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Nordicity Group Ltd.

Le Groupe Nordicité llée

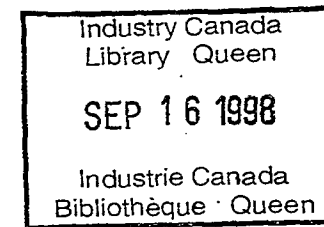
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**ECONOMIC IMPACT OF HOME TAPING
OF AUDIO-VISUAL WORKS**



Nordicity Group Ltd.
Le Groupe Nordicité Itée



ECONOMIC IMPACT OF HOME TAPING OF AUDIO-VISUAL WORKS

Draft Final Report

Prepared for
Canadian Heritage and Industry Canada

Prepared by
NGL Nordicity Group Ltd.

September 23, 1994

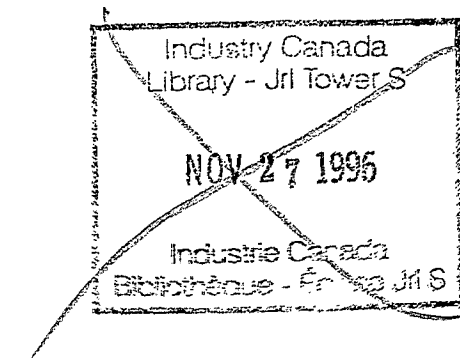


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Executive Summary

1. Introduction

- The economic impact of home taping is difficult to determine since there is no set way of determining the value of foregone royalties that would otherwise have been collected if reproduction rights had been enforceable in the home.
- A methodology for this study was developed to estimate the foregone royalties based on alternative indicators such as lost television viewing audience or lost videotape rentals or sales. By estimating the loss to broadcasters and video retailers, the loss to producers becomes known. Consequently, the loss to rights holders can then be estimated based on lost producer revenue.
- Appropriate data, required to make the estimates were difficult to acquire. In addition, there was some concern about the validity of behavioural data on consumer habits.
- For the purpose of this report, rights holders are defined as producers, creators, performers and other copyright owners.

Executive Summary (cont'd)

2. Economic Impact of Home Taping

The following points summarize the financial impact of home taping on the industry as a whole; producers, creators, performers and other copyrights owners:

- The loss to producers due to home taping is \$89-112 million annually.
- Of the \$89-112m, the loss to creators, performers and other copyright owners is on the order of \$18-23 million annually. (Though technically performers do not have rights, it is assumed that performers are included in this impact study).
- \$4 million of the \$18-23 million loss to creators, performers and other copyright holders is due to time shifting.
- The estimated \$43 million impact on the television industry due to the downward pressure on advertising revenues caused by home taping represents about 3% of total television advertising revenues annually.
- The estimated \$132-179 million impact on video rentals and sales represents 12-16% of the video industry's rental and sales revenue.

Executive Summary (cont'd)

Summary of Financial Impact to Rights Holders

	Total Impact	Feature Film & Non-Film	
		Free TV	Video Rental/Sales
Gross impact on industry	\$175-221m	\$43m (\$31m TS, \$12m L)	\$132-178m
Net impact on producers	\$89-112m	\$23m (\$17m TS, \$6m L)	\$66-89m
Impact on creators, performers and other copyright owners	\$18-23m	\$5m (\$4m TS, \$1 L)	\$13-18m

TS = impact due to time shifting; L = impact due to librarying

Note: The impact on creators, performers and other copyright holders is included as part of the impact on producers revenues.

- \$175-221 million represents 6-8% of the total revenue of television and home video industries in Canada.
- As actual earnings for producers and creators, performers and other copyright owners is unknown, it is difficult to estimate the impact of home taping on their revenue. A rough estimate suggests that these amounts represent 60-80% of producers revenue and 2-5% of performers revenue.

Executive Summary (cont'd)

3. Amounts to be Generated by a Potential Royalty of Blank Videocassettes

- Reliable data on the number of blank video cassettes sold in Canada annually is not available. Five different estimates were reviewed with the estimate by Statistics Canada for imports only used for illustrative purposes throughout the remainder of the analysis. The Statistics Canada estimate for blank video cassettes sold in Canada is 32 million annually.
- A Gallup 1994 survey estimated the consumer purchase behaviour of blank video tapes before and after the proposed introduction of 15, 40 or 75 cent royalties.
- Even with a 75 cent royalty, a fund would collect at most \$18.5 million annually - below the level of losses estimated for creators, performers and other copyright owners.

Total Funds Generated by a Royalty on Blank Videocassettes Various Royalty Levels

VCR Tapes Only (VHS)				VCR & Camcorder Tapes			
Units Sold	15¢	40¢	75¢	Units Sold	15¢	40¢	75¢
30m	\$4.5m	\$11.3m	\$17.3m	32m	\$4.8m	\$12.0m	\$18.5m

Executive Summary (cont'd)

4. Royalty Revenue Allocation Mechanisms

- Four different scenarios were examined in allocating any royalties to Canadian and foreign author/producers and performers. Under each of the scenarios, the option of 0% or 25% of total royalties flowing to a Development-of-the-Industry Fund was considered. In summary, for every \$1 collected by a royalty, authors/producers would earn 8.4-19.1¢ and performers would gain 5.6-16.7¢. These ranges take into account all the combinations of the three variables considered: Development of the Industry Fund or no Fund; U.S. rights holders paid or not paid; and potential 67/33 or 50/50 splits between authors and performers.
- In general, Canadian authors/producers would earn up to \$3.5 million while Canadian performers would earn up to \$3.1 million. These amounts represent less than 3.5% and 2% of respective annual earnings.

Royalty Revenue to Author/Producers and Performers

	VCR Tapes Only 30 million Units			VCR & Camcorder Tapes 32 million units		
	Royalty Level			Royalty Levels		
	15¢	40¢	75¢	15¢	40¢	75¢
Authors/Producers	\$0.4-0.9m	\$0.9-2.2m	\$1.5-3.3m	\$0.4-0.9m	\$1.0-2.3m	\$1.6-3.5m
Performers	\$0.3-0.8m	\$0.6-1.9m	\$0.9-2.9m	\$0.3-0.8m	\$0.7-2.0m	\$1.0-3.1m

1.0 INTRODUCTION

1.1 Purpose of Study

The Department of Canadian Heritage has mandated an economic study relating to the home taping of film and video material originating as television or pre-recorded video programming. NGL Nordicity Group Ltd. (NGL) was commissioned to assess the economic impact of the lack of an appropriate regime to protect the reproduction copyright of rights holders of audio-visual productions from home taping, and the potential benefits they might derive as a result of effective copyright protection from home taping. Expected benefits of this study include:

- A clearer picture of the home taping of audio-visual productions;
- An assessment of the economic consequences of the practice for key sectors of the audio-visual industry;
- A forecast of the potential amount of funds that could be generated by a home taping royalty;
- A discussion of the possible royalty allocation measures among copyright protection claimants; and
- Additional input to the current planning process concerning the financing of the CBC.

The study was undertaken with the support of Industry Canada.

1.2 Terms of Reference

NGL was retained by the Department of Canadian Heritage to undertake a study on the economic impact of home taping of audio visual works.

The study was divided into three components, as follows:

- The first component involved the design of a consumer survey to be undertaken and completed by Gallup Canada. NGL contributed to the questionnaire's refinement and assisted in the development of the survey's methodology. The results of the Gallup 1994 survey were used as a key quantitative input to the NGL analysis.
- The second component of the study was to assess the impact of audio-visual works taped at home from broadcasted signals, or taped from rented, purchased or borrowed sources. Specifically, NGL was to approximate the total amount of royalties lost by authors and performers in Canada, and to assess the value of video tapes that would have been otherwise purchased or rented had home taping been impossible.
- The third component required the evaluation of alternative home taping royalty allocation measures, as suggested by the Department. NGL was to determine how much money would be raised from the various measures and compare the results to other countries. NGL was to develop further scenarios on repatriation of these royalties among rights holders; and to approximate the outflows likely to stem from the implementation of the measure resulting from international obligations in terms of repatriation and national treatment.

1.3 Examination of Previous Studies

As per the terms of reference, NGL examined three principal sources of information.

- *Home Taping of Audio-Visual and Audio Works - Final Report, 1994*, prepared for the Department of Canadian Heritage by Gallup Canada, Inc. (1994 Gallup);
- *"A Report on Home Taping of Audio and Video Products in Canada" and "Copyright Regimes in Other Countries Dealing with Home Taping"*, 1992, prepared for the Department of Communications by T.M. Denton Consultants Inc. (Denton);
- *National Video Home Recording Survey, 1992* prepared for Communications Canada by Gallup Canada Inc. (1992 Gallup).

1.3 Examination of Previous Studies (cont'd)

Our literature search also disclosed other sources of information that provide further insights into the problem of home taping. Although none address taping from all programming sources, as is attempted in this study, each provides information that addresses many similar areas of concern for foreign markets. The previous studies and reports include:

- *"An Analysis of Economic Benefits and Harm from Videocassette Recorders and Related Products"*, 1982 prepared for Motion Pictures Distributors Association;
- *Home Taping in America - A National Survey of VCR Owners*, 1990, prepared for Macrovision Corporation;
- *Home Taping in America - The Second National Survey of VCR Owners*, 1993, Schulman, Ronca and Bucuvalas Inc., prepared for Macrovision Corporation (Schulman); and
- *Impact of Pay-Per-View Program Delivery Systems On the Home Video Industry*, 1993, prepared by Video Software Dealers Association.
- *SORECOP and COPIE FRANCE Summary Report*, 1990.

1.4 Methodology of this Study

1.4.1 General Approach

In our effort to examine the economic impact of home taping of audio visual works on rights holders, the following methodology was developed.

For the purpose of the study, rights holders are defined as producers, creators, performers and other copyright owners unless otherwise identified.

1. Examine the Rights Involved

The damage to the copyright owner due to home taping arises from the violation of the reproduction right. A reproduction right is violated when a copy of a work is made, without the authorization of the copyright owner, from various sources: Pay-TV, PPV-TV, FREE TV and/or Pre-Recorded Cassettes. For example, the reproduction right is violated when a viewer tapes "Dances With Wolves" while it is shown on CTV or when he/she makes a copy of "The Fugitive" videocassette for a friend. The rights holder's reproduction right has been violated because the viewer has not sought the rights holder's permission to reproduce the audio-visual work.

Theoretically, rights holders have foregone royalties they would otherwise have been able to earn. However, in the absence of a regime to apply and enforce the reproduction right in the home these royalties go uncollected.

To estimate these foregone royalties, alternative indicators such as lost television audience viewing share and lost videotape rental/sales can be used.

1.4.1 General Approach (cont'd)

2. Examine the Distribution Chain

If lost television audience and lost video rental/sales are to be used as indicators of foregone royalties, then a clear understanding of how the industry works is required. Consequently, the next step was to identify each part of the audio-visual distribution chain. The business relationships were modelled (for example, how programs are purchased and indirectly how rights are acquired), as were the financial flows from production to end-user.

This step is important in assessing where reproductions and, consequently losses occur. In general, the more upstream a reproduction occurs, the larger the loss to rights holder. In addition, while taping a work will not affect upstream window's revenues since viewers already had a chance to view the work, taping a work could affect downstream window's revenue. For example, taping a feature film off of pay-TV could reduce its audience when it is shown later on FREE TV.

Since the distribution of audio-visual works varies by the type of product, two audio-visual distribution streams were examined. First, feature films are distributed through many windows domestically including theatre, home video, PPV, Pay-TV and broadcast television. Second, non-film programming is generally only distributed through several broadcast television windows and rarely is distributed through theatres, home video or PPV/Pay-TV. Consequently, the analysis is divided into two parts based on these distribution streams.

1.4.1 General Approach (cont'd)

3. Examine the lost television audience and videotape rentals/sales

To estimate the losses to rights holders, the loss in rentals, sales or viewership for video retailers and broadcasters at each point in the distribution chain was first examined. For example, if a feature film was taped from PPV, the loss is first estimated in terms of lost PPV sales or video tape rentals/sales. If a feature film or other program is taped from broadcast television, the loss is estimated based on the reduced "live" audience.

4. Estimate the loss to the industry and to rights holders

The first level of losses calculated are for the broadcasters/distributors of the works, i.e., video retailers, Pay/PPV operators, broadcasters, etc. Once this "retail" loss is known, the loss to producers and other copyright holders is calculated based on their share of each retail dollar. For example, if the net loss to broadcasters is estimated at \$1, then producers, creators, performers and other copyright holders net loss would be 54 cents, since broadcasters spend 54% of their revenue on programming.¹

For the purposes of this study, distributors have not been included. Distributors earn a commission brokering programs between the producer and broadcaster/video retailer. However, in many instances, producers are also distributors. For simplicity, it was assumed that distributors are considered only where a company is also a producer.

¹ Statistics Canada 1993.

1.4.1 General Approach (cont'd)

Although the theoretical losses to broadcasters/distributors are calculated, the discussion in this study of compensation extends only to creators, performers and other copyright holders that are likely to benefit from a non-taping regime. Consequently, our conclusions are limited to rights holders which, of course, may include broadcasters in their capacity as creators of programs or broadcasters and distributors when rights have been ceded to them.

5. Estimate the impact of a Royalty on blank videocassettes

Assuming a royalty was to be introduced on blank videocassettes, the impact of different levels of royalties can be determined using the results of the Gallup 1994 survey. An estimate of the amount of money a royalty could raise is obtained by multiplying the number of blank videocassettes by various suggested fee levels and adjusting for consumer's stated reduction in purchases due to the increase in price.

6. Estimate the amount of money that would stay in Canada and flow to rights holders

Using scenarios suggested by both Departments, an estimate of the amount of funds that would flow to Canadian authors and performers versus going to the US or other countries is obtained. The estimate is derived by determining which types of programs are taped (e.g. movies, sports, etc.) and what percentage of these programs are from Canadian or foreign sources.

1.4.2 Other Key Methodological Issues

Two methodological issues should be noted.

A. Librarying and Time-Shifting

In general, two types of home taping of TV programs are possible: librarying and time-shifting.

Librarying can be defined as taping for viewing more than once. The impact of this copying violation may be reflected in lower sales or rental displacement.

Time-shifting can be defined as taping for viewing once only at a later time. There are two opposing positions with regard to the copyright infringement issue: Simply, one views time-shifting as a violation of the reproduction right while the other believes that this issue still has to be addressed by Canadian courts.

According to the first position, time shifting constitutes an unauthorized reproduction of a protected work. If there was a legal challenge, Canadian courts would have to assess whether time shifting falls under the Fair Dealing defense.

To involve the Fair Dealing defense, the copy must represent a substantial part of the work. If not, then no violation occurs. If it is a substantial part of the work, the Fair Dealing Defense can be invoked if it is determined that the copy was made for the purpose of private study or research.

1.4.2 Other Key Methodological Issues (cont'd)

As time shifting represents at least a substantial part of the work then the Fair Dealing Defense might be considered. However, time shifting is generally not done for private study or research so the courts would likely reject that claim.

According to the second position, Canadian statutes do not specifically address the time-shifting of audio-visual productions, nor has any Canadian jurisprudence clarified the applicability of copyright statutes in this domain.

In this area, Canadian statutes can only protect those rights if they appear on a controlled list of rights. In the absence of clear identification of a protected right, it is up to the courts to interpret the applicability of any related statutes. Therefore, while many close to the issue have opinions as to the probable outcome, no definitive decision can be made.

Generally, in the absence of Canadian law in the past, Canadian Courts have looked to other jurisdictions for parallel cases. In the case of time-shifting, the U.S. Supreme Court has ruled that time-shifting is "fair use"² of a right and therefore not a copyright violation. However, in the copyright regime in France, time-shifting is considered an infringement to the reproduction right which should therefore be prohibited.

² Fair Use is a broader definition than Fair Dealing and used in the U.S. not Canada.

1.4.2 Other Key Methodological Issues (cont'd)

Although different situations prevail in the U.S. and France, the laws of those countries are different from those in Canada. Until Canadian Courts or legislators clarify this position, the question remains unresolved and no decision can be made with respect to copyright violations as a result of time-shifting.

It is beyond the scope of this study to conclude on the merit of these legal arguments. For the purpose of this report, the economic loss due to time shifting has been calculated, and specified separately from tapes made for a home library.

Timeshifting has a potential economic impact as well.

