PUBLIC VERSION

Before the
COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of	)	**Docket No. 2006-1 CRB DSTRA**
Adjustment of Rates and Terms for Preexisting Subscription and Satellite Digital Audio Radio Services	)	

REBUTTAL TESTIMONY AND EXHIBITS JOINTLY SUBMITTED BY SIRIUS SATELLITE RADIO INC. AND XM SATELLITE RADIO INC.

VOLUME 2 OF 3

R. Bruce Rich (N.Y. Bar No. 1304534)
Bruce S. Meyer (N.Y. Bar No. 2108447)
WEIL, GOTSHAL & MANGES LLP
767 Fifth Avenue
New York, NY 10153
Tel: 212.310.8170
Fax: 212.310.8007
r.bruce.rich@weil.com,
bruce.meyer@weil.com

Counsel for XM Satellite Radio Inc.

Bruce G. Joseph (D.C. Bar No. 338236)
Michael L. Sturm (D.C. Bar No. 422338)
Thomas W. Kirby (D.C. Bar No. 915231)
Karyn K. Ablin (D.C. Bar No. 454473)
Benjamin B. Reed (D.C. Bar No. 461768)
Jennifer L. Elgin (D.C. Bar No. 432975)
Matthew J. Astle (D.C. Bar No. 488084)
WILEY REIN LLP
1776 K St NW
Washington, DC 20006
Tel: 202.719.7258
Fax: 202.719.7049
bjoseph@wileyrein.com,
msturm@wileyrein.com,
tkirby@wileyrein.com, kablin@wileyrein,
breed@wileyrein.com,
jelgin@wileyrein.com,
mastle@wileyrein.com
Counsel for Sirius Satellite Radio Inc.

July 27, 2007

Index of Testimony

Volume 1	Written Rebuttal Testimony of John Woodbury
Volume 1	Written Rebuttal Testimony of Roger Noll
Volume 2	Written Rebuttal Testimony of John Hauser
Volume 2	Written Rebuttal Testimony of George Benston
Volume 3	Written Rebuttal Testimony of Erich Joachimsthaler
Volume 3	Written Rebuttal Testimony of Consor
Volume 3	Written Rebuttal Testimony of Bruce Silverman
Volume 3	Written Rebuttal Testimony of William Fisher

Hauser

Before the
COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of ADJUSTMENT OF RATES AND TERMS FOR PREEXISTING SUBSCRIPTION SERVICES AND SATELLITE DIGITAL AUDIO RADIO SERVICES	)	Docket No. 2006-1 CRB DSTRA

WRITTEN REBUTTAL TESTIMONY OF

JOHN R. HAUSER

Kirin Professor of Marketing and Head of the Management Science Area
MIT Sloan School of Management, Massachusetts Institute of Technology

July 2007

TABLE OF CONTENTS

I. Introduction 1

II. Assignment 3

III. Summary of Opinions 4

IV. Two Key Conceptual Flaws in the Wind Survey 8

V. Further Critique of the Wind Survey 16

VI. Two Surveys Correct Some of the Flaws in the Wind Survey 24

VII. Qualitative Research to Identify the Voice of the Customer 26

VIII. Questionnaire Development 28

IX. Identifying the Samples 30

X. Validations 34

XI. Mall-Intercept and Internet Questionnaires 35

XII. Willingness to Pay for Music 37

XIII. The Importance of Music 40

XIV. Relative Importance of Sound Recording Rights, 1972 and Later, as a Percentage of the Importances of Music Programming Features 41

XV. Use by the Pelcovits Report of Data from the Wind Survey and Opinions Expressed in the Wind Report 42

XVI. Use by the Ordover Report of Data from the Wind Survey and Opinions Expressed in the Wind Report 44

XVII. Results of Correcting Data from the Wind Survey and Opinions from the Wind Report Used in the Ordover and Pelcovits Reports 46

Exhibits:

