THE ECONOMIC IMPACT OF MULTICAST MUST CARRY

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Appendix

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The Economic Impact of Multicast Must Carry

Introduction and Summary

Broadcasters have argued that in order to facilitate the transition to digital television, Congress should require cable systems to carry, in addition to a broadcaster's primary digital signal, multiple digital streams – called multicasting – which could include three, four, five, even six channels for each local station. Cable systems, however, do not have unlimited capacity. Most cable systems already have used their recently expanded capacity to offer a vast array of new enhanced services (e.g., faster High-Speed Data service, cable telephony, Video on Demand, and high definition television). The cable industry is actively involved in developing and implementing ways to conserve bandwidth and other techniques to create more effective capacity. However, given current capacity constraints and, more significantly, the value of cable's broadband bandwidth, the economic burden to add mandatory multicast programming will be substantial. As we demonstrate below, under even the most conservative valuation approach ("the leased access approach"), the cost to cable operators to implement a mandatory multicast regime would be in the $4.2 - $5.6 billion range. Under an "opportunity cost approach" – which we believe is a very reasonable methodology to use in this instance – the cost of a multicast regime to cable operators exceeds $115.6 billion.

Kane Reece Associates, Inc. was retained by the National Cable & Telecommunications Association (NCTA) to render an opinion on the value of the cable broadband bandwidth that would be used if Congress mandated carriage of most or all multicast streams. Kane Reece, founded in 1986, provides valuation, management, and technical consulting to the communications, entertainment and media industries. The firms' valuation practice is among the largest in the world serving these industries. Principals and senior staff have many decades of operating, financial, engineering, and valuation experience. Clients include businesses, financial institutions, governmental units, and attorneys. (More detailed information about the firm's services appear in an appendix to this report.)

Kane Reece used four approaches to estimate the cumulative value of the broadband bandwidth which would have to be used to satisfy a multicast must carry requirement. For the purpose of any valuation, it is necessary to set forth a set of reasonable assumptions. Our analysis is based on the assumption that a mandatory multicast regime may require cable operators to carry five additional streams (channels) of programming per must carry broadcast station, that each stream would require a minimum of 1 MHz of bandwidth and that, on average, there are five stations per market that would opt for must carry. Under those assumptions, the required bandwidth for the multicast requirement would be equivalent to five 6 MHz channels (5 multicast must carry stations x 5 multicast streams). Under these assumptions, each of the four valuation approaches results in a significant cost to cable operators from a government mandated multicast requirement. Even if carriage of only an additional two streams per

station were required, under the "opportunity cost" approach, this would result in a loss of $90 billion.

While current analog must carry requirements also obviously result in some costs to cable operators to implement, the cost of the proposed multicast regime would dwarf that of current must carry requirements for at least two reasons. First, by the time the analog must carry requirements were imposed in 1992, cable operators were already carrying most of the analog channels that they were required to carry, meaning little net additional consumption of capacity. Second, at the time that analog must carry requirements were imposed, cable operators were using bandwidth almost exclusively for traditional analog video service. Today, by contrast, all manner of advanced services vie for the use a cable operator's bandwidth. In addition, substantial capacity is required as many cable operators implement "digital simulcast" services to facilitate their own transition from analog to all-digital. Both of these facts are reflected in one or more of the methodologies we use in this report. The results of these approaches are as follows:

- National Leased Access Model: The most conservative approach uses leased access rates as a basis for determining the cost for carriage of multicast channels. This approach results in a cost of $4.2 - $5.6 billion for bandwidth that would be required under a mandatory multicast regime. However, because leased access rates were developed when the cable industry was still predominantly a video provider and was based on the income derived from such "video" bandwidth, the valuation based on leased access rates significantly understates the value of bandwidth which today is used for advanced services in addition to traditional video service.
- 6 MHz Valuation Model: Under a more reasonable "income" approach (based upon the valuation of a 6 MHz channel), we estimate the value of the bandwidth required for multicast must carry at $11 billion.
- Cost of Capital Approach: Using a "cost of capital expenditures" approach yields a valuation of $11.6 billion.
- Opportunity Cost: An opportunity cost valuation approach is based on the future revenues lost because the bandwidth required for mandatory multicasting precludes using that bandwidth for newer services that generate the greatest revenue per 6 MHz (and using that as a proxy for future services) yields a valuation of over $115.6 billion. This approach is more in line with the actual decisions of equity and debt investors in cable plant.