We do not have any behavioural studies to indicate whether the practice of fast forwarding through the commercials on taped programs is more common and therefore more detrimental to viewing of advertising by audiences than, muting, channel surfing, or leaving the room during the advertisements in a live broadcast. Even if taped commercials are viewed less than those on live broadcasts, it is highly improbable they are never viewed at all. Nevertheless, the rating agencies and advertisers have not changed their practices, and continue to only use live audiences to determine rating points and advertising prices. Thus it seems reasonable to assume that under the present system, home taping will lower advertising revenues to the extent that viewers substitute taped shows for live viewing.

1.4.2 Other Key Methodological Issues (cont'd)

Alternatively, it is possible that the unmeasured impact of viewing advertising on taped programs has inflated the value of a rating point. (The real value of advertising does not lie in rating points, for they are only one element in helping to assess advertising's ability to affect sales and profits of the goods and services advertised.) The inflation in the value of rating points could counteract the lower audience ratings and maintain advertising revenues. Under this scenario timeshifting would have no adverse economic impact on advertising revenues and thus should not be counted as a loss.

It should be also noted that timeshifting losses for broadcasters are less direct than the losses to video retailers generated by librarying. For retailers it is assumed that (with some probability) a sale or rental of a specific film is low whenever that film is copied. For broadcasters, since the price paid for a film is determined before audience share is established, it would take some time for lower audience share due copying to affect advertising revenue, and this will affect all productions, not a particular program or film.

The point being made is that there are many dramatic changes happening in this industry, and is difficult to determine the extent to which timeshifting constitutes a significant loss. For this reasons, while the study has considered timeshifting to be a source of revenue losses, the study explicitly identifies those losses associated with timeshifting and librarying, so that the timeshifting component can be discounted by those so inclined.

B. National Treatment

A national treatment has been used for this report for estimating losses to rights holders and allocation of any royalty revenues. This means in calculating royalties, that Canada treats foreign rights holders the same as Canadian rights holders.

1.5 Gallup 1994 Survey Results

1.5.1 Key Results

This section presents selected data derived from the Gallup 1994 Survey.

- Number of VCR Active Canadians (age 18+): 14.0 million
- Number of TV programs recorded in average year: 1,159 million
- Number of TV programs recorded from pay-TV/PPV in average year: 126 million
- % of TV programs recorded that were feature films: 25.7%
- Number of TV programs recorded that were feature films: 298 million
- Number of pre-recorded video copies in an average year: 25 million
- % of pre-recorded video copies that were feature films: 37.2%
- Number of pre-recorded video copies that were feature films: 9.4 million

1.5.1 Key Results (cont'd)

- % of pre-recorded video copies that were non-film: 42%
(not including personal/home videos or don't know as answers)
- Number of pre-recorded cassette copies that were non-film: 10.5 million
- Number of blank videocassettes purchased in average year: 149 million
- Number of pre-recorded videos rented in average year: 636 million
- Number of pre-recorded videos purchased in average year: 56 million
- Time shifting accounted for 64% of feature film taping and 74% of non-film taping from television. Librarying accounted for 36% of feature film and 26% of non-film taping from television.
- On average, 8.5 of 10 recorded TV programs are actually watched. The other 1.5 recorded programs are not viewed at all.

Home Taping Universe

26 million Canadians

└── 20.4 million 18+ (1991 Census)

└── 68.4% VCR penetration

└── 14.0 million VCR active (own, rent or borrow) Gallup 1994

└── 82.7 Recorded programs per person

└── 1,150 million recorded programs in average year

25.7% ─── 297 million feature films

12.4% ─── 143 million sports events

29.5% ─── 341 million situation comedy or drama

4.8% ─── 55 million childrens program

10.5% ─── 122 million documentary or educational

1.5.2 Data Interpretation

The data provided by Gallup 1994 was carefully examined and compared to other similar studies.

a) Discrepancies Between Gallup 1994 and Other Surveys

The results of the Gallup 1994 survey for renting and purchasing behaviour by Canadians seems to be high when compared to results of previous studies or sources. For example, if Canadians rented 636 million videocassettes and purchased 56 million videocassettes as the Gallup 1994 survey suggest then based on a \$2.50 rental price and \$15 purchase price, video retailers would have sales of \$2.4 billion annually. However, according to the Statistics Canada Household survey, actual video retailer sales and rentals are about \$1.1 billion. Some of the discrepancies may be due to respondents considering household behaviour even though they were asked to answer explicitly as an individual. It might also reflect the strong growth of the video market in general. Consequently, using the Gallup 1994 survey results for the amount of renting and purchasing done by Canadians may be overstating the actual amount.

Discrepancies Between Studies

	Gallup 1994	Gallup 1992	Statistics Canada 1992
Blank tapes purchased	149 million	59 million	20-32 million
Number of video rentals	636 million	382 million	210-425 million*
Number of video purchases	56 million	13.7 million	12-25 million**

* NGL estimate based on dividing estimated \$850 million in rentals by estimated average \$1-4 rental price.

** Estimate based on dividing estimate \$250 million in sales by estimated average \$10-20 purchase price.

1.5.2 Data Interpretation (cont'd)

However, the Gallup 1994 results used most often in this study centre around the amount of taping by program category and whether a tape was made for viewing once at a later time or for viewing more than once. Discussions with analysts of previous VCR studies and Anthony Smith, an expert in methodology and research design, have indicated that the way these questions were asked in the Gallup 1994 survey provides the most reasonable answers possible. In the survey, the respondent was asked to recall details of the last program that they taped.

The only way these key results could have been improved would have been to ask respondents what they taped the previous day (if they taped anything at all). However, to obtain an acceptable sample size in this case, a much larger base of respondents would be required.

1.5.2 Data Interpretation (cont'd)

b) Viewing Audience Multiplier

The Gallup 1994 study separately assessed what the average viewer taped for personal use as well as shared or lent to a friend or relative. Consequently, a viewing audience multiplier is then required to account for the additional impact that the extra viewing to illegal copies by friends or relatives will have on the system.

The viewing audience multiplier is obtained by multiplying three components: percentage of tapes actually viewed, percentage of tapes lent to friends, and percentage of tapes viewed at home with friends or relatives.

First, according to the Gallup 1994 survey, only 85% of all recorded TV programs are actually viewed. The other 15% are taped but then not viewed. Consequently, any numbers used from the Gallup 1994 regarding taping occurrences should be considered at 85% of their value.

Second, according to the Gallup 1994 survey, 15.2% of viewers lent a homemade tape to a friend. These friends therefore represent an additional audience for these illegal tapes and thus increase the economic harm to the industry. Consequently, the viewing base of 85% of programs should be increased by 15.2%.

1.5.2 Data Interpretation (cont'd)

Third, according to the Gallup 1994 survey, 28.5% of homemade tapes were viewed at home with friends or relatives. These friends or relatives could also be considered as extra viewing since they would then not then rent a legal video or view the program "live". Alternatively, these friends or relatives should not be considered as an extra audience since if they watched a legal videocassette copy or "live" television event with the viewer their viewing is unaccountable anyway. Consequently, to be conservative for the purposes of this study, viewing that is shared with friends or relatives is considered normal usage and therefore does not increase the economic harm to the industry.

The resulting viewing audience multiplier is then $.98 (1 \times 85\% \times (1 + 15.2\%))$.

Given the order of magnitude accuracy of this study, the viewing audience multiplier is therefore assumed to be 1. Throughout the study, the viewing audience multiplier is then used wherever Gallup 1994 data on the number of tapes made occurs. However, since the factor is one and for reasons of simplicity, the viewing audience multiplier is not shown.

1.6 Macrovision/Schulman Studies

In estimating the economic harm to performers, authors and other copyrights holders that results from various types of copying, it is essential to determine whether such copying is actually displacing other revenue earning activities, such as buying or renting a cassette, where money would in fact flow to rights holders. The only study we have been able to find estimating such behaviour was one commissioned by Macrovision Corporation in 1993, entitled "Home Taping in America: The Second National Study of VCR Owners", prepared by Schulman, Ronca & Bucavalas Inc. However, there are several difficulties in using this study.

First, Macrovision, is a firm that sells copy protection technology, and could be perceived as a source that is not neutral. Indeed the numbers from the first Survey published in 1990 were revised downwards after industry criticisms that they seem inflated. Nevertheless, the firm commissioned to do the study has a solid reputation, and the methodology used seems sound. Thus in the absence of other sources of data, we feel it was reasonable to use the results of this study, but ask readers to take note of these concerns.

The second major problem is the scope of the Macrovision study: it only deals with taping of pre-recorded material and losses in terms of sales and rentals of pre-recorded videocassettes whereas we must also consider taping off TV and losses to broadcasters. For example, lost sales of pre-recorded videocassettes due to home taping are only indirectly related to lost advertising revenues from taping TV shows. These issues are addresses in greater detail in the text whenever the Macrovision figures are introduced.

2.0 ECONOMIC IMPACT OF HOME TAPING

This section examines the economic impact of home taping of feature films and other non-film programming. The analysis is broken into two parts because the commercial value and distribution chain for feature films and non-films programs is quite different. A feature film is generally shown in theatres, on home video, on pay-TV, on PPV and then Free TV. A non-film program is generally shown on Free TV or home video.

A discussion of how each industry operates begins the analysis.

2.1 Feature Film Taping

2.1.1 The Feature Film Industry

A feature film is an expensive undertaking typically costing \$5-100 million or more. Consequently, the copyright owners are anxious to recover as much money as quickly as possible.

Historically, the major Hollywood studios who produce and own the majority of feature films made have earned the bulk of their revenues by displaying the films in theatres across North America. However, the emergence of Free TV and then more recently, Home Video, pay-TV and PPV has significantly changed the revenue structure of the industry. Today, theatre box office revenue accounts for about a third of a studio's revenue from a film.

U.S. Studio Revenue

Source of Revenue	1993 Revenue (\$ millions)	% of Total
Theatre	\$2,500	33%
Home Video	\$4,100	54%
Pay TV	\$956	13%
PPV	\$64	1%
Total	\$7,620	100%

Source: Paul Kagan Associates Inc.

2.1.1 The Feature Film Industry (cont'd)

The feature film distribution chain today allows each medium to have generally exclusive rights to the film for a period of time. In general, the windows in order are: Theatre, Home Video, PPV, Pay-TV, and Free TV.

Theatres

Typical theatre admission is \$8 for an adult with about 50% going to the exhibitor and 50% to the studio/distributor. Consequently, studios earn about \$4 per viewer when a film is released.

Home Video

Theatres still show films first but now, about three to six months after a film is in theatres, it is made available for video rental and perhaps for sale as well. However, the success of a film in home video is generally dependent on its success in theatres. If the film was a hit in theatres then video stores order more copies generating more revenue. If it was a bomb then they order fewer video copies and consequently generate less revenue.

A typical video rental is \$1-4 per day. Video stores must buy a rental copy that may cost \$65 or more from the studio distributor. The \$65 is all the studio receives. The video store then hopes to rent the pre-recorded cassette at least 40 times to earn back the tapes costs and overhead. If video stores misjudge the potential for a video and order too many copies of a film then they could lose significant amounts of money. After interest has subsided in a film, video stores sell copies to other stores or consumers as "previously-viewed" copies. Studios receive none of this revenue.

2.1.1 The Feature Film Industry (cont'd)

Since video stores have proved to be such a lucrative window for studios, the studios now give them 60-90 days exclusivity before allowing it on PPV. Studios are seriously concerned that if a film were to be shown first on PPV, then illegal copies could be made and that video stores would order fewer copies thus resulting in significantly reduced home video revenue.

Generally, though a video store carries sometimes thousands of titles, 80% of its revenue comes from 200 or so recently released films. Consequently, video stores generally earn the vast majority of revenue from a title before the 60-90 window expires.

Assuming each video is rented 40 times and seen by 2 people each time, then a studio that sold the video for \$65 to the video store realises about \$0.80 per viewer.

PPV

PPV films are typically sold for \$4 per viewing. To see a PPV movie, a cable television viewer must have an addressable decoder so that the cable company can descramble the signal once a movie is purchased. Revenue is typically split equally among the cable system, the PPV operator and the studio/distributor. A studio with a hit film has stronger leverage in negotiating its rate. However, not all films released to theatres are shown on PPV.

Assuming 2 people watch each PPV showing then studios earn about \$0.67 per viewer.

2.1.1 The Feature Film Industry (cont'd)

Pay-TV

A few months later the film is made available on Pay-TV. A pay-TV service typically offer a hundred movies per month. Viewers may watch as many of these films as are offered as often as they choose, for a flat rate of \$10-20 per month. Not all films are shown on pay-TV.

Since most of those individuals who would be willing to pay to see a specific film have had three opportunities (theatres, home video, PPV), pay-TV operators acquire these films at much lower cost. Consequently, studios earn substantially lower revenues per viewer from pay-TV than from even home video or PPV. (The number cannot be estimated since viewership to pay-TV is not measured.)

Free TV

Approximately one to three years after a film appeared in theatres, the film is shown on free television. Television broadcasters typically purchase a package of hit and non-hit films offered by studio/distributors. Broadcasters recover the films' expense by selling advertising that is shown throughout the movie telecast. In selecting the films they wish to purchase, broadcasters look to theatre box office results as an indicator of potential viewer interest.

Revenue per viewer for the studio is on the order on 1 cent or less from Free TV.

2.1.1 The Feature Film Industry (cont'd)

Summary

The following are the key points about the feature film industry that have a bearing on estimating the economic impact of home taping:

- The higher upstream a film is available, the greater its commercial value.
- Theatrical box office success generally determines viewer interest and revenue for downstream windows since it is the first and strongest indication of viewer interest.
- Once a product is released to new windows in the distribution chain, it has exhausted most, but not all of its revenue earning potential from the previous window. Therefore, since the bulk of revenue has been extracted from prior distribution windows before copying can occur, the overall impact of home taping is low.
- If the distribution chain were to change in terms of the revenue profile of windows or with the addition of new windows, the relative importance of copying could change.

Clearly, exceptions exist such as a film being released directly to video, but they are relatively minor.

2.1.2 Qualitative Discussion of Potential Losses Due to Home Taping

In this section, the impact of taping on feature film off of television or pre-recorded cassette is discussed qualitatively.

1) Film taped off of Free TV (e.g. "Dances With Wolves" on CTV)

By the time a viewer tapes "Dances with Wolves" from Free TV, the film has already earned most of its eventual total revenue. If home taping were not possible, the distributor would likely not re-release the film to theatres nor would video stores purchase additional copies nor would Pay and PPV schedule additional showings. Consequently, copyright holders losses are negligible from these upstream windows.

However, copyright holders could theoretically lose revenue if broadcasters lose audience share due to home taping. If a viewer tapes "Dances with Wolves" to either view once at a later time or for a library, then the broadcasters' "live" audience is reduced. Advertisers purchase only "live" audiences³ so broadcaster advertising is reduced. Therefore, broadcasters will likely pay less for the right to telecast the film. Consequently, copyright holders ultimately lose potential revenue as a results.

³ Until the recent introduction of people meters, audience measurements services were only able to measure "live" viewing audiences. Viewers watching a taped program were classified as "VCR Tuning". Therefore, advertisers have traditionally only paid for "live" audiences since it was impossible to know the amount of "taped" viewership. In addition, since viewers of taped programs "zip" through commercials and an advertisement may be seen outside of its intended window, advertisers would not generally value "taped" audiences even if they were measured.

2.1.2 Qualitative Discussion of Potential Losses Due to Home Taping (cont'd)

However, it is important to understand that broadcasters purchase films independent of the actual audience ratings the film achieves. If a film is expected to receive a 2 rating share but delivers a 4 rating share, broadcasters do not pay any more to the rights holder. In addition, some distributors force broadcasters to buy a group of films even if the broadcaster only wants one particular film. Therefore, broadcasters may be paying rights holders for films that are not even shown. Consequently, it could be argued that if home taping were impossible, "live" audience figures would rise somewhat but that broadcasters might not actually pay any more for a film.

2. Film taped from Pay/PPV e.g. "Cliffhanger" on Viewer's Choice or The Movie Network

A person who tapes "Cliffhanger" from Pay or PPV for one showing at a later time is infringing the reproduction right but is not causing any indirect loss to rights holders. In this case, the viewer has paid for the right to see the film and is simply rescheduling the movie to the appropriate time.

A person who tapes "Cliffhanger" from Pay or PPV for library purposes is also infringing the reproduction right since the viewers have not been authorized to make a copy. In this case, however, the loss to Pay/PPV and video retailers must be considered.