A – Curriculum Vitae
B – Testimony in Last Four Years
C – Materials Reviewed
D - List of Customer Needs from Exploratory Research
E - Mall-Intercept Questionnaires: Word versions and CAI Screen Shots
F – Mall-Intercept Screening Statistics and Sample Deposition
G - Internet Survey Questionnaire and Screen Shots
H - Internet Survey Invitation to Respondents
I - Internet Survey Screening Statistics Sample and Disposition
J - Willingness to Pay for Satellite Radio
K - Value of Satellite Radio Features
L - Anchored Importances as Measured in the Mall-Intercept Survey
M - Importance of Music Programming Features (From Internet Survey)
N - Willingness to Pay Using Pelcovits Cut-off
O - Value of Sound Recording Rights Disaggregated by Time Period

Appendices:

1 –	Calculations Reweighted for Demographics of XM and Sirius Subscribers
2 –	Validation Protocol
3 –	Exhibits with Confidence Intervals for Estimates Used in this Report

I. Introduction

1. My name is Dr. John R. Hauser. I am the Kirin Professor of Marketing and Head of the Management Science Area at the MIT Sloan School of Management at the Massachusetts Institute of Technology ("MIT"). The Management Science Area at the MIT Sloan School of Management includes the Marketing Group, the Statistics Group, and other groups. I have served MIT in a number of capacities including Head of the Marketing Group, Director of the Center for Innovation in Product Development, and Director of the International Center for Research on the Management of Technology. The principal focus of my research and teaching at MIT has been in the areas of marketing management, new product and service development, customer satisfaction, marketing research, and competitive marketing strategy.

2. I am the author of over seventy articles and papers, as well as the textbooks *Design and Marketing of New Products* and *Essentials of New Product Management*. In addition, I served as editor-in-chief of *Marketing Science* and have held senior editorial positions with *Management Science*, the *Journal of Product Innovation Management*, and the *Journal of Marketing Research*. I have also received numerous awards for excellence in research and teaching in marketing and marketing research, and was recognized by the American Marketing Association with the Converse Award for "outstanding contributions to the development of the science of marketing."[1] I received the Parlin Award, "the oldest and most distinguished award in the [marketing research] field [that recognizes] distinguished academics and practitioners who have demonstrated outstanding leadership and sustained influence on the evolving profession of marketing research."[2] I have done research on and have provided consulting advice about market research and new product development for over thirty years. My textbooks on new product development have also been influential and have been used at many universities.

---

[1] See http://web.mit.edu/newsoffice/1996/converse-0403.html.
[2] See http://www.marketingpower.com/content1097.php.

I am a trustee of the Marketing Science Institute. My Curriculum Vitae is attached as Exhibit A.

3. One article, for which I have received awards, is particularly relevant to this case. I have been informed that this article on the "Voice of the Customer" was identified by the INFORMS Society of Marketing Science as one "of the top 20 marketing science articles in the past 25 years."[3] This article, among other things, establishes a scientific basis for identifying those aspects of a product or service that customers or potential customers use when making a decision to purchase or use that product or service. When published, this article was awarded prizes for the best article published in marketing science (1993) and the best article based on a dissertation (awarded 1995). It has influenced the scientific literature on qualitative interviewing, having been cited at least 178 times by peer-reviewed articles (based on ISI's Web of Science) and at least 352 times on Google Scholar.[4]

4. I have served as an expert witness in connection with a range of disputes. Most of this expert testimony has involved surveys and other market research to measure customers' attitudes, beliefs, and intentions. I have been called upon to project what customers would have done in different market scenarios, to measure the importance of product features, to measure the impact of rumors, to evaluate marketing research with respect to advertising claims, and to investigate the potential for customer confusion. I have also consulted to dozens of major corporations, including General Motors, Fidelity Investments, American Airlines, Proctor & Gamble, and IBM. A list of cases in which I have testified within the last four years at deposition or trial is attached as Exhibit B.