REPORT

I. General Valuation Methodologies

In determining the fair market value for an asset, there are three basic valuation concepts typically used:[1]

> Income Concept. The term income does not refer to income in the accounting sense, but to the future benefits accruing to the owner. Under the income concept, one first estimates the future ownership benefits and then discounts those benefits to present value using a rate suitable for the risks associated with realizing those benefits.
>
> Market Concept. This concept assumes that value can be estimated from analyzing recent sales of comparable assets. This concept is commonly used to value single-family homes, where the appraiser estimates a home's value by comparing it to similar homes recently sold or offered for sale. In business valuations, one analyzes comparative public companies (and private companies, whenever possible) and/or comparative transactions to determine a company's value. Using this concept requires a thorough search for comparatives and thorough analysis and adjustment of the comparative data, both public and private.
>
> Cost Concept. This concept assumes that an asset's value is determined by the cost of reproducing or replacing it, less allowance for physical deterioration and obsolescence. The concept is commonly used for assets that are not sold on an active market, such as land improvements and special purpose equipment. For business valuations, the concept generally applies to companies with little value beyond the value of their tangible assets, such as holding companies. It is also used when valuing individual components of a business enterprise.

The four analyses employed by Kane Reece in this project utilized versions of the income approach and cost approach. The market approach was considered but was not utilized given that there was no comparative data.

Specific Valuation Methods Used in Analysis

In order to assess the value of cable's broadband bandwidth, Kane Reece looked at four approaches typically used in market valuation: (1) a national "leased access" approach; (2) an "income" approach based on a 6 MHz channel valuation model; (3) a "capital expenditure" cost approach and (4) an opportunity costs valuation based on the

[1] *Guide to Business Valuations*, Fishman, Pratt, Griffith and Wilson, Fifteenth Edition, Practitioners Publishing Company, Fort Worth Texas, 2005.

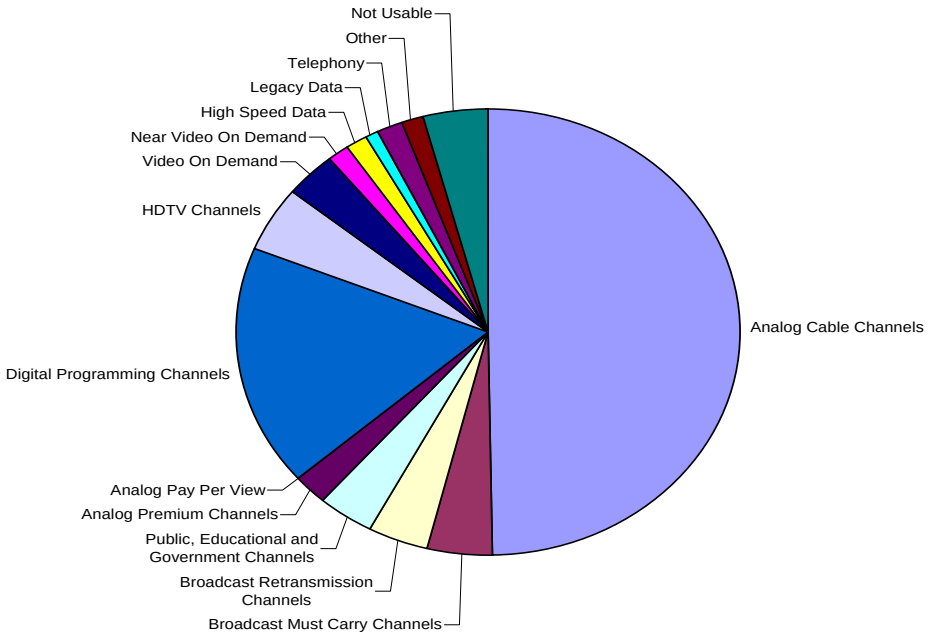
current value derived by specific new enhanced services offered on cable's broadband plant. The first, second and fourth approaches employ a version of the income approach, and the third approach uses the cost concept.