By the time a Pay/PPV viewer tapes a film from Pay/PPV, the film has already generated virtually all the theatrical and home video rental/sales revenue it will likely realize (e.g. the film no longer is shown in theatres and the video version is removed from the new release shelf and/or the price and number of copies available is reduced). However, since the video is still available in video stores, it is possible that the taping of a film off Pay/PPV may reduce the chance the video will be rented. Consequently, the impact of home taping off of Pay/PPV can be estimated based on the impact on home video rentals.

2.1.2 Qualitative Discussion of Potential Losses Due to Home Taping (cont'd)

If a person tapes "Cliffhanger" for his/her library from pay-TV, no loss occurs for the pay-TV operator since they receive a fixed rate from subscribers regardless of whether the subscribers watch any films on the channel. However, there is a loss for video retailers since the subscriber is less likely to rent or buy "Cliffhanger" once it is no longer shown on pay-TV.

If a person tapes "Cliffhanger" for his/her library from PPV, a theoretical loss occurs for PPV operators in that the subscriber is less likely to "rent" the film again from PPV. However, since movies are available on PPV for a relatively short period of time, it is unlikely that the subscribers would rent the same video twice from PPV anyway. Consequently, the loss, as with pay-TV, is for the video retailer since the subscriber is less likely to rent or buy "Cliffhanger" once it is no longer shown on PPV.

It could be argued that if a viewer could not make a tape from Pay/PPV, Free TV audiences in future would be larger. However, since broadcasters do not consider the number of legal or illegal video tapes in the system when purchasing a film for broadcast, there is negligible impact on broadcasters, and the prices they pay for a film. Therefore, there is negligible impact on rights holders. In the long term, however, there is likely downward pressure on ratings, advertising revenue, and program acquisitions.

2.1.2 Qualitative Discussion of Potential Losses Due to Home Taping (cont'd)

Although difficult to quantify, anecdotal evidence indicates that many people subscribe to Pay-TV and PPV in large part so that they can tape movies. An effort to quantify this figure is difficult and beyond the scope of the data available.

However, if Pay-TV/PPV operators were able to prevent the copying of feature films they transmit, would their overall subscriber base increase or decrease as a result? The likely effect would be a decrease, as many people subscribe so they can tape their favourite movies. Therefore, it appears that although rights holders lose in certain instances, pay-TV operators may profit in others.

2.1.2 Qualitative Discussion of Potential Losses Due to Home Taping (cont'd)
Impact on Rights Holders From Home Taping Off Of Television

	Taped Off Of...	Viewer Segment	Distribution Window			
			Home Video	PPV	Pay	TV
1.	Free TV e.g., "Dances with Wolves" on CTV	Pay/PPV subscriber (1.0m HHs)	Negligible Impact	Negligible Impact	Negligible Impact	LOSS - lower ratings offset: lower prices for programming
	Free TV e.g., "Dances with Wolves" on CTV	Non-Pay/PPV subscriber (9.0 m HHs)	Negligible Impact	-	-	LOSS - lower ratings offset: lower prices for programming
2.	Pay/PPV e.g., "Cliffhanger" on Viewer's Choice or The Movie Network	Pay/PPV subscriber (1.0m HHs)	LOSS - reduced turns - reduced sales	Negligible impact	Negligible impact	None

2.1.2 Qualitative Discussion of Potential Losses Due to Home Taping (cont'd)

3. Film taped from a Pre-Recorded Cassette e.g. "The Fugitive"

Taping from a pre-recorded cassette is primarily for library purposes. It is unreasonable to assume that viewers would borrow or rent a tape and then copy it for just one showing.

If a pay/PPV subscriber goes to the effort of taping a pre-recorded videocassette, the film must be of such value to the subscriber that he/she cannot wait the few months until it is available of pay/PPV when it would be technically easier and, in some cases, cheaper to tape it. Potentially, it is a film that will not show up on PPV or Pay at all. Therefore, negligible losses to PPV or Pay operators would occur since, in many cases, they will not be showing the film anyway.

Alternatively, the pre-recorded cassette taped could be a friend's copy so the viewer may not purchase a PPV showing he/she otherwise would have. Consequently, a loss for PPV operators is possible. For the purpose of this report, NGL has assumed that the loss to rights holders due to the taping of pre-recorded cassettes is at the level of home video rather than PPV since PPV is only available to about 10% of Canadian households.

If a non-pay/PPV subscriber goes to the effort of taping a pre-recorded cassette, they are generally taping films that they want to keep for a library; otherwise they would just rent the movie. Again, in this case, the loss is a reduction in home video rentals and sales that would have otherwise occurred.

2.1.2 Qualitative Discussion of Potential Losses Due to Home Taping (cont'd)

The loss to broadcast television due to the taping of pre-recorded video cassettes is negligible in the short term. Theoretically, each person who views an illegal copy would be one less person available to the broadcaster as a potential audience member. However, consumers have had the choice of renting or borrowing legal copies of the film for several years before the film is shown on television. As well, the forecast broadcast audience upon which the price of the film is based, is independent of the number of tapes, legal or illegal in the system. However, in the long run, illegal tapes in the system may exert downward pressure on prices.

Impact on Rights holders From Home Taping Off Pre-recorded Video

	Taped Off Of...	Viewer Segment	Home Video	PPV	Pay	First Window TV
3.	Pre-recorded video e.g., "Fugitive"	Pay/PPV subscriber (1.0m HHs)	LOSS - reduced turns - reduced sales	Negligible Impact	Negligible Impact	Negligible Impact
	Pre-recorded video e.g., "Fugitive"	Non-Pay/PPV subscriber (9.0m HHs)	LOSS ++ - reduced turns - reduced sales	-	-	Negligible Impact

2.1.3 Film Taping from Pay/PPV

This section examines the economic impact of the home taping of feature films from Pay/PPV sources. The economic impact is estimated by determining the total number of feature films taped for a home library and then multiplying by the expected revenue in terms of video rentals and sales if home taping were eliminated. Taping done for a home library is considered only since it is assumed that copies made for time shifting purposes still mean the rights holder has been paid the appropriate rate. Lost video retail sales represent the most measurable proxy available.

A. Total Number of Feature Films Taped from Pay/PPV

Number of programs taped from pay/PPV	126 million
Proportion that are feature films	<u>x 50.2%</u>
Total Pay/PPV taping of feature films	= 63 million

Data: Gallup 1994

- 63 million feature films are taped annually in Canada from pay/PPV sources.

2.1.3 Film Taping from Pay/PPV (cont'd)

B. Feature Films Taped for a Library

Total pay/PPV tapings of feature films	63 million (A)
% of pay-TV tapings for library	<u>x49%</u>

Feature films taped for a library	31 million
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Data: Gallup 1994

- 31 million feature film tapes are made annually by Canadians for their home libraries

2.1.3 Film Taping from Pay/PPV (cont'd)

C. Estimated Loss to Video Retailers

To estimate the loss to video retailers, the following data is required:

- average video rental and purchase prices
- the percentages of viewers that would rent or buy a video if they could not tape

Detailed data on the video industry in Canada in terms of units, sales, revenue, etc. is not generally available but can be estimated from various sources. Pre-recorded videos for sale range in price from \$10-20 or more. Consequently, for purposes of illustration NGL has used a \$15 average. Pre-recorded videos for rent range in price from \$1-4 on average. Consequently, for purposes of illustration, NGL has used a \$2.50 average.

If home taping were impossible, viewers would either rent or buy the video or watch something else. The actual percentage that would do each is unknown so a proxy must be used. In 1993, the Schulman⁴ study conducted for Macrovision Corporation in the U.S. found that of the VCR owners who had been frustrated in making a copy of a pre-recorded cassette 20% actually chose to purchase a legal copy and another 23% actually rented the video once.

⁴ While not directly applicable since the study dealt only with pre-recorded videocassette taping and was only done in the U.S., they are the only comparable percentage figures available. A summary of the Schulman study results are contained in Appendix B.

2.1.3 Film Taping from Pay/PPV (cont'd)

The Schulman study figures may be used here. However, it is important to note their limitations. It is technically much more difficult and inconvenient for a viewer to make a copy of a pre-recorded cassette as compared to taping a film off of television. For example, two VCRs or a VCR and VHS camcorder are required which may involve renting or borrowing the second unit. In addition, they must be hooked together in the proper way so that taping can occur. Therefore, if a viewer were to go to the difficulty of taping a pre-recorded cassette then they must really want to make that copy. Taping off TV is much easier so viewers may not want the copy as much. Consequently, the 20% and 23% Schulman figures which are based on taping from pre-recorded cassettes may be high if applied to viewers who only tape off of television. Thus, lower percentages should be considered.

Alternatively, it could be argued that since Pay/PPV viewers are more inclined to home tape than average non-Pay/PPV viewers, these Pay/PPV viewers would be predisposed to purchase/rent the films if they could not copy them. Thus, this sample bias may offset the factors related to the ease in copying.

Consequently, for the purposes of this study, NGL assumed that if viewers could not tape off of Pay/PPV, Free TV or pre-recorded cassette, then 20% would buy a video, 20% would rent a video once, and 60% would watch something else. These assumptions about video rental/sales and viewer behaviour are used throughout the rest of the analysis in this study.

2.1.3 Film Taping from Pay/PPV (cont'd)

C. Estimated Loss to Video Retailers (cont'd)

(i) Sales

Feature films taped for a library	\$31 million (B)
20% of viewers who would buy a video if could not copy from pay/PPV	x 20%
Video purchases price	<u>\$15 (NGL estimate)</u>
Lost Video Retail Sales	\$93 million

(ii) Rentals

Feature film taped for a library	31 million (B)
20% of viewers who would rent the video once it could not copy from pay/PPV	x20%
Video Rental Price	<u>x \$2.50 (NGL estimate)</u>
Lost Video Rental Revenue	\$16 million

- Video retailers lose \$109 million in rentals/sales revenue due to home taping from pay/PPV or about 10% of existing total revenues of \$1.1 billion.

2.1.3 Film Taping from Pay/PPV (cont'd)

The table presented below will follow the calculation of financial loss at various stages throughout the analysis. As we proceed, we will continue to fill in the table until we are able to estimate the overall impact of home taping.

**Summary of Financial Loss to Broadcasters and Video Retailers
Prior to Rights Holders Consideration**

Taped From:	Feature Film		Non-Film	
	Loss to Free TV	Loss to Video Rental/Sale	Loss to TV	Loss to Video Rental/Sale
Broadcasting Sources	?	\$109 million	?	-
Pre-recorded videocassette	-	?	-	?
Gross Impact on Industry	?	?	?	?

2.1.4 Film Taping from Free TV

This section examines the impact of home taping of feature films from free TV.

The economic impact is estimated by determining taping occurrences as a percentage of total opportunities and then multiply by television advertising revenue. Occurrences as a percentage of opportunity represent the "lost" television audience for broadcasters. Consequently, when multiplied by total television advertising derived from showing feature films, an amount of lost television advertising can be determined.

A. Taping Occurrences

Total feature films taped from TV	= 298 million
Less films taped from Pay/PPV	- <u>63 million</u> (Previous section)
Total feature films taped off of Free TV	= 235 million

Data Source: Gallup 1994

- Taping/viewing occurrences off Free TV are derived by subtracting the total taping and viewing of pay/PPV from total taping and viewing from all sources.
- 235 million feature films are taped off of Free TV in Canada annually.

2.1.4 Film Taping from Free TV (cont'd)

B. Opportunities to Tape Feature Films from Free TV

Conservative estimate of <u>prime time</u> films per week on free TV	11*
Weeks per year	x 52
VCR active Canadians	<u>x 14 million</u>
Total Free TV feature film taping opportunities	= 8.0 billion

- While over 100 English and French language feature films are on free TV each week, the ones likely to be taped are those scheduled in prime time. Consequently, the number of prime time feature films was used as a proxy, and would be a conservative estimate. In the sample week chosen, 11 English language and 13 French language feature films were shown in prime time.
- Canadians had 8 billion opportunities to tape feature films off of Free TV.

2.1.4 Film Taping from Free TV (cont'd)

C. Estimated Impact of Taping Off Free TV

Total feature films taped off Free TV	235 million (A)
Total Free TV feature film opportunities	<u>+ 8,000 million (B)</u>
All feature film taping as a % of opportunities	2.9%
Viewer would have watched live if could not tape	x 40% (NGL estimate)
Total Television advertising revenue earned from airing feature films	<u>x \$200 million (NGL estimate)</u>
Total lost advertising revenue	= \$2.3 million

2.1.4 Film Taping from Free TV (cont'd)

- If home taping were eliminated, television audiences may increase by 2.9% if all people who time-shift and library were to watch the film "live". Unfortunately, no estimate is available for viewers who would watch live if they could not on tape. There are a variety of reasons why a viewer may not watch a program "live" that they otherwise would tape, including:
 - the film is being taped while they are watching another program simultaneously;
 - the film is taped during working hours or late at night when the viewer is unavailable;
 - the viewer knows that they may be able to watch the film at another time.

Consequently, for purposes of illustration, NGL has estimated a maximum 40% of viewers who could not tape would watch the program live.

- While the actual figure is unknown, NGL estimates the advertising revenue generated by broadcasters from airing feature films at under \$200 million annually since feature films are no longer a major program purchase by most broadcasters. Consequently, revenues might increase by \$2.3 million at most.
- \$2.3 million is about 0.1% of total television advertising revenue of \$1.7 billion in Canada in 1993.

2.1.4 Film Taping from Free TV (cont'd)

- Again, although a rights holder has a claim that a reproduction right has been infringed, the commercial value of the asset has been reduced over time. Continuing to look downstream, the second TV window purchase price of a film asset is valued in part on previous live audience ratings. Had copying been impossible, it is likely that the delivered audience would have been higher and, therefore, the price paid to the rights holders for second window broadcast would have been higher.
- According to the Gallup 1994 Study, 64% of feature film taping was done for time shifting and 36% for librarying. Thus, of the \$2.3 million loss, \$1.3 million is for time shifting and \$1 million for librarying.

2.1.4 Film Taping from Free TV (cont'd)

**Summary of Financial Loss to Broadcasters and Video Retailers
Prior to Rights holders Consideration**

Taped From:	Feature Film		Non-Film	
	Loss to Free TV	Loss to Video Rental/Sale	Loss to Free TV	Loss to Video Rental/Sales
Broadcasting Sources	\$2m (\$1m TS, \$1m L)	\$109m	?	-
Pre-recorded videocassette	-	?	-	?
Gross Impact on Industry	\$2m	?	?	?

TS= Impact due to time shifting; L = Impact due to librarying

2.1.5 Film Taping from Pre-recorded Cassettes

Aside from broadcasting sources, feature films can be copied from pre-recorded videocassettes. Two different methods can be used to estimate the economic impact: Number of tapes and % of rentals/sales.

The number of tapes method estimates the economic impact by multiplying the number of tapes made from pre-recorded videos by the percentage of viewers who would rent or buy (and the retail price) if home taping were eliminated.

Alternatively, the % of rentals/sales method assumes that the economic impact would increase based on the proportional increase in the number of rentals or sales made.

2.1.5 Film Taping from Pre-recorded Cassettes (cont'd)

I. Number of Tapes

(i) Sales

Total feature films taped from pre-recorded video	9.4 million (Gallup 1994)
20% of viewers who would buy a video if could not copy from pre-recorded video	x 20%
Video purchase price	x <u>\$15</u> (NGL estimate)
Lost Video Retail Sales	= \$28 million

(ii) Rentals

Total feature films taped from pre-recorded video	9.4 million (Gallup 1994)
20% of viewers who would rent the video once it could not copy from pre-recorded video	x 20% (NGL estimate)
Video Rental Price	x <u>\$2.50</u> (NGL estimate)
Lost Video Rental Revenue	= \$5 million

- Video retailers lose \$33 million in rental/sales revenue due to home taping of feature films from pre-recorded videos or about 3% of total revenues of \$1.1 billion.
- Percentages for those who rent and buy if could not tape and estimates for retail prices were discussed fully in section 2.1.3.