5. The subject area headings in this report are intended to assist the reader and no inference should be drawn from the use or omission of any wording or description in these headings.

6. Part of the work for this investigation was performed under my direction by Applied Marketing Science, Inc. ("AMS").[5] Since 1989, AMS has conducted market

---

[3] Griffin, Abbie and John R. Hauser (1993), "The Voice of the Customer," Marketing Science, vol. 12, No. 1, (Winter), 1-27.

[4] Data as of June 23, 2007.

[5] See http://www.ams-inc.com.

research and surveys designed to gauge consumers' wants and needs for new products in dozens of industries. I am a Senior Consultant for and Co-Founder of AMS.

7. My rate of compensation for this assignment is $650 per hour. My compensation is not contingent upon the outcome of this dispute.

II. Assignment

8. I have been asked by counsel for XM Satellite Radio Inc. ("XM") and Sirius Satellite Radio Inc. ("Sirius") to review and respond to the original and amended Expert Testimony of Yoram (Jerry) Wind (hereafter the "Wind Report") written on behalf of SoundExchange, Inc. (hereafter SoundExchange). In addition, I reviewed the use of the opinions in the Wind Report by two economists who have provided opinions in this case. Those reports are the Expert Testimony of Janusz Ordover (hereafter the "Ordover Report") and the original and amended Expert Testimony of Michael Pelcovits (hereafter the "Pelcovits Report").

9. My work is ongoing; I may update and revise my results and conclusions as I review additional data and information. I reviewed the Wind Report, the Pelcovits Report, and the Ordover Report. In addition, I reviewed the survey described in the Wind Report as well as data files summarizing the results of the survey. I reviewed the deposition transcript and trial transcript of Dr. Jerry Wind. I also reviewed the web pages of XM and Sirius and two Harvard Business Review cases on XM Satellite Radio.[6] I have subscribed to XM and have experienced it first hand. By professional experience I have reviewed numerous articles and textbooks on survey research and on conjoint analysis. I have cited some of these articles in the footnotes to this report. A complete list of materials I have considered to date in connection with this assignment is included as Exhibit C. To the extent that I review additional information after this report is filed, I will supplement this list.

[6] XM Satellite Radio (A & B) Harvard Business Review Case 9-504-009. I have also reviewed the Instructor's notes to that case and have taught this case in a basic marketing management course at MIT.

10. In addition to my review and response to the Wind, Pelcovits, and Ordover Reports, I also designed and executed two surveys among subscribers and potential subscribers of satellite radio. These surveys are based on scientific principles and were executed according to those principles. My surveys correct some of the methodological flaws in the survey described in the Wind Report (hereafter the "Wind Survey") and provide more accurate measures of the value that subscribers and potential subscribers of satellite radio place on the various features of satellite radio.

III. Summary of Opinions

11. The willingness to pay ("WTP") question (Question 9) and analyses in the Wind Survey and Wind Report are biased by the method in which the feature in question is always removed first from satellite radio service. This biased method strongly favors SoundExchange, and the results for each feature cannot be used on a standalone basis because they insufficiently account for the value provided by other features. Based on this biased method, the Wind Report estimates that respondents are willing to pay $6.80 for music. When these questions are re-asked cumulatively – the more appropriate method, as I explain below – in an order that favors XM and Sirius, results show that respondents would be willing to pay only $0.92 for music. If the questions are asked cumulatively, in an unbiased, random order, respondents are willing to pay $2.93 for music in general, a number that is reduced to $1.78 when music is limited to music of the 70's, 80's, 90's and today.[7]

12. The features that the Wind Survey uses in its willingness-to-pay and constant-sum questions were obtained from counsel for SoundExchange and were not modified by Dr. Wind. It is scientifically more appropriate to select features based on the "voice of the customer." Based on this limited set of features and an analysis that favors SoundExchange, the Wind Report estimates that 74% of the respondents allocate the most points to music. When importances are measured for features

[7] I am informed that the sound recording rights at issue in this case are for sound recordings created from February 15th, 1972 onward. They do not cover sound recordings prior to 1972 or live performances.

identified based on the voice of the customer and ties are broken fairly, as done in my surveys, substantially fewer respondents, 5.4%, allocate the most points to music of the 70's, 80's, 90's, and today.