II. THE EXTENT OF MULTICAST MUST CARRY: ASSUMING AN ADDITIONAL 25 CHANNELS PER CABLE SYSTEM (ON AVERAGE)

There is an economic loss to the cable operator when its bandwidth is used to satisfy a multicast must carry regime. In particular, based on our analyses, we believe that cable systems would lose a significant number of high value channels, especially in major markets, if forced to use bandwidth for multicast streams of programming. Likewise, our analyses indicate that there will be a significant disproportionate negative economic impact on rural operations. *Using Nielsen station carriage data, and assuming that each local broadcast station offers five streams of multicast programming, we conclude that a multicast must carry requirement may require the average cable system to carry an additional 25 channels beyond what it currently carries*.[2] In the New York DMA, and in similarly situated larger broadcast television markets, the required bandwidth could amount to an additional 75 channels (15 broadcasters x 5 channels). The average cable system is currently using all of its capacity to provide video, high speed data, telephone, and other enhanced services and any additional must carry obligations will clearly impact cable's return on investment. (See the chart below for typical 750 MHz system bandwidth allocation.)

[2] Kane Reece is not predicting the exact number of stations that will or will not opt for multicast must carry nor are they predicting the precise number of programming streams that broadcasters may air and cable operators would or would not carry in the absence of a multicast must carry requirement. However, for modeling purposes Kane Reece made the following assumptions. The national weighted average number of commercial broadcast stations per TV household is 11 per Nielsen. Approximately 6 broadcast channels are carried by retransmission consent, on average. Therefore, the remaining five broadcast channels are must carry channels, on average. We assume for purposes of modeling that each of these stations will, on average, offer five streams of multicast programming over the current must carry obligations.

Current Use of 750 MHz Plant



Mandatory carriage of multicast streams would also hamper the ability of the cable systems to introduce new services to cable customers. Thus, mandatory multicast must carry rules would have a significant adverse impact on both cable operator and cable programmer innovation. Moreover, given the limits on cable system capacity, any multicast carriage requirement would likely result in the removal from a system's lineup of channels – primarily those which are least viewed, small niche, and/or public interest programming. The losses associated with these substitutions are not considered in the analysis and would only drive the estimates upward.

III. VALUING THE FORCED OCCUPATION OF 25 ADDITIONAL CHANNELS (OR FIVE 6 MHZ CHANNELS)

National "Leased Access" Model: One approach to valuing the bandwidth necessary to implement a multicast regime is to ascertain the income derived from the same number of channels under the FCC's leased access rules. Under these rules, a broadcaster (or any other programmer) can lease space on a cable system to distribute its programming. This FCC model, based on an Average Implicit Fee Calculation[3] was developed to determine the maximum commercial leased access rate that a cable operator may charge for full-time channel placement. The inputs to the model are:

3 Second Report and Order and Second Order on Reconsideration of the First Report and Order in the matter of: Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992 / Leased Commercial Access, Adopted January 31, 1997.

cable rates, programming costs, number of subscribers and number of channels. The model then calculates the leased access fee as the difference between total tier revenue less tier programming costs weighted on channels and subscribers. Inputs to the model here are derived from Kagan's *Broadband Cable Financial Databook 2005* with calculations based on 80 analog channels and a digital channel universe of either 100 or 200 channels (video streams). The 100 digital channel analysis yields a monthly income of $6,980,000 while the 200 digital channel analysis yields a monthly income of $5,214,000. Based on a presumed national average requirement of 25 additional multicast broadband channels, this yields a potential loss of *annual* cable operator revenue of between $1.6 billion and $2.1 billion. (See analysis in Appendix)

In addition, this monthly leased access income can be converted into the value of a video stream by multiplying the amount of the fee by 50% to account for Operating Costs (including depreciation and amortization). This calculation generates monthly pre-tax income which needs to be annualized. Taxes are then applied at a 40% rate and the resulting income stream is capitalized at 11.25%, the FCC's allowable return factor for cable television investments. (Step by step calculations are included in the two charts in the Appendix.)