2.1.5 Film Taping from Pre-recorded Cassettes (cont'd)

II. % of Rentals/Sales Method

(i) Sales

Feature films taped from pre-recorded video	9.4 million (Gallup 1994)
20% of viewers who would buy a copy if could not tape	x 20% (NGL estimate)
Total videos purchased in Canada	+ 56 million (Gallup 1994)
Total sales of pre-recorded videos	x \$250 million (Statistics Canada 1992)
Lost Video Retail Sales	= \$8.4 million

(ii) Rentals

Feature films taped from pre-recorded video	9.4 million (Gallup 1994)
20% of viewers who would rent a copy if could not tape	x 20% (NGL estimate)
Total videos rented	+ 636 million (Gallup 1994)
Total rentals revenues of pre-recorded video	x <u>\$850 million</u> (Statistics Canada)
Lost Video Rental Revenue	= \$2.5 million

2.1.5 Film Taping from Pre-recorded Cassettes (cont'd)

- Total lost revenue due to home taping of feature films from pre-recorded video amounts to \$11 million or 1% of total sales of \$1.1 billion.
- The large difference in results between \$11 million and \$33 million is due to the use of different sources of data. The \$11 million amount is likely more accurate since it eliminates the bias of the Gallup 1994 results by dividing one Gallup 1994 result by another and then using Statistics Canada figures. The \$33 million amount while reasonable represents the maximum amount lost (A discussion of discrepancies between the Gallup 1994 study and other surveys is in section 1.5.2.).

2.1.5 Film Taping from Pre-recorded Cassettes (cont'd)

**Summary of Financial Loss to Broadcasters and Video Retailers
Prior to Rights Holders Consideration**

Taped From:	Feature Film		Non-Film	
	Loss to Free TV	Loss to Video Rental/Sale	Loss to Free TV	Loss to Video Rental/Sales
Broadcasting Sources	\$2m (\$1m TS, \$1m L)	\$109m	?	-
Pre-recorded videocassette	-	\$11-33m	-	?
Gross Impact on Industry	\$2m	\$120-142m	?	?

TS= impact due to time shifting; L = impact due to librarying

2.2 Non-Film Program Taping

This section examines the economic impact of home taping of programs which are not feature films.

2.2.1 The Non-Film Industry

The non-film distribution chain is significantly different from the feature film distribution chain. First, non-films are rarely shown in theatres. Instead, their first showing is usually on television - either Free TV, pay-TV or PPV TV. Second, in some cases, particularly childrens, music or documentary programming, a pre-recorded video is available in video stores for rental and perhaps sale. Third, old television series such as "Star Trek" or "Roots" are available on videocassette. Fourth, a value per viewer is difficult to determine since the content and distribution of individual non-film programs varies greatly.

Non-film programs include comedy, drama, documentary, educational, sports and other programming and represents approximately 74% of all home taping. (Gallup 1994)

Pay/Pay-TV

According to the Gallup 1994 Survey, 50% of TV programs recorded from pay/PPV were non-films. Since pay movie channels only show feature film, the source must have been either PPV which shows music or sports events or pay-TV channels such as Family Channel, or the U.S. superstations which show a variety of programming.

2.2.1 The Non-Film Industry (cont'd)

In any case, while some of these non-film programs may be available in video stores, the majority are not, so using lost video rentals or sales as a proxy would be inaccurate.

Alternatively, since PPV sport or music events are relatively rare in Canada and U.S., superstations are effectively the same as conventional broadcasters, it is not unreasonable to estimate the loss due to home taping on the basis of loss to television broadcasters.

Free TV

Free TV programming is solely supported by advertising. A television station will acquire or produce programming that it feels will attract a large audience. In turn, it sells advertising to advertisers who wish to reach that audience. In order to make a profit and cover overhead costs, broadcasters then have to sell enough advertising during that program to pay for the program.

Advertisers generally only want "live" audiences since their message has little value if the commercial is out-of-date or skipped over by the viewer.

The loss to broadcasters is then the lost audience television audience due to home taping which can be measured as a percentage of total audience.

2.2.1 The Non-Film Industry (cont'd)

Home Video

Besides movies, larger video retailers also carry a selection of non-film programs such as childrens cartoons, music videos, documentaries or popular old television series episodes. 42% of all programming taped from pre-recorded cassettes are non-film programs such as these.

The loss due to home taping can be estimated by multiplying the number of tapes made by the average retail price of a displaced rental or purchase.

Note that non-film videos generally rent for a lower price than hit films. Consequently, for the purposes of illustration, we have assumed that the rental price is slightly less than hit films or \$2 per non-film rental.

The purchase price for non-film videos vary but appear to be comparable to films so the assumed \$15 purchase price for films is used here.

2.2.2 Qualitative Discussion of Potential Losses Due to Home Taping

In this section, the impact of taping non-films from television or pre-recorded cassette is discussed qualitatively.

1. Non-film taped off of pay/PPV

As previously discussed, a reasonable way to estimate the loss due to home taping of non-films from pay/PPV is based on the loss to television broadcasters.

Since most non-film programs shown on pay-TV will not be available on Free TV or on home video for some time, there is likely little impact on those industries. In addition, pay-TV subscribers represent only about 10% of all TV households.

2. Non-film taped off Free TV

A non-film shown on TV will likely be repeated at another time. By taping the program, the "live" audience for the original showing is diminished and the potential audience for a repeat showing may also be reduced. The economic loss can be estimated by the lost advertising revenue due to reduced "live" audience. Since the average non-film is not released on video, there is no loss to video retailers. Of course, some minor exceptions may exist.

2.2.2 Qualitative Discussion of Potential Losses Due to Home Taping (cont'd)

3. Non-film taped from pre-recorded cassette

If a viewer goes to the trouble of taping a non-film program off of a pre-recorded video, they likely missed the original or repeat television showing. Therefore, they were not counted in the audience ratings. Consequently, there is no impact on television. However, taping from a pre-recorded cassette clearly reduces the number of future rentals and sales of that video by a video retailer.

**Summary Chart
Impact on Rights Holders From Home Taping**

	Taped Off Of...	Distribution Window		
		Pay/PPV	Free TV	Home Video
1	Pay/PPV	-	Loss - reduced audience	-
2	Free TV	-	Loss - reduced audience	-
3	Pre-recorded Cassette	-	-	Loss - reduced turns - reduced sales

2.2.3 Non-Film Taping from TV

This section examines non-film programming, taped from Free TV, pay-TV and PPV.

The estimate is based on the average hours taped as a percentage of total hours viewed. This percentage when applied to total television advertising represents the potential lost revenue due to home taping. Advertisers only pay for "live" audiences. Therefore, any home taping whether time shifting or librarying would be considered detrimental. Since broadcaster pay for programs based on potential revenues from their live audiences, any taping reduces audiences and indirectly causes a loss.

A. Average Hours Taped per Year

Total program tapings	1,159 million
Non-feature film taping	<u>x 74%</u>
Total non-film taping per year	= 860 million
VCR Active Adult Canadians	<u>+ 14 million</u>
Average person's non-film taping per year	= 61 hours*

Data Source: Gallup 1994

- Approximately 860 million non-film programs are copied from TV per year.
- On average, every adult viewer tapes 61 hours of non-film programming per year.

* Assuming the average program taped is one hour long.

2.2.3 Non-Film Taping from TV (cont'd)

B. Total Hours of TV Viewed per Year

Average number of hours per capita of yearly TV viewing	1,196 hours (CBC Research 1993) ¹
Percentage of non-film television viewing	<u>x 75%</u> (NGL estimate)
Total non-film TV viewing per year	= 897 hours

- The average viewer watches 897 hours per year of non-film television.
- No reliable data is available on the percentage of non-film television viewing so this estimate is based on a review of existing TV schedules and audience rating.

¹ This level has remained relatively stable for the last twenty years.

2.2.3 Non-Film Taping from TV (cont'd)

C. Average Taping as a Percentage of Hours Viewed

Average viewer's non-film taping	61 hours (A)
Total Non-Film TV viewing per year	<u>+ 897 hours (B)</u>
Non-film taping as a percentage of opportunity	6.8%

- The average viewer tapes 6.8% of the non-film programs they watch.

2.2.3 Non-Film Taping from TV (cont'd)

D. Impact of Non-Film Taping from TV

Total television advertising revenue	\$1.7 billion (Statistics Canada/CRTC 1993)
Less feature film advertising revenue	- \$0.2 million (NGL estimate)
Total non-film television advertising	\$1.5 billion

Lost viewing audience due to taping	x 6.8% (C)
40% who would have watched the program live if they could not tape	x 40% (NGL estimate)
Lost Television Advertising	= \$41 million

- Television broadcasters lose \$41 million in advertising due to home taping or about 2.4% of \$1.7 billion in total television advertising.
- If home taping were eliminated, it is not practical to assume that each viewer would be available to watch the live broadcast. However, no reliable estimate exists for this figure. There are a variety of reasons why a viewer may not watch a program "live" that they otherwise would tape, including:
 - the program is being taped while they are watching another program simultaneously;
 - the program is taped during working hours or late at night (e.g. soap operas) when the viewer is unavailable;
 - the viewer knows that they may be able to watch the program at another time (e.g. Star Trek).

2.2.3 Non-Film Taping from TV (cont'd)

For the purposes of illustration, NGL has assumed a reasonable maximum assumption may be 40%.

It could be argued that this estimate for non-films should be lower than for films since non-films could be taped throughout the day whereas films are generally broadcast in prime time when viewers could more likely watch them. Alternatively, since pay/PPV viewers may tape films at any time. This argument may not hold true. Consequently, the 40% estimate is used for both non-films and films.

- According to Gallup 1994 survey, 74% of home taping was done for time shifting and 26% for librarying. Thus, of the \$41 million loss, \$30 million is for time shifting and \$11 million is for librarying.

2.2.3 Non-Film Taping from TV (cont'd)

**Summary of Financial Loss to Broadcasters and Distributors
Prior to Rights holders Consideration**

Taped From:	Feature Film		Non-Film	
	Loss to Free TV	Loss to Video Rental/Sale	Loss to Free TV	Loss to Video Rental/Sales,
Broadcasting Sources	\$2m (\$1m TS, \$1m L)	\$109m	\$41m (\$30m TS, \$11m L)	-
Pre-recorded videocassette	-	\$11-33m	-	?
Gross Impact on Industry	\$2m	\$120-142m	\$41m	?

TS= impact due to time shifting; L = Impact due to librarying

2.2.4 Non-Film Taping From Pre-recorded Cassette

Non-film programming can be taped from pre-recorded video just as easily as feature films. As in section 2.1.6 on feature films, two methods are used to estimate the loss: number of tapes and % of rentals/sales.

The number of tapes method estimates the economic impact by multiplying the number of tapes made from pre-recorded videos by the percentage of viewers who would rent or buy (and the retail price) if home taping were eliminated.

Alternatively, the % of rentals/sales method assumes that the economic impact would increase based on the proportional increase in number of rentals or sales made.

2.2.4 Non-Film Taping From Pre-recorded Cassette (cont'd)

I. Number of Tapes

(i) Sales

Non-film programs taped from pre-recorded video	10.5 million (Gallup 1994)
20% of viewers who would buy a video if could not copy from pre-recorded video	x 20% (NGL estimate)
Video purchase price	x <u>\$15</u> (NGL estimate)
Lost video retail sales	= \$32 million

(ii) Rentals

Non-film programs taped from pre-recorded video	10.5 million (Gallup 1994)
20% of viewers who would rent a video if could not copy from pre-recorded video	x 20% (NGL estimate)
Video rental price	x <u>\$2</u> (NGL estimate)
Lost video rental revenue	= \$4 million

- Video retailers lose \$36 million in rental/sales revenue due to home taping of non-film programming or about 3% of total revenues of \$1.1 billion.
- Percentages for those who rent or buy if could not tape were discussed in section 2.1.3. Estimates for rental and purchase price were discussed in section 2.2.1.

2.2.4 Non-Film Taping From Pre-recorded Cassette (cont'd)

II. % of Rentals/Sales Method

(i) Sales

Non-films taped from pre-recorded cassettes	10.5 million (Gallup 1994)
20% of viewers who would <u>buy</u> a copy if could not tape	x 20% (NGL estimate)
Total videos purchased in Canada	+ 56 million (Gallup 1994)
Total sales of pre-recorded videos in Canada	<u>x \$250 million</u> (Statistics Canada 1992)
Lost Video Retail Sales	= \$9.4 million

(ii) Rentals

Non-films taped from pre-recorded cassettes	10.5 million (Gallup 1994)
20% of viewers who would <u>rent</u> a copy if could not tape	x 20% (NGL estimate)
Total videos rented in Canada	+ 636 million (Gallup 1994)
Total rentals of pre-recorded video in Canada	<u>x \$850 million</u> (Statistics Canada 1992)
Lost Video Rental Revenue	= \$2.8 million

2.2.4 Non-Film Taping From Pre-recorded Cassette (cont'd)

- Total lost revenue due to home taping of non-film programming from pre-recorded video amounts to \$12 million or 1% of total sales of \$1.1 billion.
- The large different between \$12 million and \$36 million is due to the use of different sources of data. The \$12 million amount is likely more accurate since it eliminates the bias of the Gallup 1994 results by dividing once Gallup 1994 result by another. However, the \$36 million estimate should be reasonable as a high end amount (A discussion of the discrepancies between Gallup 1994 and other studies is in section 1.5.2.).

2.2.4 Non-Film Taping From Pre-recorded Cassette

Summary of Financing Loss to Broadcasters and Video Retailers Prior to Rights Holders Consideration

Taped From:	Feature Film		Non-Film	
	Loss to Free TV	Loss to Video Rental/Sale	Loss to Free TV	Loss to Video Rental/Sales
Broadcasting Sources	\$2m (\$1m TS, \$1m L)	\$109m	\$41m (\$30m TS, \$11m L)	-
Pre recorded videocassette	-	\$11-33m	-	\$12-36m
Gross Impact on Industry	\$6m	\$120-142m	\$41m	\$12-36m
Total Impact on Industry	\$175-221 million			

TS= impact due to time shifting; L = impact due to librarying

- The total impact of home taping on broadcast video retailers is \$175-221 million annually.
- A loss of \$43 million in advertising revenue to the \$1.7 billion television industry represents 3% of revenues.
- Time shifting accounts for \$31 million of the \$43 million loss in television industry revenue.
- A loss of \$132-178 million in rental and sales revenue for the \$1.1 billion video industry represents 12-16% of revenues.

2.3 Impact of Home Taping and Rights Holders

In the previous sections, the economic impact of home taping on broadcasters, pay/PPV operators, and video retailers was determined. In this section, an estimate of the impact of home taping on producers and creators, performers and other rights holders is determined based on the industry results. The following is a simplified estimate of the actual impact of home taping on right holders intended to provide order of magnitude results upon which to draw reasonable conclusions.

In the previous section, \$175-221 million was the estimated financial impact that broadcasters, and video retailers suffer as a result of home taping annually. To estimate the creators, performers and rights holders' loss, the producers' share of the broadcasters' and video retailers' loss must first be determined. Once this share is estimated, the following considerations must then be borne in mind.

- Some agreements between creators, performers and other rights holders and producers involve lump sum payments for certain markets and a set period of time, generally five years. In these cases, revenue losses by producers due to home taping do not translate into losses for rights holders since they have already been paid. In other cases, rights holders are paid a percentage of the producers' revenues and would, therefore, lose revenues when the producer loses revenues due to home taping.
- In most cases, the commercial value of the work is depleted after the five years. While the majority of revenue is collected during this initial period, some revenue is collected after the five year period expires.

2.3 Impact of Home Taping and Rights Holders (cont'd)

Typical Canadian production rates for remuneration to creators, performers and other rights holders can be used to estimate the harm caused to them. Although, as explained above, harm to some of these rights holders would not be linked to producers' revenue losses per se, it is assumed that the lump sum payments to these rights holders would have been higher had losses not been incurred due to home taping. Thus, the application of these rates across the board includes the harm caused by home taping to creators, performers and other rights holders who have negotiated lump sum payments.

To illustrate the potential loss, the following percentages⁵ of producers' receipts that each rights holder will receive are used:

6% performers
4% writers
10% directors
20% total

An estimate of the losses for composers due to reproduction practices can be made separately based on the lost advertising revenue of television broadcasters. Generally, broadcasters contribute 2.4% of advertising revenue to composers. Consequently, since the loss to broadcasters is estimated at a total of \$43 million (\$41+2), the loss to composers would be about \$1 million annually or about 3% of what composers now earn from private broadcasters alone.

⁵ Based on CFTPA/AFTPQ collective agreements with ACTRA, UDA, the Writers Guild and Directors Guild.