13. There are other biases or threats to reliability in the Wind Survey and the Wind Report. These biases and threats to reliability exacerbate the fundamental biases discussed in Paragraphs 21 - 38. Among these biases and threats to reliability are the following:

- The willingness-to-pay question, Question 9, is leading, biased upward and confusing (see paragraphs 40 - 44 of this report).
- The value of music is inflated substantially in the conjoint analysis (paragraphs 45 - 48).
- The respondents' answers to the Wind Survey's most open-ended question (Question 1, as shown in Figure 11 of the Wind Report), contradict the Wind Report's conclusion (paragraphs 49-50).
- Many conclusions in the Wind Report are based on figures that improperly conflate the responses to questions addressing primarily programming features (Questions 2 and 3 of the Wind Survey) with the responses to less restrictive questions (Questions 1 and 11 of the Wind Survey) (paragraph 51).
- The Wind Report's use of a single coder does not allow us to assess the reliability of the content (open ended responses) analysis in the Wind Report. The use of independent, multiple coders would have allowed for the objectivity and would have allowed the quality of work of each coder to be assessed (paragraph 52).

14. I designed and executed two surveys to examine the impact of some of the critical flaws in the Wind Survey. These surveys are based on scientific principles and were executed according to those principles.

15. The first survey I conducted replicates the mall-intercept methodology used by the Wind Survey and provides more-accurate estimates of willingness to pay (WTP) for the sound recording rights at issue in this case. This survey also measures the importance of a more-representative set of features of satellite radio services. The second survey is an Internet Survey, a commonly accepted and scien-

tifically valid methodology. The second survey uses constant-sum methods to measure the relative importance of various features of music programming.

16. I found, based on the willingness-to-pay questions in the mall survey I conducted, that the consumers' willingness to pay for music programming is $2.93. This is a more reasonable estimate than the Wind Report's value of $6.80.[8] It is more reasonable because the Wind Report's value is based on a biased methodology that grossly inflates its estimate of the value of music programming.[9] We can further parse consumers' willingness to pay for music programming to focus on music from the 70's, 80's, 90's, and today. I parse consumers' willingness to pay with the importance ratings for various types of music programming in the Internet survey I conducted. Based on this parsing, the value of music programming from the 70's, 80's, 90's and today is $1.78.

17. As part of the Howard Stern analysis, the Pelcovits Report relies on data from Question 9 of the Wind Survey that are flawed and misleading. Rather than the 43% cancellations if music were unavailable on satellite radio that the Pelcovits Report draws from the flawed data of the Wind Survey, my mall-intercept survey reveals that only 12.2% of the respondents would cancel their service. The Pelcovits Report further assumes that Sirius (and by implication, XM), would not find it viable to provide service to all customers who the Wind Survey identifies as willing to pay less than $12.95 if music were not available.[10] The Wind Survey attributes an average willingness to pay of $7.27 to customers who would pay less than $12.95 and the Pelcovits Report assumes that Sirius (and by implication, XM) would not find it profitable to provide service at $7.27.[11] This is an incorrect assumption arising from the Pelcovits Report mistakenly attributing the average willingness to pay of $7.27 to all of these customers, when in fact their will-

[8] This WTP value is derived from Figure 8, on page 24 of the Wind Report. It is equal to $12.95 - $6.15, the latter being the price on average that respondents are said to be willing to pay for a satellite radio service without music. The Wind Report concludes, the balance of the purchase price of $12.95 must be equal to the value of music programming.

[9] This is discussed in further detail in paragraphs 23 – 29 of this report.