The resultant calculations are $223 million per video stream in the 100 digital channel scenario, and $167 million in the 200 digital channel scenario, yielding values of between $4.2 billion ($167 million per stream x 25 streams), and $5.6 billion ($223 million per stream x 25 streams) for the total of 25 additional multicast broadband channels.

If cable operators were compelled to carry a weighted average of 25 additional multicast broadcast channels at no charge, leased access revenue of $1.6 - $2.1 billion per year would be denied to the owners of the cable systems on a national basis. The 25 channels under this approach would be valued at approximately $4.2 - $5.6 billion. This is the most conservative valuation approach. A cable operator, in our opinion, would not freely transact at this level. The FCC model does not include all video revenues and does not include any non-video service revenues, which typically generate a greater return on use of bandwidth. Moreover, the leased access model was developed when cable operators typically distributed only video programming. Given that the opportunity costs associated with this bandwidth far surpass the *de minimis* revenues generated by leased access (as discussed below), it is highly unlikely that this approach would fairly compensate cable operators for this valuable bandwidth.

A second income approach to the value of cable's broadband bandwidth would be to examine a valuation model of 6 MHz of bandwidth which at least takes into account non-video revenues.

6 MHz Valuation Model: This approach also utilizes the income concept to valuation. The premise is to value an average 6 MHz channel on a national basis. To calculate this number, we have chosen a cable system's total monthly residential revenue (per customer) of $80.38 including video and non-video sources as the starting

point. This figure reflects the current state of the industry's total revenue generating capacity. We have assumed a national model of a 750 MHz system with approximately 115 6 MHz channels. This yields an average monthly revenue per 6 MHz channel of $0.699. An average 40% EBITDA margin is applied and this is multiplied by the average number of cable customers to derive the annual EBITDA of $219.4 million per channel.

The calculation is shown below:

Average revenue per customer per month[4]	$80.38
Divide by average number of 6 MHz channels	115
Monthly revenue per channel per customer	0.699
Apply industry EBITDA margin of 40%	x .40
Monthly EBITDA per 6 MHz channel per customer	0.280
Annualize (12 months)	x 12
Annual EBITDA per 6 MHz channel per customer	3.355
Number of cable customers (in millions)	65.4
Annual EBITDA per 6 MHz channel (in millions)	$219.4

This annual EBITDA per 6MHz channel of $219.4 million can be converted to a current value by utilizing an industry average EBITDA multiple of 10x. This calculation (EBITDA multiple x EBITDA) yields a value of $2.2 billion per 6 MHz channel. Therefore, if as assumed above, five additional 6 MHz channels are required on an average national basis, the total value of the multicast must carry bandwidth is $11 billion. This income approach gives a more precise *current* valuation to this valuable bandwidth but does not fully account for forward looking use of the bandwidth.

Current Capital Expenditure to Implement Non HDTV Multicast Must Carry: Another method to value this bandwidth is to estimate the capital expenditure costs associated with accommodating the must carry multicast streams.[5] In our model, we assume that each cable system would need to have capacity for 5 additional 6 MHz channels, on average, to accommodate the 25 (5x5) streams from the average of 5 must carry stations. One 6 MHz channel can carry one analog television signal or six digital video streams. In this model, we also assume that the mandatory multicast requirements are imposed prior to the cable industry's transition to an all digital

[4] All data derived from *Broadband Cable Financial Databook 2005*, published by Kagan Research.

[5] As noted in footnote #2 above, the precise number of multicast streams required under a multicast must carry requirement may vary. In this cost approach, the relevant valuation is derived by comparing the value of the bandwidth needed to carry 25 video streams to the current costs of building that capacity; regardless of whether such upgrades would actually occur.

platform. As noted below, a large number of cable customers either do not currently subscribe to digital cable service or have analog television sets not connected to a digital set top box (STB). Any mandatory multicast requirement which requires cable operators to make the multicast channels viewable on all television sets connected to cable would impose costs of deploying digital STBs to millions of televisions, even in homes that may already have one digital STB.