2.3 Impact of Home Taping and Rights Holders (cont'd)

Recognizing that the \$175-221 million in lost revenue is split between service providers and producers at each stage of the distribution chain, the following is a rough approximation of how much could flow to producers and ultimately to other rights holders (see summary chart at the end of this section).

TV

If broadcasters would have earned an extra \$43 million for showing films and non-films, producers would earn about 54%⁶ extra or \$23 million per year based on current proportion of program expenses to revenue for broadcasters. If creators, performers and other rights holders share 20% of producers' receipts, they would earn an extra \$5 million per year.

Video Rentals/Sales

If home video retailers would have earned an extra \$132-178 million per year due to the elimination of home taping and have, say, a 100% mark-up, producers would earn an extra \$66-90 million. If creators, performers and other rights holders share 20% of producers receipts, they would earn an extra \$13-18 million per year.

⁶ 1993 programming expenses as % of revenue - Private TV-broadcasters - Statistics Canada.

2.3 Impact of Home Taping and Rights Holders (cont'd)

Summary of Financial Impact to Rights Holders

	Total Impact	Feature Film & Non-Film	
		Free TV	Video Rental/Sales
Gross impact on industry	\$175-221m	\$43m (\$31m TS, \$12m L)	\$132-178m
Net impact on producers	\$89-112m	\$23m (\$17m TS, \$6m L)	\$66-89m
Impact on creators, performers and other copyright holders	\$18-23m	\$5m (\$4m TS, \$1m L)	\$13-18m

TS = impact due to time shifting; L = impact due to librarying

2.3 Impact of Home Taping and Rights Holders (cont'd)

- \$175-221 million represents a combined loss of 6-8% in revenues for the television and home video industries. \$43 million is about 3% of television revenues while \$132-178m is about 13-16% of total video industry revenues.
- As a direct result, producers, both Canadian and foreign, lose an estimated \$89-112 million. The amount that is Canadian is difficult to determine with any accuracy. However, as shown later, in section 4.3 (page 94), Canadian programs represent about 28% of all programs taped. Therefore, Canadian producers likely lose \$25-31 million which represents about 3-5% of their 1992/93 revenues of \$700 million.¹
- Creators/performers, and other rights holders lose an estimated \$18-23 million. Again, the share that is due to Canadian rights holders is difficult to determine. If we assume for sake of illustration that 28% of the loss was due to Canadian rights holders as above, then the loss would be on the order of 1-2% of annual earnings. Note that audio-visual work earnings data only exists for performers and not creators or other rights holders, so we have assumed the impact for these groups is proportional to performers.

¹ Statistics Canada

2.3 Impact of Home Taping and Rights Holders (cont'd)

Detailed Summary of Loss to Rights Holders

Rights Holder	% of Producer Receipts	Canadian and Foreign Lost Earnings (\$ million)	% Assumed Owed to Canadians	Canadian Annual Earnings (\$ millions)	% of Annual Earnings Owed to Canadians
Authors					
Writers	4%	\$4-5m	28%	not available ¹	not available
Directors	10%	\$9-12m	28%	not available ¹	not available
Performers	6%	\$6-7m	28%	\$130 million ²	1-2%
Total Authors/Performers	20%	\$18-23m	-	not available	not available
Producers	100%	\$89-112m	28%	\$700 million	3-5%

¹ Unfortunately, the total earnings of writers and directors in Canada from audio-visual works are not available. In an effort to collect the data, Statistics Canada is currently undertaking a Cultural Labour Force Survey. However, the data collected does not separate the earnings of, say, writers from book publishing and audio-visual work. NGL estimates that the additional revenue to writers and directors would likely be on the same order of magnitude as for performers (e.g ~1-2%).

² Based on estimates from ACTRA, Uda, and AFM/Gilde des musiciens.

2.4 Impact on the CBC/SRC

The CBC/SRC, as a broadcaster, would lose audience to home taping as any other broadcaster would. However, due to its programming mandate it rarely runs feature films. Since television broadcasters in Canada including the CBC/SRC lose \$41 million in advertising revenue annually due to home taping of non-film programming, the CBC likely loses its proportional share.

The estimate of loss to CBC/SRC as a broadcaster can be obtained by multiplying the \$41m in lost advertising revenue due to non-film taping by the CBC/SRC's 17%³ share of television advertising revenue. This loss amounts to \$7 million annually or 2.5% of the CBC/SRC's current advertising revenue of \$284 million.

2.5 Mitigating Factors Limiting Future Damage to Rights Holders

After estimating the economic harm caused by home taping practices, it is important to note that this harm can be reduced or offset by various means.

Copy Protection

The technology now exists to significantly reduce copying of pre-recorded video cassettes. At a cost of less than 10¢ per tape, a manufacturer can prevent the copy of that cassette. In spite of its low price and widespread availability, only 65%⁷ of videos are now being copy protected. The industry should have a responsibility to deter copying if the cost of doing so is less than the harm that is suffered by rights holders and the industry.

The next step in copy protection will be the integration of new technology in the next generation of converter boxes, thus reducing copying from Pay and PPV. The focus of copy protection will continue to centre on feature films.

Pirating

Although outside the terms of reference of this study, it is important to note that the practise of pirating causes additional harm and economic loss. Illegal "black box" decoders unscramble signals and provide free access to all Pay, PPV offerings. This results in the complete loss of monthly subscription fees, extended basic fees, etc.

⁷ Macrovision, "Home Taping in America"

2.5 Mitigating Factors Limiting Future Damage to Rights Holders (cont'd)

Consumer Electronics Industry

Co-operation with the consumer electronics industry could lead to a decrease in violations of reproduction rights. Their involvement and advice should be sought pro-actively in order to properly address the home taping problem. By developing equipment and techniques that impede the average viewers' ability to make illegal copies while not diminishing his/her ability to enjoy legal video tapes, the economic impact of home taping can be limited.

3.0 AMOUNTS TO BE GENERATED BY A POTENTIAL ROYALTY ON BLANK VIDEO CASSETTES

This section examines how much a royalty on blank video cassettes would generate if a royalty were to be implemented to offset the impact of home taping.

3.1 Factors to be Considered

The amount a royalty would raise is dependent on two general factors:

- the level of royalty per cassette⁸
- the number of cassettes sold on which a royalty will be placed

Other considerations include:

- Impact of Royalty on Sale of Blank Videocassettes - if the royalty per cassette is too high, then fewer cassettes may be sold resulting in lower royalty revenue and lower sales for manufacturers/distributors. For the purposes of this study, Gallup 1994 results showing consumer purchasing behaviour at various royalty levels have been used to determine potential losses of cassette sales.

⁸ It should be noted that unlike audio cassettes, video cassettes are generally produced as a two hour tape. Consequently, a royalty per length of tape is proportional to a royalty on each individual unit.

3.1 Factors to be Considered (cont'd)

- Types of Cassettes Upon Which Royalty is Collected - if the royalty is applied to all cassettes (VHS, VHS-C, 8mm, etc.) regardless of use, more funds will be generated. However, an argument could be made that cassettes designed for small camcorders should be exempt since little home taping is likely done using them though. For the purposes of this study, royalty levels include and exclude camcorder cassettes since theoretically, they can be used to tape programs.
- Collection of Royalty at Retail/Wholesale Level - a royalty could be collected at the retail or wholesale level. There are significant advantages and disadvantages to each. If applied at the wholesale level, a royalty would be relatively easy to collect from the small number of manufacturers/distributors. However, retailers may attempt to charge a mark-up on the royalty when passing it on to consumers thus inflating the impact of the royalty. If applied at the retail level, it may prove difficult and costly to collect royalties from thousands of small retailers who each sell a small number of cassettes.

For the purpose of this report, the royalty is assumed to be charged at the retail level since the Gallup 1994 asked respondents about the royalty based on their retail sales behaviour in buying videocassettes.

3.2 Price of Cassettes/Units Sold

Price of Cassettes

- Cassettes vary in retail price from \$2-\$10 or more depending on quality.
- The average wholesale price for 1992 according to Statistics Canada was \$2.50. Assuming a 100% mark up, the average retail price would be \$5.00.
- The 1992 Gallup survey⁹ indicated that Canadians assumed they paid \$5.70 on average for a blank video cassette.
- For purposes of this study, a \$5.00 average retail price is assumed. In the future, however, the average retail price for blank tapes may decline as competition increases.

⁹ National Video Home Recording Survey, Final Report, Gallup Canada Inc., 1992

3.2 Price of Cassettes/Units Sold (cont'd)

Units Sold

The number of blank videocassettes sold in Canada annually is difficult to determine. Estimates vary widely thus casting doubt on the reliability of a given figure, whether from Statistics Canada, a given survey or the industry itself.

Complicating the analysis, some videocassettes are intended solely for use in camcorders. Though camcorders can be used to make home tapes, their intended usage is quite different. Consequently, the question becomes should these tapes also be subject to any royalty? The following analysis shows projections both including and excluding camcorder tapes.

A brief discussion of five different estimates shows that a wide range exists.

- A) Gallup 1994 and (B) Gallup 1992 estimates relied on respondents recalling their purchase behaviour for blank video tapes over the last year. This method can only provide order of magnitude results.
- C) The International Tape Association keeps track of U.S. but not Canadian data on the production of blank videotape. Not counting videotape in pancake form (bulk), 410 million blank videocassettes were sold in the U.S. in 1992 including 31 million tapes for camcorders only. Assuming Canada is 1/10 the size of the U.S. market, then 41 million blank videocassettes are sold here. Naturally, the Canadian market may be different from the U.S. market in a variety of ways that affect the way consumers buy video tape. Consequently, this estimate is a rough order of magnitude result only.

3.2 Price of Cassettes/Units Sold (cont'd)

- D) Statistics Canada (I) data on imports of blank videocassettes indicate 32 million tapes for VCRs and camcorders were sold in 1993. This figure refers only to commercial importation of videocassettes. Videotape is also imported into Canada in bulk form and then used for, among other things, the assembly of videocassettes. However, it is difficult to determine the actual quantity of bulk tape imported.

This figure also does not include direct imports in small quantities (i.e. cross border shopping) as no records are kept by Custom Officials.

No figures are available for any domestic production.

- E) Statistics Canada (II) Household Expenditure data can be interpreted to provide another estimate. Assuming that 10 million Canadian households spend \$15 each on blank videocassettes at an average retail price of \$5, then 30 million blank videocassettes are sold annually in Canada.

3.2 Price of Cassettes/Units Sold (cont'd)

#	Source of Estimate	Tapes for VCR Only (VHS) (millions)	Tapes for VCR and Carricorders (millions)
A	Gallup 1994	143*	149
B	Gallup 1992	43	59
C	International Tape Association	38	41
D	Statistics Canada I	30*	32
E	Statistics Canada II	28*	30

* Assumed based on proportion of VHS tapes to all tapes sold in the U.S. as shown in International Tape Association data.

The estimates of total blank videocassettes sold in Canada range from 30-149 million. The Statistics Canada I estimate (based on imports) of 32 million total blank videocassettes is used throughout the remainder of the analysis as it is the only estimate based on measurable Canadian sales-related activity.

3.3 Elasticity of Demand

To determine the possible royalty revenue that will be generated, a factor for elasticity of demand must be considered.

The Gallup 1994 survey asked three different sub-groups how many cassettes they purchased annually and then asked them how many cassettes they would have purchased if a royalty of x cents per cassettes had been attached. The change in tapes purchased is taken to represent the elasticity of demand.

Responses of People Who Buy Videotapes

Tapes Purchased Annually	Group A 15¢ Royalty	Group B 40¢ Royalty	Group C 75¢ Royalty
Before	13.0	14.4	18.6
After with Fee	14.4	13.5	14.3
% Change in Tapes Purchased	+11%	-6%	-23%

Source: Gallup 1994

3.3 Elasticity of Demand (cont'd)

The Gallup 1994 results indicate that a 15¢ royalty would actually increase unit sales of videocassettes by 11% and royalties of 40¢ and 75¢ would decrease unit sales by 6% and 23% respectively.

While all three results are statistically significant, the increase in unit sales with a 15¢ royalty is counter intuitive - if a videocassette were to cost 15¢ more, fewer products would likely be sold, not more. Consequently, for the purposes of report, it is assumed that a 15¢ royalty would have no impact on the number of tapes purchased while 40¢ and 75¢ royalties have elasticities of demand of 6% and 23% respectively.

3.3 Elasticity of Demand (cont'd)

The apparent price inelasticity of the royalty up to 40¢ is reasonable when the royalty is compared to the retail price. Based on a \$5.00 average price per video cassette, a 15¢ or 40¢ royalty only represents a 3% or 8% increase respectively. A 75¢ royalty represents 15% and consequently appears larger to the consumer.

As retail price range for videocassette varies, a small increase due to a royalty could easily be absorbed by consumers who might simply buy a lower grade of tape.

	Group A 15¢	Group B 40¢	Group C 75¢
% of \$5 Retail Price	3.0%	8.0%	15.0%

3.4 Possible Revenue From Royalty Amounts

The amounts a royalty would generate is based on the number of units sold times the royalty per unit times the elasticity of demand. For example, the table below shows that \$18.5 million would be raised by a 75¢ royalty on 32 million blank videocassettes where the elasticity of demand is -23%.

Unless the royalty is 75¢ or greater on all blank videocassettes, the total royalties collected would be below the estimated losses to rights holders of \$19-23 million.

**Total Funds Generated by a Royalty on Blank Videocassettes
Various Royalty Levels**

VCR Tapes Only (VHS)				VCR & Camcorder Tapes			
Units Sold	15¢	40¢	75¢	Units Sold	15¢	40¢	75¢
30	\$4.5m	\$11.3m	\$17.3m	32	\$4.8m	\$12.0m	\$18.5m

4.0 ROYALTY REVENUE ALLOCATION MECHANISMS

This section examines the mechanisms than can be used to distribute the revenue earned from a royalty on blank video cassettes.

4.1 Methods Used by Other Countries

Other countries have attempted to counteract the impact of home taping by implementing fees on blank video cassettes and in some cases VCRs.

In most cases, each country sets aside a significant percentage of the funds to be used for various activities related to the audio/video sector. The remainder (less administrative costs) was then distributed to rights holders.

Countries	VCR Royalty	Videotaping Royalty	% to Other Uses	% to Rights holders
Austria		✓	51	49
Finland		✓	67	33
France		✓	25	75
Germany	✓	✓	-	100
Hungary		✓	-	100
Iceland	✓	✓	15	85
Italy		✓	5	95
Spain	✓	✓	20	80
Netherlands		✓	15	85
Sweden	✓	✓	20	80
USA*	-	-	-	-

Source: Denton 1992 Study
 * Sound recording only.

4.2 Canadian Alternatives

A Canadian model would likely follow the lines of international examples. The actual details and amounts will be worked out by the collectives and the Copyright Board. For the purposes of highlighting the potential flow of funds, the following example has been worked out.

After the total revenues from a royalty on blank videocassettes are collected in a fund, it is assumed that they will be allocated in the following order:

- 1) Development of the industry projects (0 or 25%) - A portion of the overall fund, say 25%, could be used to help promote and/or develop Canadian authors and performers, as is done in other countries. Alternatively, no funds would be retained for the development of the industry.
- 2) Administration Costs (15%-20% of the remaining Fund) - For example, administration costs represent about 15% and 19% of the funds of the Canadian Broadcaster Retransmission Agency and SOCAN respectively.
- 3) Rights holders (the remainder) - The rights holders share the remaining revenue.

4.2 Canadian Alternatives (cont'd)

The revenue to rights holders is then allocated based on two major considerations:

- The percentage share authors and performers each receive:

e.g.: 67% authors, 33% performers or

50% authors, 50% performers

The shares are to be determined by the administrators of the fund.

- The percentage allocated to each country:
e.g., 25% Canada, 65% USA, 10% Foreign

These percentages can be determined in many ways and are the subject of the following section.

4.3 Shares Allocated to Each Country

Several methods of determining what each country receives as its share of revenue are possible. Methods can be based on:

- share of hours tuned
- number of programs

The number of programs method is more suitable for Canada since the majority of programs shown on television must be Canadian. The U.S. would likely prefer the share of hours tuned method since U.S. programs generally attract larger audiences. The Canadian collective is theoretically free to choose whatever method it so desires.

Partial raw data on the number of programs by category is available but complicated manipulation would be required before it could be used here. For example, every television station's schedule would have to be broken down by type of program. Consequently, it is not shown here.