[10] Pelcovits Report, Footnote 14 on pages 13-14.

[11] The Pelcovits Report uses data attributed to Sirius' customers. The Wind Report provides an estimate of $7.18 as the average willingness to pay for satellite radio customers who would pay less than $12.95. Wind Report, page 24, Figure 8.

ingness to pay can fall anywhere in the range from $0.01 to $12.94. With this flaw in mind, we can nevertheless use data from the willingness-to-pay question in the mall-intercept survey I conducted to show that 12.2% of respondents would cancel and an additional 9.6% of respondents would pay less than $7.27 for their service.[12] Thus, when these flaws in the Wind Report are corrected, the estimate of the percent of subscriber revenue lost if music were not available that the Pelcovits Report derives from the Wind Survey would be 21.8% -- much smaller than the 56% in the Wind Report. Indeed, even 21.8% overstates the "value" as applicable to this case because it includes the value of music recorded prior to 1972 and live music. A more accurate, but still conservative, estimate would reduce the 21.8% value by another 39.2%, to account for the importance of music from the 70s, 80s, 90s and today. The Pelcovits Report also uses the Wind Survey's flawed data as part of its "Shapley value" model. The Pelcovits Report's analyses are flawed because the inputs to the calculations are fundamentally flawed due to the fact that the Wind Report does not determine the appropriate incremental value for music and ignores other aspects of XM's and Sirius' services that add significant value.

18. While I do not opine on the methodology, relevance or appropriateness of analyses in the Pelcovits Report, the effect of using the Wind Survey's flawed data on that analysis is dramatic. To illustrate this, when the inputs from the Wind Report into the Pelcovits Report's Howard-Stern analysis are adjusted based on the results from my Internet and mall intercept surveys, the Pelcovits Report's own analyses conclude that the percent of satellite radio service revenues attributable to the sound recording rights at issue in this case are 2.8% or less.[13,14]

19. The Ordover Report similarly refers to and relies on data from the Wind Report that are flawed and misleading, including the results from the Wind Report's constant sum question. When the Wind Report's constant-sum question is re-asked

[12] I summarize the results using the $7.27 cut-off that is used by the Pelcovits Report (Footnote 14, pages 13-14). Data are also available to calculate results for other cut-off levels such as the $7.18 average in the Wind Report, Fig. 8, p. 24, or for any other cut-off that might be proposed. I am not opining that $7.27 is the appropriate cut-off.

[13] The Pelcovits Report refers to satellite radio service as SDARS for "satellite digital audio radio services."

[14] See calculations in Paragraph 118.

using a more-complete set of features and breaking ties fairly, substantially fewer respondents assign the most points to music of the 70's, 80's, 90's, and today: 5.4% versus the 74% that the Ordover Report quotes. The more general feature, "I can listen to music" is ranked first by 10.7% of the respondents. Further, as noted above, my survey reveals that the percent of respondents who would cancel if satellite radio lacked any music programming is 12.2%, much lower than the 43% that the Ordover Report relies upon. The Ordover Report quotes the Pelcovits Report to estimate that "music accounts for approximately 55% of the value of all programming content distributed by the SDARS."[15] This 55% was an approximation of the 56% from the Pelcovits Report which was in turn based on data from the Wind Report.[16] Among other flaws, the 56% is based on a flawed questioning approach (Wind Survey Question 9), hence, this 55% itself is flawed.

20. Thus, the calculations outlined in the Ordover Report, like those in the Pelcovits Report, are based on flawed data and, hence, are themselves flawed.[17] While I express no opinion on the methodology, relevance, or appropriateness of Dr. Ordover's report generally, were Dr. Ordover to redo those calculations using data from my mall-intercept and Internet surveys – data that are more-accurate than the data from the Wind Survey – the Ordover Report would estimate royalties that are substantially less than those estimated based on the flawed data from the Wind Report.