We believe that the capital expenditures necessary for the implementation of multicast must carry will fall under three major categories: STBs, plant upgrades, and cable headend conversion costs. To receive a digital transmission via cable, customers that currently do not require a set top box (STB) for the analog services they receive and cable customers that have analog STBs will need to be provided a digital STB with a standard NTSC analog signal output.

Moreover, each cable headend must be equipped with reception equipment for the off-air broadcast signal, digital processing facilities to convert from a broadcast format to a cable format, and multiplex equipment to combine various digital signals into a 6 MHz channel. Bandwidth space for the broadcast digital signals is made available by the removal of some existing analog channels from the current channel line-up. The removed channels could be made available in a digital format with the addition of headend facilities similar to the equipment needed to implement the digital broadcast signals.

It should be noted that not all current cable plant is capable of carrying digital signals and would require some upgrading to do so. Such systems would typically be low bandwidth systems in rural areas.

Based on our modeling of capital expenditures associated with the three categories of equipment, our cost estimates follow:

Set top boxes ("STB")	$8.5 billion
Plant Upgrades	1.2 billion
Headend conversion	1.9 billion
TOTAL =	$11.6 billion

Our assumptions and calculations for the cost model are as follows:

Digital STBs			
Basic customers:	65.4 million	(Kagan)	
Digital customers:	29.6 million	(Kagan)	
TV sets per basic customer:	2.5		
Digital converters per Digital customer	1.4		
Total televisions in cable customers' homes:	65.4 million x 2.5 = 163.5 million		
Total digital STBs in service:	29.6 million x 1.4 = 41.4 million		
Required digital STBs:	163.5 million - 41.4 million = 122.1 million		
Price per installed digital STB:	$70.00		
Cost for Digital STBs	122.1 million x $70.00 =		**$8.5 billion**

Plant Upgrade		
Estimated miles of cable plant:	1.54 million	
Percent needing upgrade:	5%	
Miles needing upgrade:	77,000	
Cost per upgrade mile	$15,000	
Cost for Plant Upgrade:	77,000 x $15,000 =	**$1.2 billion**

Headend Conversion Costs		
Equipment to convert broadcast signal in cable format/broadcaster:		$20,000
Average number of broadcasters per headend:		5
Estimated number of headends:		8,600
Minimum number of cable channels moved from analog to digital:		3
Convert broadcast signal to cable format:	5 x $20,000 =	$100,000
Convert 3 analog channels to digital:	3 x $15,000 =	$ 45,000
Back office and data processing costs		$ 20,000
Installation, integration, program management, Procurement, local taxes, and other costs @ 33%		$ 55,000
Per Headend cost:		$220,000
Estimated number of headends:		8,600
Cost for Headend Conversion:	$220,000 x 8600 =	**$1.9 billion**

Therefore, the mere capital costs associated with adding five 6 MHz channels for multicast must carry would total $11.6 Billion.

Opportunity Cost Approach to Value Future Uses: Another income-based approach to measure the value of cable's bandwidth is to review the opportunity cost of cable's bandwidth by ascertaining its highest current valued uses. If the cable industry does not add new capacity to replace that required for multicast must carry, then the industry will likely lose its ability to expand its high speed data, telephony, video on demand and other advanced services and to introduce the next generation of services. Current advanced services contribute substantial value to broadband industry participants. One would expect next generation services to contribute similar value.

NCTA has provided us with the expected 2005 national revenues for each of the latest generation of new services based on Kagan Research data. We have converted these revenue streams to a value as a proxy for estimating future lost value if bandwidth is not available for the next generation of new services. This potential exists due to loss of bandwidth necessary to carry the presumed additional 25 video streams under the multicast must carry scenario.

We have created a 10-year discounted cash flow model ("DCF") for each of the five services listed below.