4.3 Shares Allocated to Each Country (cont'd)

Share of Hours Tuned Method

To obtain the appropriate amounts that should be directed to Canadian and foreign rights holders, data on the share of each program category by country of origination should be multiplied by that program category's share of home taping.

Data on category programming by country of origin is available from BBM except for feature films. NGL has estimated feature films and U.S./foreign content for purposes of illustration. Foreign represents non-Canadian or non-American sources and is assumed to be 10% of non-Canadian share by NGL.

Share of Viewing to Category Programming by Country of Origin

Category	Canada	U.S.	Foreign*
Comedy/Drama	11%	80%	9%
Feature Films	4%	87%	9%
Sports Event	69%	28%	3%
Documentary/Education	56%	40%	4%
Variety Show	40%	54%	6%
Other	0%	90%	10%
Children's Program	56%	40%	4%
News/Public Affairs	74%	24%	3%
Music Video	50%	45%	5%

Source: BBM Fall 92, Feature Films, estimated by NGL
 * Foreign is assumed to be 10% of non-Canadian sources (NGL estimate)

4.3 Shares Allocated to Each Country (cont'd)

According to the Gallup 1994 Survey, over 50% of the home taping last done was to either a situation comedy, drama series or feature film. After some adjustment of categories, the results are as follows.

Content of Last Recorded TV Program

Category	Percent
Comedy/Drama	30
Feature Film	26
Sports Event	12
Documentary/Education	11
Variety Show	5
Other	5
Children's Program	5
News/Public Affairs	4
Music Video	3

Source: Gallup 1994

4.3 Shares Allocated to Each Country (cont'd)

By multiplying the Share of Viewing to Category Programming by Country of Origin by Contents of Last Recorded TV Program, a weighted average of Canadian, U.S. and other programming taped is obtained.

Canadian programming represents 28% of all taped programming.

Taped Programs by Country of Origin

Category	Canada	U.S.	Foreign ¹
Comedy/Drama	3%	24%	3%
Feature Film	1%	23%	3%
Sports Event	8%	3%	0%
Documentary/Education	6%	4%	0%
Variety Show	2%	3%	0%
Other	0%	5%	1%
Children's Program	3%	2%	0%
News/Public Affairs	3%	1%	0%
Music Video	2%	1%	0%
Weighted Average	28%	66%	7%

Source: BBM Fall 92 Feature Films, estimated by NGL
 Foreign is assumed to be 10% of non-Canadian sources

4.4 Possible Scenarios

Having calculated the share to each country, four scenarios can be examined to determine how much royalty revenue would stay in Canada and how much royalty revenue would leave the country.

The four basic scenarios suggested by the Department for analysis in this report are as follows:

- 1) 67/33 Author/Performer Split, Full Payment to All Rights holders
- 2) 50/50 Author/Performer Split, Full Payment to All Rights holders
- 3) 67/33 Author/Performer Split, No Payments to U.S. Performers
- 4) 50/50 Author/Performer Split, No Payments to U.S. Performers

These scenarios test the amounts including and excluding payments to U.S. performers since the U.S. does not belong to the Rome Convention which covers performers. Assuming U.S. performers are excluded by Canadian Fund administrators, their share will be redistributed amongst all authors and performers proportional to the shares each is now receiving.

Each scenario is shown with two options:

- a) 25% of royalty revenue for development of industry
- b) 0% of royalty revenue for development of industry