IV. Two Key Conceptual Flaws in the Wind Survey

21. There are many flaws in the Wind Survey. These flaws increased erroneously the value that the Wind Report estimates for music programming. Indeed, when these flaws are corrected (and the remaining aspects of the methodology in the Wind Report are kept intact), the estimated value of music programming is substantially lower. I address in this section two key conceptual flaws in the Wind Survey.

---

[15] Ordover Report, p. 41.
[16] Ibid., and pages 12-13, and Footnote 14, pages 13-14, of the Pelcovits Report.
[17] For Ordover's calculations, see pp. 41, 46 and 51 of the Ordover Report.

22. The first conceptual flaw is the biased method by which features of satellite radio service are removed in the willingness-to-pay question, Question 9, of the Wind Survey. The Ordover and Pelcovits Reports rely on this question and this question alone for quantitative inputs to their royalty estimations.[18] I call this the "tires-on-the-car" criticism. The only method that was used in the Wind Survey and the Wind Report was the method that is most favorable to SoundExchange. By choosing this most-favorable method, the measured willingness to pay for music is inflated. The second conceptual flaw is the biased manner in which the features of satellite radio service were defined for those methods in which points or importance were allocated. I call this the "voice-of-counsel" flaw. By choosing a limited number of service features and by defining music in a manner most favorable to SoundExchange, the relative share or importance of music is inflated. It is more appropriate to base the set of features on interviews with customers – the voice of the customer.

23. "Tires-on-the-car" flaw. As in many scientific arguments, we begin with a thought experiment.[19] Imagine that we are purchasing a new automobile, such as a Chrysler 300C. We might be willing to pay $40,000 for a suitably equipped 300C. Now suppose that we are told that the automobile will come with wheel rims, but no tires. Furthermore, we assume in this thought experiment that there is no alternative market in which we can purchase tires for our new automobile. Our assumption implies that if the automobile does not come with tires, we would have to drive the automobile on its wheel rims. If this were the case, it is unlikely, in this "but for" world, that we would pay $40,000 for the Chrysler 300C. If asked in a survey we might be willing to pay, say $1,000, which might

[18] Other data in the Wind Report are quoted in the Pelcovits and Ordover Reports. I comment in this report on the accuracy and appropriateness of those data as well.

[19] This is often called a "Gedankenexperiment" (from the German). For example, many of Einstein's arguments for relativity are based on Gedankenexperiments. A thought (Gedanken) experiment is an important tool to check the implications of a theory. In this case, we use the thought experiment to demonstrate that the procedure in the Wind Report leads to illogical conclusions. From Wikipedia (visited June 24, 2007), "Thought experiments have been used in a variety of fields, including philosophy, law, physics, and mathematics. In philosophy, they have been used at least since Greek antiquity, some pre-dating Socrates. In law, they were well-known to Roman lawyers quoted in the Digest. In physics and other sciences, notable thought experiments date from the 19th, and especially the 20th Century, but examples can be found at least as early as Galileo." http://en.wikipedia.org/wiki/Thought_experiment.

be the salvage value of the automobile. This hypothetical line of questioning parallels the willingness-to-pay questions in the Wind Survey. If we compare the initial willingness to pay for a Chrysler 300C ($40,000) to the no-tire willingness to pay ($1,000), then, using the Wind Report's logic, we compute a value of $39,000 for the incremental revenue due tires.

24. Fortunately we do not live in a world where automobiles are sold without tires and, even if an automobile were sold without tires, there is a competitive secondary market in tires. A typical value of four tires for a Chrysler 300C is $564.[20] Thus, the value to the customer of four tires is substantially less than the $39,000 that we obtain following the logic in the Wind Report.