This approach to value begins with a revenue and expense forecast over a given time period from which pro forma cash flows are estimated for each year. For the purposes of this study, the appraisers utilized a forecast of revenues and expenses for 2005 through 2014. Revenue by service is derived from the *Broadband Cable Financial Databook 2005* by Kagan Research. Expenses were determined by reference to our extensive database of cable television financial statistics. Costs equally applied to all five new services listed were selling, general and administrative at 30% of revenue, management fees at 1.75% of revenue and taxes at 40% of operating cash flow.

Costs of product were derived for each individual service as follows:

Service	% of Revenue
HSD	10.0%
Phone	45.0%
VOD	42.5%
Digital Video	25.0%
HD	45.0%

In using the DCF, value results from two sources: the present value of the annual cash flows over the ten year period and the present value of each service's continuing value at the end of the projection period.

The values determined by the DCF methodology are total value for each of the five services. To determine the value per 6 MHz, we have divided the calculated result by the number of 6 MHz channels required to generate each new service.

Per the industry estimates, the number of 6 MHz channels utilized per service are:

Service	Number of 6 MHz Channels Required
HSD	1.6
Phone	1.6
VOD	3.7
Digital Video	20.4
HD	5.6

Therefore, the value per each 6 MHz of new service is:

Service	2005 Service Revenue/National 6 MHz Channel	2005 Value Per Service/Channel
HSD	$8,125 Million	$57 Billion
Telephone	$1,375 Million	$13 Billion
Video on Demand	$ 227 Million	$ 2 Billion
Digital TV/HDTV	$ 178 Million	$ 1 Billion

Since 1996, the cable industry made a massive investment (currently estimated by NCTA at over $100 billion) to add additional bandwidth and system capabilities to deliver new services that are generating revenues and values as shown above. These value indications can be used as a proxy for the next generation of new services whose introduction may be constrained by lack of bandwidth due to a multicast must carry requirement. Using the five 6 MHz channels that generate the best return on investment, Kane Reece estimates the value of this bandwidth at over $115 billion**.** (See table below.)

Service	2005 Value Per Service/Channel	Number of 6 MHz Channels used	Value per Service
HSD	$57 Billion	1.6	$ 91.2 Billion
Telephone	$13 Billion	1.6	$ 20.8 Billion
Video on Demand	$ 2 Billion	1.8	$ 3.6 Billion
Total		5	$115.6 Billion

Conclusion

As demonstrated above, under any of the four recognized valuation methodologies, the cost of a mandated multicast regime to cable operators would be substantial. The "opportunity cost" approach, which is a reasonable one to apply to this dynamic industry, results in a cost to cable operators of over $115 billion if they are forced to devote scarce bandwidth to a government-imposed multicast must carry requirement. Even under the more conservative approaches – all of which understate the value of the bandwidth required for a multicast regime –cable operator losses would be in the billions of dollars.

As with all valuation modeling, changing the assumptions will affect the precision of the results. The precise number of broadcast stations opting for multicast must carry and the number of multicast streams could vary, but the magnitude of the impact on the cable operator would still be substantial. Even if carriage of only two additional multicast channels per station were required, under the "opportunity cost" approach this would result in a loss of over $90 billion.

Appendix

Chart 1

National Cable Video Stream Valuation
Leased Access Model
(Based on Kagan '05 Broadband Cable Financial Databook)

	Revenue Annualized	Revenue Monthly	Subs	Programming Cost %	Programming Cost $	# of Channels	Sub Channels	% of Sub Channels	Rev x Subs	Cost x Subs	Total Implicit Fee	Average Implied Fee	Average Implied Fee Per Channel
Basic	$ 475.92	$ 39.66	65,400,000	30.0%	$ 11.90	80	5,232,000,000	49.4%	$ 2,593,750,000	$ 778,125,000		$ 1,017,939,804	$ 12,724,248
Digital	$ 168.88	$ 14.07	26,800,000	35.0%	$ 4.93	200	5,360,000,000	50.6%	377,166,667	132,008,333		1,042,843,530	$ 5,214,218
							10,592,000,000		$ 2,970,916,667	$ 910,133,333	$ 2,060,783,333	$ 2,060,783,333	