HOME TAPING

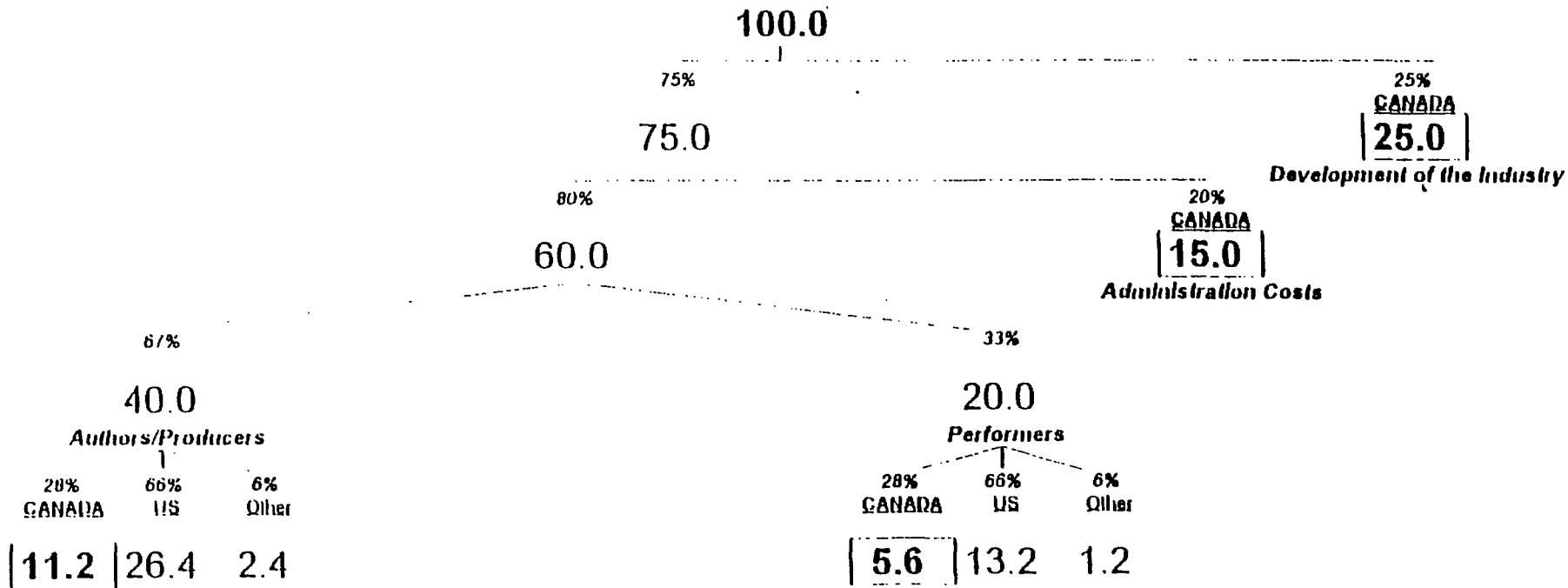
SCENARIO 1a

67% AUTHORS / 33% PERFORMERS

For Each \$1 Collected		
CANADA	USA	OTHER
\$0.57	\$0.40	\$0.04

FULL PAYMENTS TO ALL RIGHTSHOLDERS

25% for DEVELOPMENT OF THE INDUSTRY



HOME TAPING

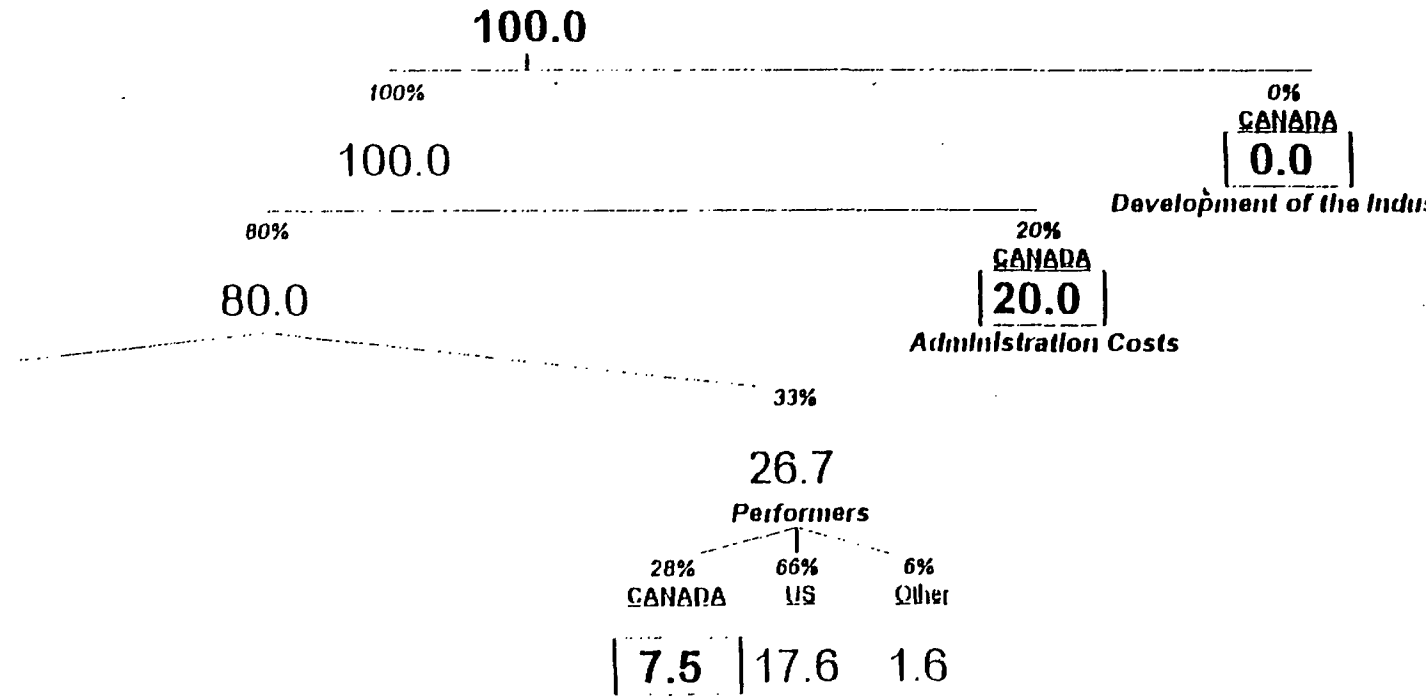
SCENARIO 1b

67% AUTHORS / 33% PERFORMERS

FULL PAYMENTS TO ALL RIGHTSHOLDERS

0% for DEVELOPMENT OF THE INDUSTRY

For Each \$1 Collected		
CANADA	USA	OTHER
\$0.42	\$0.53	\$0.05



HOME TAPING

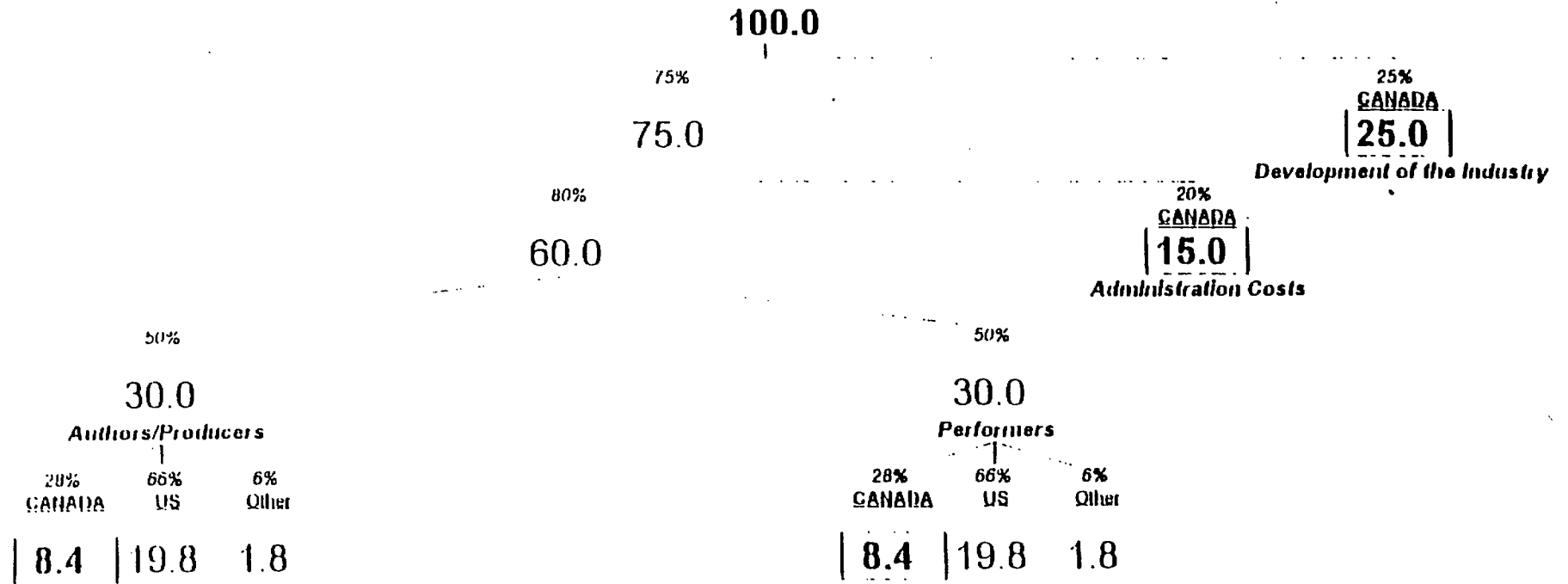
SCENARIO 2a

50% AUTHORS / 50% PERFORMERS

For Each \$1 Collected		
CANADA	USA	OTHER
\$0.57	\$0.40	\$0.04

FULL PAYMENTS TO ALL RIGHTS HOLDERS

25% for DEVELOPMENT OF THE INDUSTRY



HOME TAPING

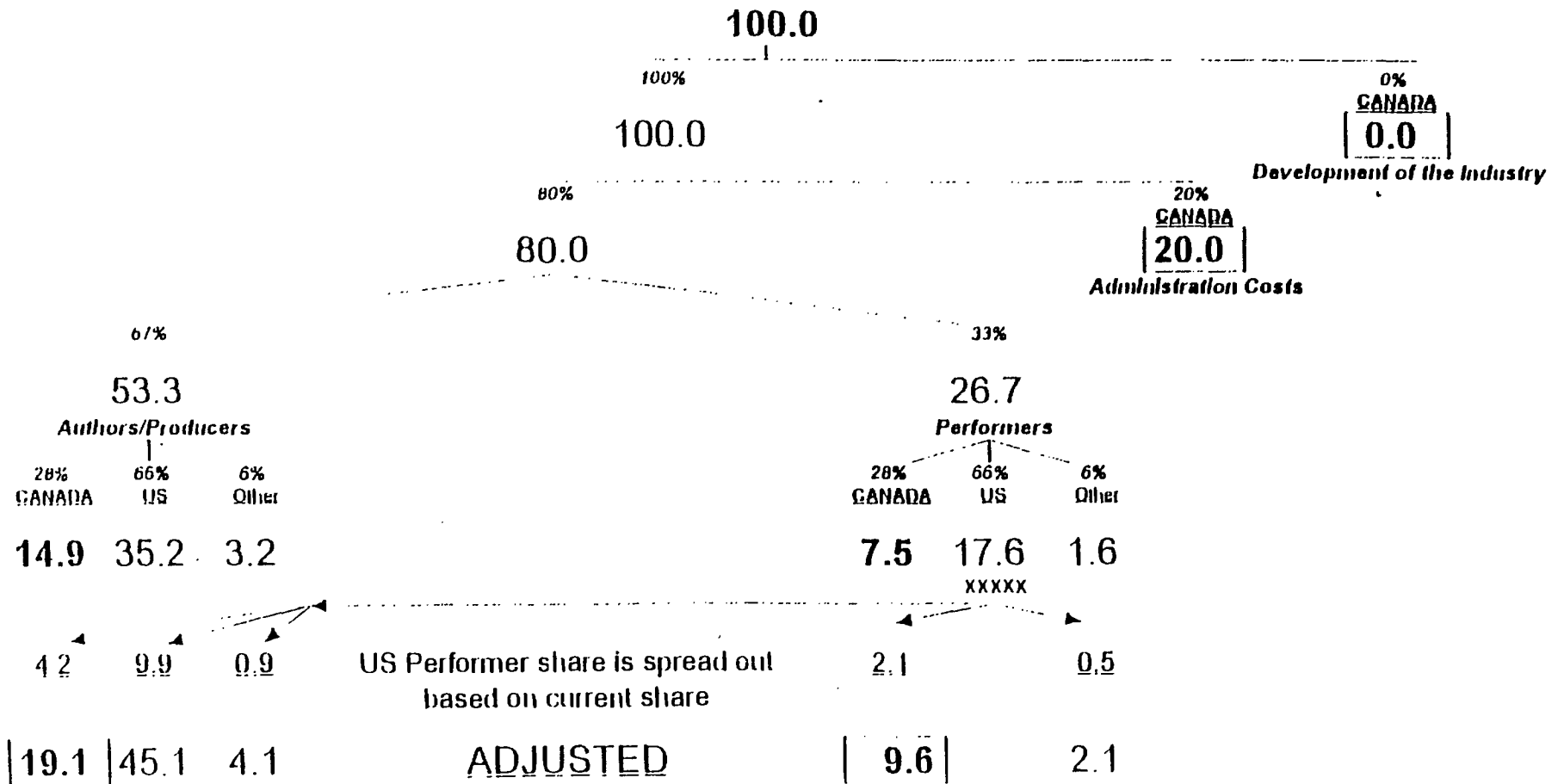
SCENARIO 3b

67% AUTHORS / 33% PERFORMERS

NO PAYMENTS TO USA PERFORMERS

0% for DEVELOPMENT OF THE INDUSTRY

For Each \$1 Collected		
CANADA	USA	OTHER
\$0.49	\$0.45	\$0.06



HOME TAPING

SCENARIO 4a

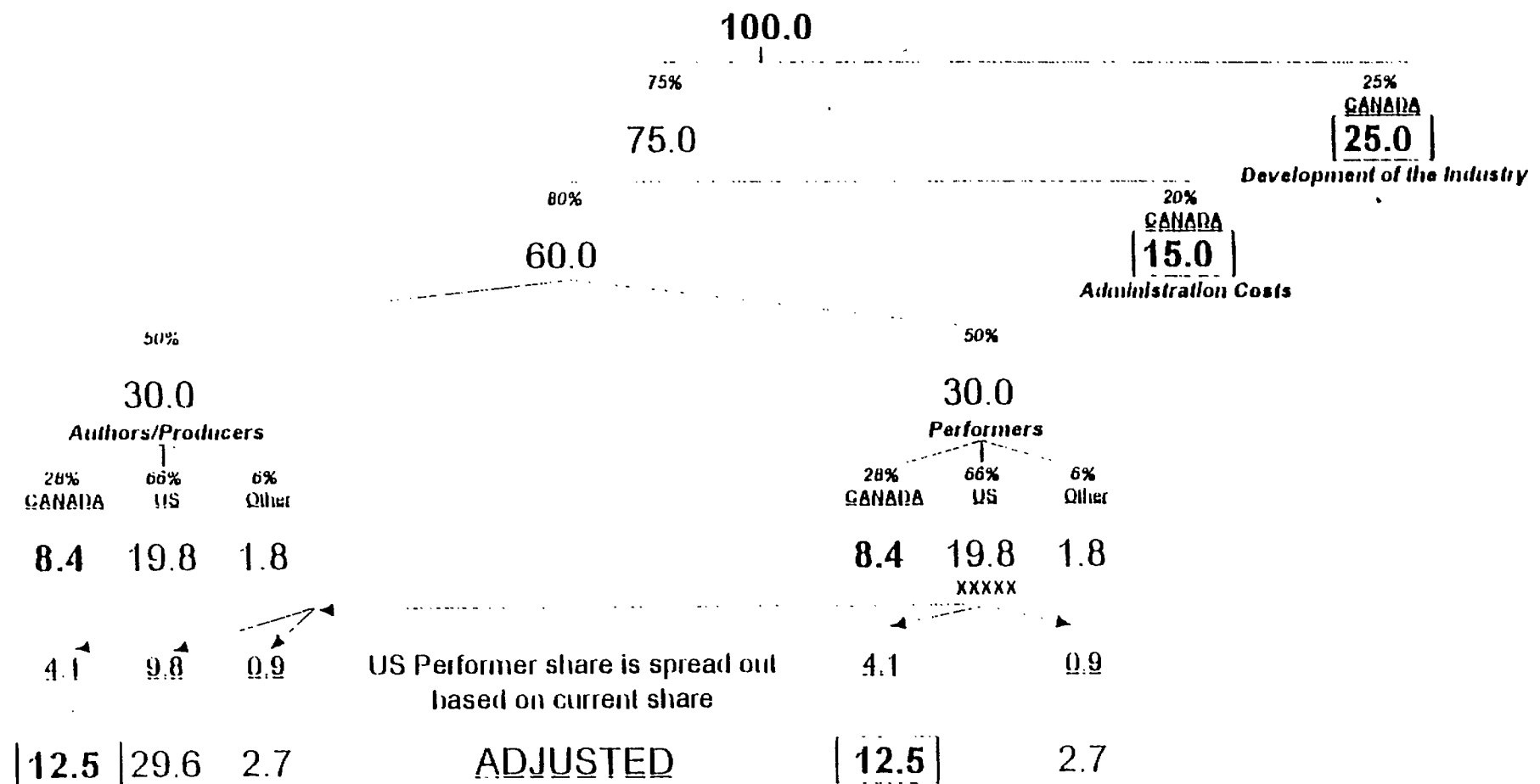
50% AUTHORS / 50% PERFORMERS

For Each \$1 Collected

CANADA	USA	OTHER
\$0.65	\$0.30	\$0.05

NO PAYMENTS TO USA PERFORMERS

25% for DEVELOPMENT OF THE INDUSTRY



HOME TAPING

SCENARIO 2b

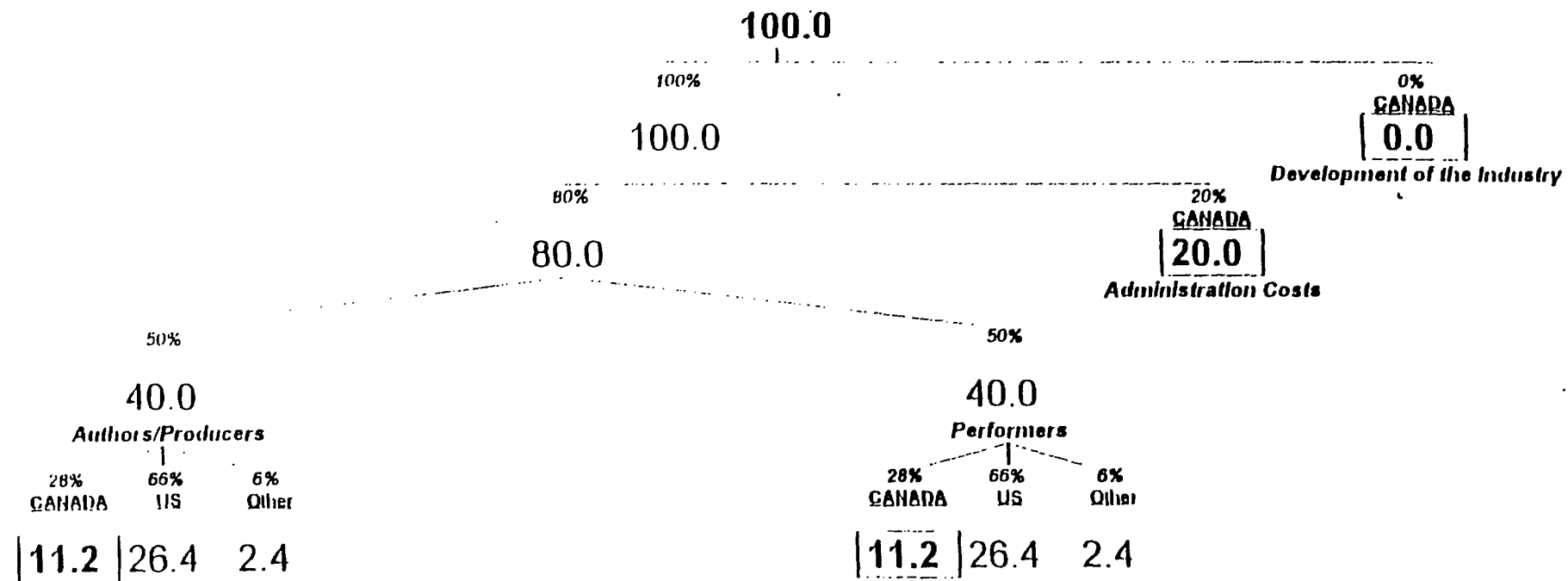
50% AUTHORS / 50% PERFORMERS

For Each \$1 Collected

CANADA	USA	OTHER
\$0.42	\$0.53	\$0.05

FULL PAYMENTS TO ALL RIGHTSHOLDERS

0% for DEVELOPMENT OF THE INDUSTRY



HOME TAPING

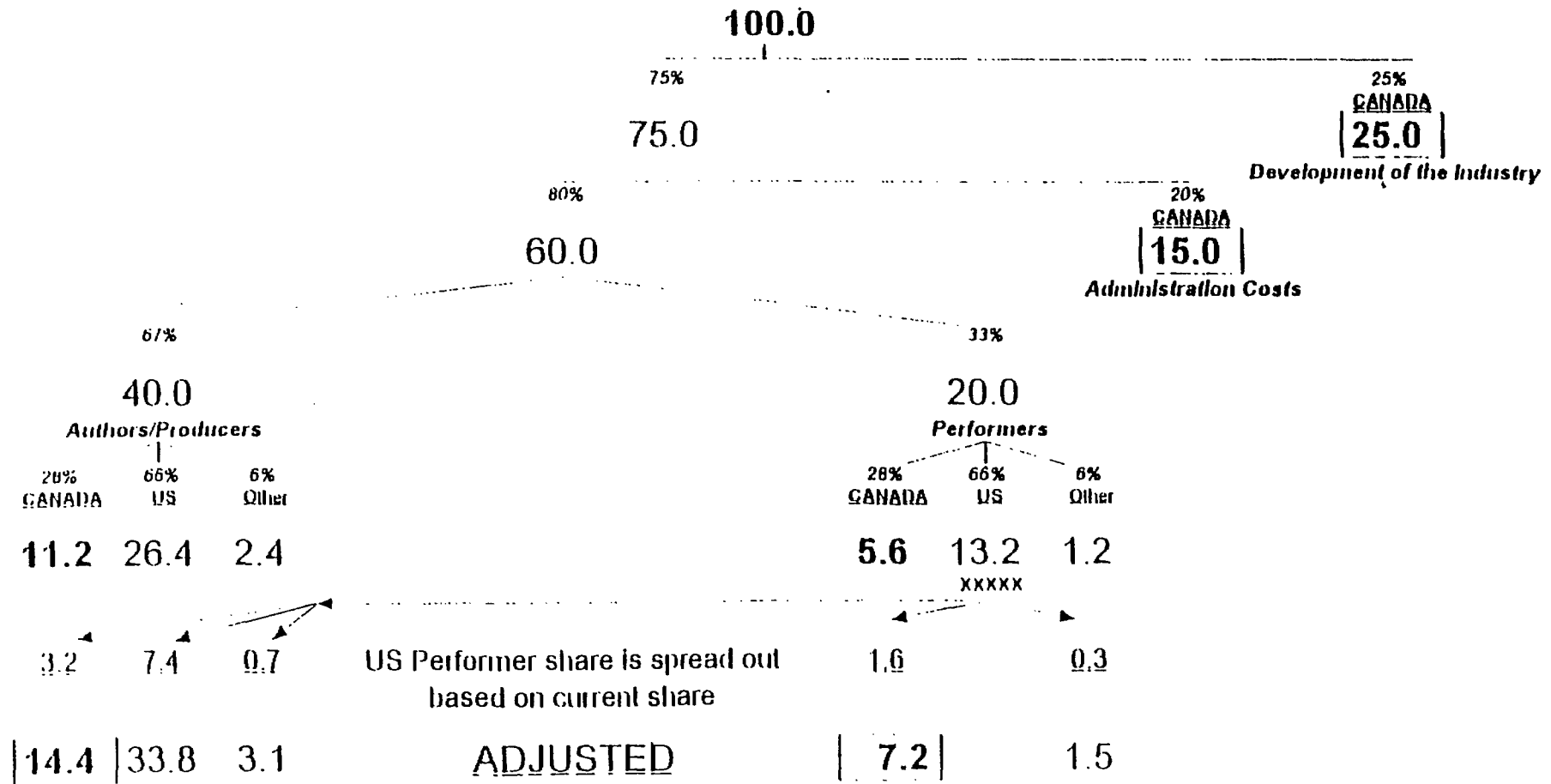
SCENARIO 3a

67% AUTHORS / 33% PERFORMERS

For Each \$1 Collected		
CANADA	USA	OTHER
\$0.62	\$0.34	\$0.05

NO PAYMENTS TO USA PERFORMERS

25% for DEVELOPMENT OF THE INDUSTRY



HOME TAPING

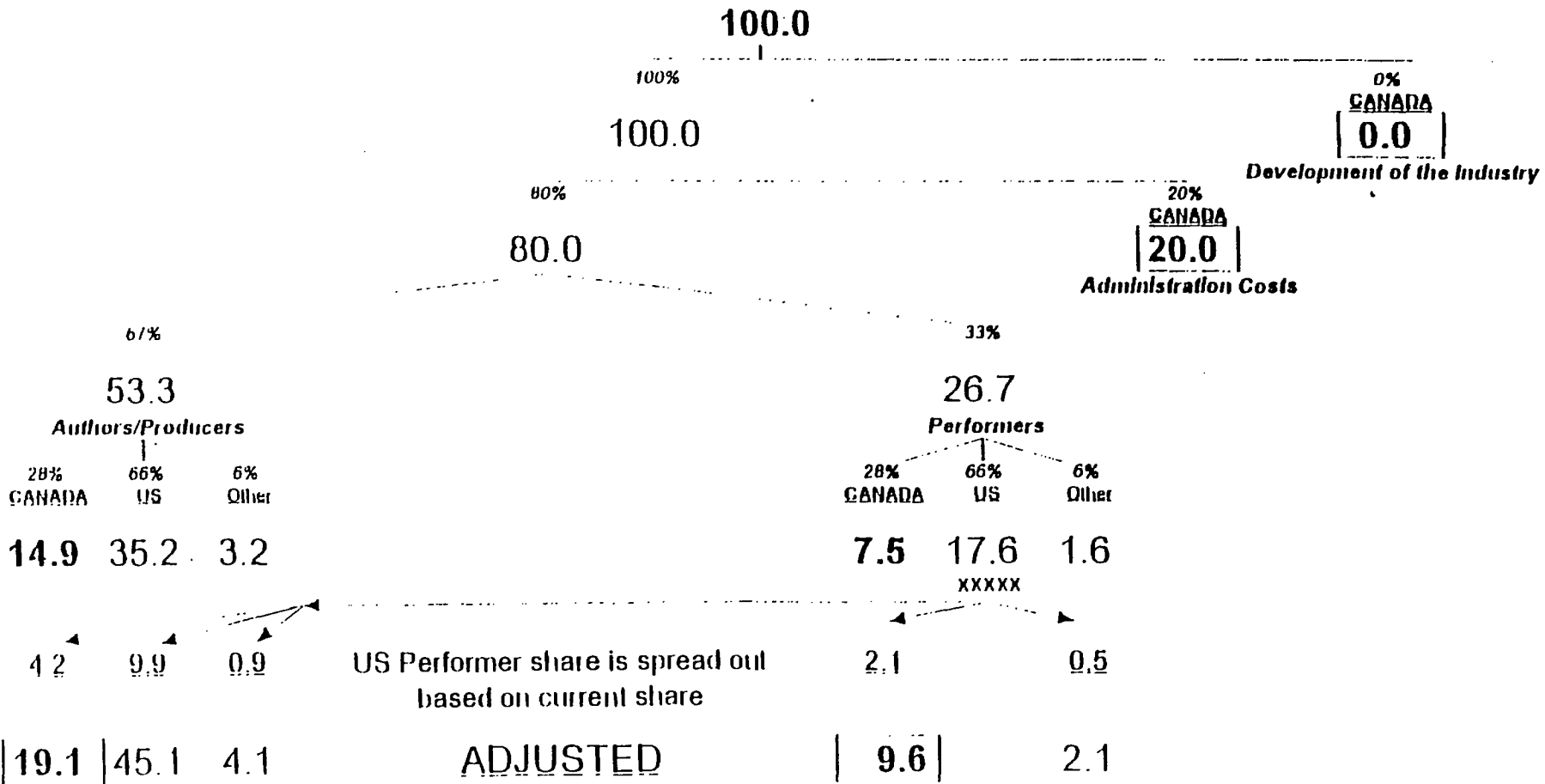
SCENARIO 3b

67% AUTHORS / 33% PERFORMERS

NO PAYMENTS TO USA PERFORMERS

0% for DEVELOPMENT OF THE INDUSTRY

For Each \$1 Collected		
CANADA	USA	OTHER
\$0.49	\$0.45	\$0.06



HOME TAPING

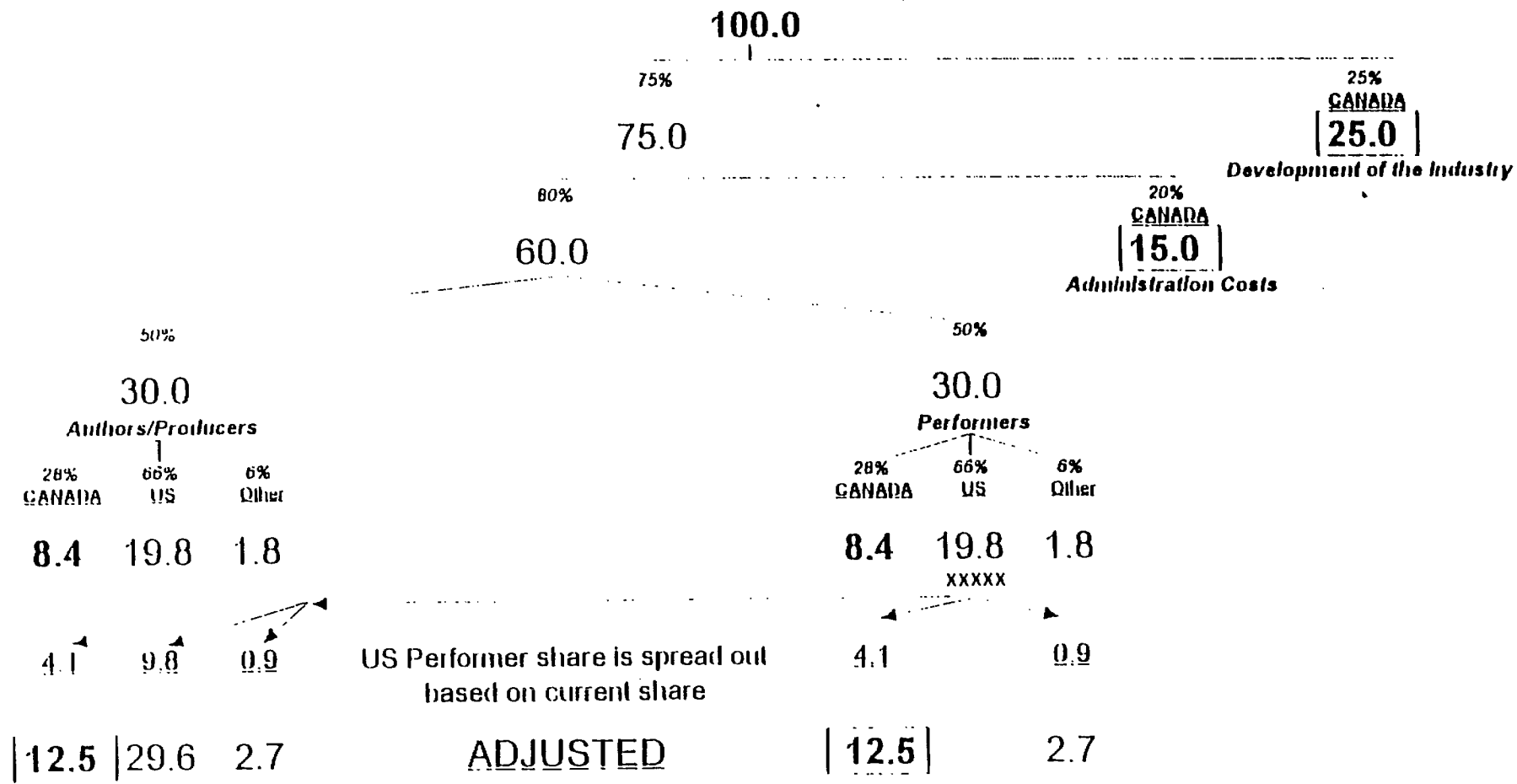
SCENARIO 4a

50% AUTHORS / 50% PERFORMERS

NO PAYMENTS TO USA PERFORMERS

25% for DEVELOPMENT OF THE INDUSTRY

For Each \$1 Collected		
CANADA	USA	OTHER
\$0.65	\$0.30	\$0.05



HOME TAPING

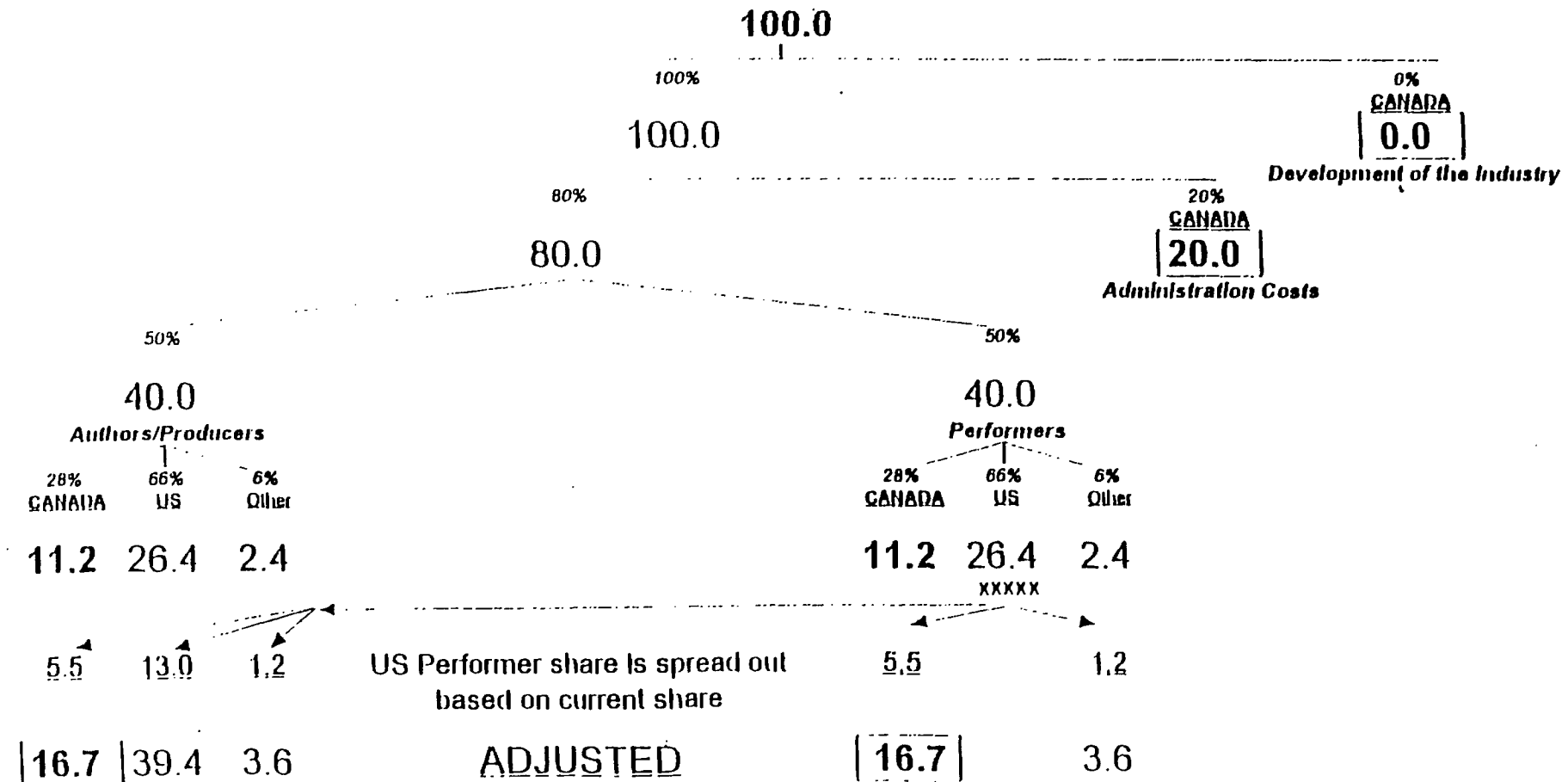
SCENARIO 4b

50% AUTHORS / 50% PERFORMERS

For Each \$1 Collected		
CANADA	USA	OTHER
\$0.53	\$0.39	\$0.07

NO PAYMENTS TO USA PERFORMERS

0% for DEVELOPMENT OF THE INDUSTRY



4.4 Possible Scenarios (cont'd)

The results on a country basis indicate the following:

- 42-65¢ from each \$1 collected would stay in Canada.
- If all rights holders, including U.S. performers are paid, then the amount of money that stays in Canada is independent of whatever split is determined between authors and performers.
- If U.S. performers are excluded, and the goal is to keep money in Canada, the logical strategy is to institute a split of 50/50 or higher in favour of performers.
- What Canada keeps of every dollar collected is highly dependent on what it can keep for development of the industry and administration of the Fund.

Revenue Outflows by Country Based on Every \$1 Collected

Scenario	Author Performer Split	Payment Scheme	With 26% for Development Industry			With 0% for Development of Industry		
			Canada	USA	Other	Canada	USA	Other
1.	67/33	Full Payment	0.57¢	0.40¢	0.04¢	0.42¢	0.53¢	0.05¢
2.	50/50	Full Payment	0.57	0.40	0.04	0.42	0.53	0.05
3.	67/33	No Payments to U.S. Performers	0.62	0.34	0.05	0.49	0.45	0.06
4.	50/50	No Payments to U.S. Performers	0.65	0.30	0.05	0.53	0.39	0.07

4.4 Possible Scenarios (cont'd)

The results on a rights holder basis indicate the following:

- Author/producers would earn 8.4-19.1¢ from every \$1 collected by the royalty while performers would earn 5.6-16.7¢. These ranges take into account all the combinations of the three variables considered. Development of the Industry Fund or no fund; U.S. rights holders paid or not paid; and potential 67/33 or 50/50 splits between authors and performers.
- The remaining funds would go to development of the industry, administration or foreign rights holders.
- Authors/producers and performers would earn more royalty revenue if no development of the Industry Fund existed.

Scenario	Author Performer Split	Payment Scheme	With 25% for Development Industry		With 0% for Development of Industry	
			Author/Producers	Performers	Authors/Producers	Performers
1.	67/33	Full Payment	11.2¢	5.6¢	14.9¢	7.5¢
2.	50/50	Full Payment	8.4	8.4	11.2	11.2
3.	67/33	No Payments to U.S. Performers	14.4	7.2	19.1	9.6
4.	50/50	No Payments to U.S. Performers	12.5	12.5	16.7	16.7

4.4 Possible Scenarios (cont'd)

Results for Rights Holders

An estimate of the amount of revenue author/producers and performers could receive is obtained by multiplying their share of each \$1 collected by the revenue generated by the royalty.

- Author/producers would share up to \$3.5 million or about 1% of 1993 earnings of more than. Earnings for authors/producers from audio-visual works is unknown but assumed to be on the order of \$100-200 million as a minimum. Consequently, this royalty would represent less than 3.5% of their earnings.
- Performers would share up to \$3.1 million or about 2% of 1993 earnings of \$130 million.¹

Royalty Revenue to Author/Producers and Performers

	VCR Tapes Only 30 million Units			VCR & Camcorder Tapes 32 million units		
	Royalty Level			Royalty Levels		
	15¢	40¢	75¢	15¢	40¢	75¢
Authors/Producers	\$0.4-0.9m	\$0.9-2.2m	\$1.5-3.3m	\$0.4-0.9m	\$1.0-2.3m	\$1.6-3.5m
Performers	\$0.3-0.8m	\$0.6-1.9m	\$0.9-2.9m	\$0.3-0.8m	\$0.7-2.0m	\$1.0-3.1m