25. Now imagine that we asked the same question, but following other *cumulative* "value" questions. Suppose we first took away premium features (better engine, better interior, better sound system, etc.), then we reduced the car from a Chrysler 300C to a lesser-valued model, then we removed other features, continuing until we had an automobile valued at $14,000. If we now ask the no-tire question for this automobile, we still get an answer of $1,000 (assuming the same salvage value), but our computed value for incremental revenue is now $13,000. We have reduced the measured value of willingness to pay for tires to 1/3rd of its original value just by the order in which we asked the cumulative willingness-to-pay questions. Clearly, the order in which features are removed in the series of cumulative willingness-to-pay questions has a critical impact on the measured willingness to pay for tires.

26. The willingness-to-pay question in the Wind Survey is a "tires-on-the-car" question. For the moment ignore the other flaws in the Wind Survey. In the question that measures willingness to pay, respondents are asked how much they would be willing to pay for satellite radio if music programming were not available.[21] The

[20] www.tirerack.com. Tire observed on July 11, 2007 was a Bridgestone Turanza Serenity 225/60HR18.
[21] An Appendix to the Wind Report provides a text document. In this document, the word "not" is omitted. If this were the case in the computer-aided survey, this is another flaw.

Wind Survey upwardly biases the question by deleting music alone, and leaving all other features intact. The value of the other features is underemphasized.[22]

27. The order in which features in the Wind Survey are removed is also important. To demonstrate why, we consider a second thought experiment. Suppose we obtain a set of features that consumers consider important for satellite radio. These features might be national reception, commercial-free, and sound quality, as well as various forms of programming. Now suppose we remove national reception, commercial-free, sound quality, and any programming not available elsewhere. Such a service might be reasonably close to that obtainable for free on FM or AM radio. The respondent might be willing to pay very little for such a service because the respondent can obtain essentially the same service for free by using existing FM and AM radio.[23] For the sake of argument, assume that the respondent would pay $1 per month for a satellite radio service in which national reception, commercial-free, sound quality, and unique non-music programming were removed. If we now remove music programming, the respondent might be willing to pay $0.35 per month for such a service. Performing exactly the same calculations as in the Wind Report, we now obtain the value of music to be $0.65, less than 1/10th the value obtained by the Wind Report.[24]

28. The calculations in the Wind Report, based on a scenario in which music programming is removed and all other features are left intact, are one extreme – the extreme that most favors SoundExchange. Another extreme would be to first remove all of the premium features, such as national coverage, commercial-free, sound quality, and unique programming to make XM and Sirius essentially equal to FM and AM radio, removing music last and measuring its importance in that context. This scenario gives a small value for music and is no less legitimate than

[22] The Wind Survey also deletes other types of programming, but each time a question is asked only one type of programming is deleted. Although there is a randomization in the order in which these single-deletion scenarios are presented, the Wind Survey never asks a question in which music is deleted after another type of programming has already been deleted (in a cumulative manner). Furthermore, the deletions in the Wind Survey are limited to types of programming. The Wind Survey never deletes any other features of satellite radio programming even though consumers consider these features to be important.

[23] Assuming they already own an FM or AM receiver.

[24] These values are for illustrative purposes only. I later provide values from a survey of XM and Sirius subscribers and considerers.

the approach in the Wind Report. This calculation favors XM and Sirius. We have seen in the "tires-on-the-car" thought experiment above that it is important to remove features cumulatively to value properly different features. While there is no good theory to determine the proper order in which features are cumulatively to be removed, one reasonable strategy would be to remove features in a random order and then average over all possible values. This is a conservative estimate because, for brevity and to avoid respondent wear-out, we do not include all of the features of XM and Sirius radio in the mall-intercept survey. An estimate obtained in this manner will still estimate a higher-than-actual willingness to pay for music programming.