Data comes from the '05 Kagan Broadband Cable Financial Databook, 2005 Projections

Total Basic Subscribers	65,400,000
Digital Cable Subscribers	28,200,000
Average Basic Subscribers	65,400,000
Average Digital Cable Subsc	26,800,000
Basic Cable Revenue	$ 31,125,000,000
Digital Video Tier Revenue	$ 4,526,000,000

Leased fee per Video Stream		$ 5,214,218
Assumed Operating Costs Including Deprec & Amort		50.0%
Monthly Pre-Tax Income		2,607,109
Annualized		31,290,000
Taxes @	40.0%	12,516,000
Net Income per Video Stream		$ 18,774,000
Cap Rate	11.25%	**$ 167,000,000** **Value Indication per Video Stream (Rounded)**

Summary

Monthly Leased Access Fee per Video Stream	$ 5,214,218
Annualized	$ 62,570,612
Number of Additional Video Streams Required by Multicast Must Carry	25
Annual Lost Revenue on National Basis	$ 1,564,265,295
Value Indication per Video Stream	$ 167,000,000
Number of Additional Video Streams Required by Multicast Must Carry	25
Value of 25 Video Streams	$ 4,175,000,000

Appendix

Chart 2

National Cable Video Stream Valuation
Leased Access Model
(Based on Kagan '05 Broadband Cable Financial Databook)

	Revenue Annualized	Revenue Monthly	Subs	Programming Cost %	Programming Cost $	# of Channels	Sub Channels	% of Sub Channels	Rev x Subs	Cost x Subs	Total Implicit Fee	Average Implied Fee	Average Implied Fee Per Channel
Basic	$ 475.92	$ 39.66	65,400,000	30.0%	$ 11.90	80	5,232,000,000	66.1%	$ 2,593,750,000	$ 778,125,000		$ 1,362,742,467	$ 17,034,281
Digital	$ 168.88	$ 14.07	26,800,000	35.0%	$ 4.93	100	2,680,000,000	33.9%	377,166,667	132,008,333		698,040,866	$ 6,980,409
							7,912,000,000		$ 2,970,916,667	$ 910,133,333	$ 2,060,783,333	$ 2,060,783,333	

Data comes from the '05 Kagan Broadband Cable Financial Databook, 2005 Projections

Total Basic Subscribers	65,400,000
Digital Cable Subscribers	28,200,000
Average Basic Subscribers	65,400,000
Average Digital Cable Subscri	26,800,000
Basic Cable Revenue	$ 31,125,000,000
Digital Video Tier Revenue	$ 4,526,000,000

Leased fee per Video Stream		$ 6,980,409
Assumed Operating Costs Including Deprec & Amort		50.0%
Monthly Pre-Tax Income		3,490,204
Annualized		41,880,000
Taxes @	40.0%	16,752,000
Net Income per Video Stream		$ 25,128,000
Cap Rate	11.25%	**$ 223,000,000** **Value Indication per Video Stream (Rounded)**

Summary

Monthly Leased Access Fee per Video Stream	$ 6,980,409
Annualized	$ 83,764,904
Number of Additional Video Streams Required by Multicast Must Carry	25
Annual Lost Revenue on National Basis	$ 2,094,122,599
Value Indication per Video Stream	$ 223,000,000
Number of Additional Video Streams Required by Multicast Must Carry	25
Value of 25 Video Streams	$ 5,575,000,000

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The Firm

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- Development Stage Businesses
- ESOP Valuations
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- Federal Tax Audit Support
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- Chartered Financial Analyst (CFA)
- Institute of Business Appraisers (CBA)
- Institute for Professionals in Taxation (CMI)
- Institute of Electrical and Electronic Engineers (IEEE)
- National Association of Broadcasters
- National Cable & Telecommunications Association
- New York Society of Security Analysts
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- Society of Cable Telecommunications Engineers (SCTE)
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