¹ Based on 1993 data from ACTRA, UdA and AFM de Musiciens 1993.

APPENDIX A: GLOSSARY

BBM	The Bureau of Broadcast Measurements is one of two Canadian organizations used by broadcasters and advertisers to measure television audience viewership. The other organization is A.C. Neilson, a subsidiary of the American measurement service.
Free TV	Conventional TV broadcasters. Even though not "free", specialty TV services which have some minimal tuning are considered as part of Free TV since they also rely somewhat on advertising.
Librarying	The act of taping a program off of television or from a pre-recorded cassette for viewing more than once at a later time.
PPV	Pay-per-view: a service whereby cable subscribers with addressable decoders can choose to watch a particular event or movie for a fee, e.g. \$3.95 for one showing of a retail movie.
Pay-TV	A television channel which a cable subscriber pays a significant amount of money to receive, e.g. \$10 per month for the Movie Network.
Pre-recorded video:	A video upon which a film or program has been recorded that is then made available for rental and/or sale.
Time shifting	The act of taping a program off television to be viewed once at a later time.
U.S. superstations	A conventional U.S. television broadcaster whose signal is picked up by cable operators and delivered into Canada where it would not otherwise be available. Cable operators usually carry U.S. superstations as a pay-TV service.

APPENDIX B: HOME TAPING IN AMERICA: THE SECOND NATIONAL SURVEY OF VCR OWNERS (1993)

Survey and Analysis compiled by: Schulman, Ronca & Bucuvalas, Inc (SRBI).
Prepared for: Macrovision Corporation

Macrovision Corporation, based in Mountain View, California, is a manufacturer of anti-copying equipment and has been at the forefront of the anti-piracy and anti-copying movement. It is reported that the next generation of digital converter from General Instrument and Philips will include Macrovision technology which will foil home taping.

Macrovision has supported or commissioned several studies internationally including: "Fact-Finding Survey on Private Audio and Video Recording in Japan", 1991, by Chou Chosa Sha in association with the Japan Music Copyright Association, Japan Video Association et al. and "Report on Video Cassette Recorder Users in the U.K", 1992, conducted by The Harris Research Centre.

In 1990, Macrovision Corporation released the first comprehensive report on the extent, nature and pattern of home copying of **pre-recorded** video cassettes in the United States. The study, "Video Copying and Copy Protection in America: A National Survey of VCR Owners", was conducted by the national survey research organization, Schulman Ronca, and Bucuvalas, Inc. (SRBI). The survey was designed and conducted by SRBI. Previously, SRBI had conducted the national Survey of Home Audio Copying for the Office of Technology Assessment of the U.S. Congress.

Appendix B (cont'd)

As no comprehensive study was done since the 1990 report, Macrovision commissioned another survey in May 1993. The second survey involved telephone interviews with a national sample of 1,000 persons, aged 15 and over living in VCR households. In addition, a second national sample of 750 VCR households was screened to identify a national over sample of those who had copied or tried to copy prerecorded videocassettes. The combined cross-sectional sample and oversample yielded a national sample of 239 VCR owners who have copied or who have tried to copy. These respondents describe the outcomes of a total of 308 copying attempts.

The interviewing was conducted in May 1993. The interview lasted 17 minutes in length. The sampling and measurement procedures for the 1993 cross-sectional survey were equivalent to the 1990 study, permitting direct comparisons between the two surveys.

Key Findings From the Survey

- The number of households with multiple VCRs is increasing rapidly. These households now represent 30% of all VCR households, up from 23% in 1990.
- The proportion of adult (age 15 and older) in VCR households who admit to ever having tried to copy prerecorded videocassettes has increased slightly between 1990 and 1993, from 13.8% to 15.1%. However the proportion of respondents admitting to copying in the past year has remained the same (6.6% to 6.5%).

Appendix B (cont'd)

- Despite increases in the number of "copy ready" households:
 - The proportion of VCR households with illegal copies of pre-recorded videocassettes has declined by a quarter from 41% in 1990 to 31% in 1993; and
 - The average number of illegal copies of prerecorded videocassettes in VCR households has declined by a third from 5.6 in 1990 to 3.7 in 1993.
- The 1993 survey confirms the findings of the earlier survey that home copying does displace sales and rentals:
 - Twenty percent (20%) of prerecorded videocassettes copied would have been purchased, according to the copier, if the copy could have not been made;
 - The number of future rentals lost as a result of copying represents three quarters (74%) of the number of tapes copied.
- The survey also suggests that copy protection has an impact on retail sales and rentals, beyond the displacement represented by successful copies or the savings represented by unsuccessful copies:
 - Over three quarters (76.5%) of those who have had a problem in making a copy of a prerecorded videocassette say that their experience made them less likely to try to copy again.

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