71%
1992	284,516	548,170	708,399	893,500	32%	61%	79%
1993	433,189	944,331	1,161,320	1,352,500	32%	70%	86%
1994	597,365	1,505,890	1,787,226	2,231,000	27%	67%	80%
1995	1,173,278	2,465,599	3,088,304	3,740,000	31%	66%	83%

1> KRMA and WHYY.

2> KUSA, KOMO, WABC and WPLG.

Source:

Retransmitted Stations: Table 6A.

Home Satellite: Table 4.

**SUBSCRIBERS TO SELECTED SATELLITE RESTRANSMITTED STATIONS
1989-1995**

	PBS			ABC					WTBS		
	NetLink	Primetime 24	PrimeStar	NetLink	NetLink	Primetime 24	Primetime 24	PrimeStar	PrimeStar	DirecTV	SSS
	<u>KRMA</u>	<u>KRMA</u>	<u>WHYY</u>	<u>KUSA</u>	<u>WPLG</u>	<u>KOMO</u>	<u>WABC</u>	<u>WPLG</u>			
1989-1	71,617			71,617			49,989				236,606
1989-2	107,167			94,911			76,839				320,132
1990-1	135,033			122,244			102,772				383,179
1990-2	163,389			150,683			129,411		121		444,786
1991-1	181,311			168,944			150,628		2,021		497,060
1991-2	206,706		6,617	195,767			187,494		8,192		545,517
1992-1	235,996		22,029	232,350			255,446		22,316		615,982
1992-2	273,628		37,379	275,442			333,103		37,380		741,120
1993-1	335,417		52,184	341,592			474,472		52,183		956,520
1993-2	415,369		63,408	427,869			644,728		63,407		1,250,529
1994-1	475,606		63,148	481,878	19,783		788,639	7,758	69,154	736	1,500,298
1994-2	536,314	26,053	93,610	525,522	107,292	37,936	949,342	93,631	141,821	97,867	1,764,576
1995-1	564,058	186,136	249,337	531,400	174,733	137,028	1,153,022	251,092	373,720	440,861	1,900,149
1995-2	562,431	346,511	438,084	521,514	194,478	202,881	1,327,581	437,469	740,232	768,439	1,953,207

Note: Subscribers except PrimeStar are calculated as the total dollars divided by 6 months divided by the rate for the station (3 cents for network and PBS stations or 12 cents for independent stations (WTBS) prior to 5/1/92 and 6 cents for network and PBS stations or 14 cents for syndex-proof independent stations (WTBS) after 5/1/92. Calculations for the first half of 1992 use the old rate for 4 months and the new rate for 2 months.

Source:

Cable Data Corporation, TVRO Systems 1989-1995.

CRT, 1991 Satellite Carrier Rate Adjustment Proceeding, in Federal Register, May 1, 1992, p. 19052 and

WHYY subscribers: PrimeStar Partners Statement of Account for Secondary Transmissions by Satellite Carriers for Private Home Viewing for the periods 1991-2 to 1992-1 and 1993-1 to 1995-2.

TABLE 6A

TABLE 7

UNITED VIDEO SATELLITE GROUP
Superstar and UVTV Financial Data
1991-1995

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>
			--(\$000)--		
<u>Superstar:</u>					
Revenues	\$ 16,900	\$ 25,200	\$ 65,517	\$ 134,905	\$ 166,306
Operating Expenses <1	16,400	23,500	61,785	121,682	144,671
EBITDA <2	500	1,700	3,732	13,223	21,635
Depreciation & Amortization			703	1,099	1,524
Operating Income			\$ 3,029	\$ 12,124	\$ 20,111
EBITDA Margin Percent	3%	7%	6%	10%	13%
Operating Margin Percent			5%	9%	12%
<u>UVTV:</u>					
Revenues	\$ 19,100	\$ 21,200	\$ 21,474	\$ 22,873	\$ 26,572
Operating Expenses <1	10,895	9,900	8,451	8,761	10,983
EBITDA <2	8,205	11,300	13,023	14,112	15,589
Depreciation & Amortization			2,634	2,471	2,447
Operating Income			\$ 10,389	\$ 11,641	\$ 13,142
EBITDA Margin Percent	43%	53%	61%	62%	59%
Operating Margin Percent			48%	51%	49%

1> Before depreciation and amortization.

2> Earnings before interest, taxes, depreciation and amortization.

Source:

1991-92: United Video Satellite Group, SEC Form 10-K, 1993 (from Disclosure).

1993-95: United Video Satellite Group, SEC Form 10-K, 1995, pp. 29-30.

TABLE 8

**PRICES CHARGED BY NATIONAL PROGRAMMING SERVICE (NPS)
FOR 12 POPULAR CABLE NETWORKS AND
RETRANSMITTED NETWORK AND PBS STATIONS**

	Monthly Rate	<u>Average</u>
<u>12 Popular Cable Networks</u>		
A&E <1	\$ 0.95	
CNN/HN <2	1.35	
DISC	0.40	
ESPN	2.00	
FAM	0.60	
LIFE	0.65	
MTV <3	1.50	
NICK <4	1.25	
TNN	0.65	
TNT	1.40	
USA <5	1.00	
Total	\$ 11.75	\$ 0.98
<u>Retransmitted Network and PBS Stations</u>		
Denver 3 (ABC, CBS, NBC)	\$ 2.50	
PBS (KRMA)	0.95	
Total	\$ 3.45	\$ 0.86
PT24 East (ABC, CBS, NBC)	\$ 2.65	
PBS (KRMA)	0.95	
Total	\$ 3.60	\$ 0.90

Note: Monthly rate requires purchase of a minimum of five services.

1> Includes History.

2> Includes CNN International.

3> Includes VH1, TLC, Outdoor Channel.

4> Includes TLC, Outdoor Channel.

5> Includes Sci-Fi.

Source: *National Programming Service*, Entertainment Price Guide, pp. 8-9.

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ATTACHMENT A

STATEMENT OF QUALIFICATIONS OF LINDA McLAUGHLIN

Linda McLaughlin is an economist and Vice President at National Economic Research Associates, Inc. (NERA), a firm of consulting economists.

She received a Bachelor of Science degree in Mathematics, cum laude, from Marquette University in 1968 and a Master's degree in Economics from the University of Pennsylvania in 1970. While studying at the University of Pennsylvania, she completed all Doctoral course requirements and written examinations and was awarded a teaching assistantship for the 1969-1970 academic year.

From 1970 to 1974 she was employed as an Instructor in Economics at Hofstra University where she taught courses in introductory economics, microeconomic theory and the application of mathematics to economics.

Since joining NERA in 1974, she has worked extensively on antitrust and trade regulation matters. She has investigated the dimensions of product and geographic markets, market structure and performance, the impact on competition of various mergers and acquisitions, vertical and horizontal arrangements and other trade practices in a variety of consumer and producer industries.

Ms. McLaughlin has performed a number of economic analyses of electronic and print media. In the antitrust area, these include the competitive effect of horizontal mergers

between cable system operators, home video distributors and programming rights owners; of vertical mergers between motion picture producer-distributors and cable programmers and between cable programmers and system operators; of music rights society practices in licensing local stations and cable programmers; and of changes in newspaper and magazine distribution. She has also undertaken price-cost studies in connection with allegations of predatory pricing by cable system operators and newspaper publishers. In the regulatory area, Ms. McLaughlin has evaluated existing and proposed FCC rules concerning ownership of television stations in adjacent markets, broadcast network financial interest and syndication, the broadcast network-affiliate relationship, cable rate regulation, access to cable programming and media competition. She has also analyzed the effect of restrictions on local telephone companies in connection with their ownership interests in cable programmers and operators. Further, she has analyzed the future demand for, and cost of, satellite pay-per-view ventures and cable television franchises.

In the area of insurance, she has analyzed proposed changes in the antitrust exemption, the so-called crises in liability and auto insurance, the effect of various regulatory mechanisms and the impact of changes in distribution.

In addition, Ms. McLaughlin has worked extensively in the area of impact and damages in connection with antitrust, contract, environmental and other litigation. She has prepared affirmative damage estimates on behalf of both plaintiffs and defendants, as well as analyses of damage studies performed by others. The firms involved in these analyses include manufacturers of photographic supplies, consumer electronic products, fertilizers, paint, windows and pharmaceutical products and distributors of chemicals, steel, cellular phones and emergency lighting equipment.

LIST OF TESTIMONY, REPORTS AND PUBLICATIONS

Paschall and Intervenors v. The Kansas City Star Co. (W.D. Mo.), an antitrust case.
Deposition testimony, November 1980.

Comet Industries, Inc. v. ESB Inc., et al. (W. D. Mo.), a breach of contract case.
Deposition testimony, September 1981.

Mississippi Chemical Corp. v. Chemical Construction Corp. et al. (S.D. Miss.), a breach of contract case.
Deposition testimony, June 1982.

East Coast Chemicals v. Exxon (Sup. Ct. N. J.), a product liability case.
Damages report, June 1983; deposition testimony, June 1983.

Action Publications v. Panax Corp. et al. (W.D. Mich.), an antitrust case.
Deposition testimony, June 1984; trial testimony, December 1984.

Acorn Building Components, Inc. v. Norton Co.; Jeld-Wen, Inc. v. Norton Co.; and Weather Shield Mfg, Inc. v. Norton Co. (E.D. Mich., Southern Div.), product liability cases.
Deposition testimony, October 1985.

James F. Chumbley, et al. v. Rockland Industries, Inc. (D. Md.), a breach of contract case.
Deposition testimony, December 1985; trial testimony, January-February 1986.

Apache Corp. v. McKeen et al. (E.D.N.Y.), a RICO case.
Deposition testimony, April 1987.

James M. King and Associates, Inc. v. G. D. Van Wagenen Co., et al. (D. Minn.), an antitrust case.
Affidavit, January 1988; deposition testimony, February 1988.

Associated Imports, Inc. v. International Longshoremen's Association et al. (S.D.N.Y.), a breach of contract case.
Deposition testimony, October 1988, September 1990; trial testimony, October 1990.

Cable Television Franchise Renewal Proposals of Manhattan Cable TV and Paragon Cable Manhattan.
Opinions on the reasonableness of certain assumptions, January 1990.

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Trial testimony, October 1991.

With Paul Joskow, "McCarran-Ferguson Act Reform: More Competition or More Regulation?,"
Journal of Risk and Uncertainty, December 1991.

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1992, Rate Regulation, FCC MM Docket No. 92-266.
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Selcke v. Touche Ross & Co., et al. (Cir. Court of Cook County, Ill), a breach of contract case.
Deposition testimony, March 1994 and May 1995.

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With Richard Schmalensee, Report, March 1994; deposition testimony, April 1994.

With Paul Joskow, "Competitive Effect of Elimination of Small Overbuilds Between Time Warner
and Cablevision Industries,"
Report prepared for submission to the Federal Trade Commission, April 1995.

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a First Amendment case.
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Television Networks and Affiliates, FCC MM Docket No. 95-92.
With Philip A. Beutel and Howard P. Kitt, Report, October 1995, Supplemental Report, January
1996.

Frebon International Corporation v. Bell Atlantic Corporation, et al. (D.D.C), a breach of
contract case.
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