29. I describe in a later section, a survey that replicates most aspects of the Wind Survey, e.g., mall intercept, computer-aided questions, etc. However, I ask willingness-to-pay questions in which features are cumulatively removed in a random order.[25] From this survey I obtain an estimate of $2.93 (relative to a $12.95 per month subscription price) as the value of music for XM and Sirius service ($3.37 unweighted).[26] This is a conservative estimate as described above and because it does not distinguish sound recordings from 1972 and later versus sound recordings from before 1972.[27] As a second survey demonstrates, if we focus only on music of the 70's, 80's, 90's and today, customers would be willing to pay $1.78 ($2.05 unweighted).[28]

30. "Voice-of-counsel" flaw. The Wind Report uses many methods, such as constant-sum analysis and conjoint analysis, to analyze the data obtained from the Wind Survey. Both constant-sum analysis and conjoint analysis have a long his-

[25] Following good survey practice and correcting another flaw in the Wind Survey, respondents are first asked how often they pay for satellite radio. Some respondents pay by the month, but others have yearly or even lifetime subscriptions. These are converted to monthly subscription rates for this calculation.

[26] The "weighted" value is obtained by weighting the data from my mall-intercept survey to account correctly for the presence of a filter question, question 9(a), in the Wind Survey. This filter question was intentionally absent in the mall-intercept survey I conducted. See paragraph 97 for more-detailed explanation. Because I use data from the Wind Survey for calculating the weighted value, I also provide unweighted values (based on the raw data) for completeness.

[27] I am informed that sound recordings of interest in this case were recorded on or after February 15, 1972. Furthermore, valuing "sound recordings" per se does not account for live performances.

[28] This, too, is conservative because it does not account for live performances. Although I included live performances in my Internet Survey, some of these live performances include music of the 70's, 80's, 90's, and today, thus, to be conservative, I do not further subtract the measured value of live performances.

tory in marketing research, are used routinely by corporations and other entities to make important decisions, and have proven accurate as analysis methods. However, the results of these types of analysis are only as accurate as the inputs to these analyses. If the inputs are biased or incomplete, the results will be biased, incomplete, and misleading.

31. Calculations of relative importances from either constant-sum analysis or conjoint analysis are sensitive to the features that are used as items in these analyses.[29] I illustrate these effects with a thought experiment and then critique the selection of features in the Wind Survey. I later describe the results of surveys in which the features are chosen in a more representative and scientifically valid manner.

32. As a thought experiment, consider again a purchase of a Chrysler 300C. There are many features that might be relevant to this decision such as the styling of the car, speed and acceleration provided by the engine, the ride and handling provided by the suspension of the car, the quality of the interior including seats and dashboard, the roominess of the front and rear seats, the cargo capacity of the trunk, the fuel type and mileage, and so on for a large number of features. Suppose we select only three features: the tires, the cup holders, and the floor mats. If we ask a respondent to allocate 100 points among these three features, it is reasonable that the tires might receive the most points. Similarly, when the Wind Report states that respondents allocate the most points to music, this result is highly dependent upon the features that are used in the constant-sum question.[30] On the other hand, if we were to provide the respondent with a list of all of the features that affect his or her decision to purchase a particular automobile, this list could be quite lengthy. If tires were included in such a more-appropriate list, it is unlikely that tires would receive the most points.[31] This example is chosen to be extreme. However, it illustrates how summary statements, such as "percent of points allocated to a feature" and "more points allocated than any other feature,"

[29] Features, as used in this report, are also known as "customer needs."
[30] For example, see Wind Report, page 37.
[31] There is a technical issue in that tires affect the ride and handling, the safety, and the fuel mileage of an automobile. In an actual analysis we would be careful about defining features with respect to consumer needs.

are highly dependent upon the list of features that are used in the constant-sum analysis. Conjoint analysis is subject to the same criticism.

33. The selection of features for the constant-sum analyses in the Wind Report can and do have a major effect. For example, both the Ordover Report and the Wind Report cite a statistic that 74% of the respondents placed the most points on music.[32] I demonstrate later in this report that, if we include features of satellite radio service that consumers consider important and if we redefine music to that of the 70's, 80's, 90's, and today, substantially fewer respondents, 5.4%, allocate the most points to music.[33] In a second survey, the Internet Survey, we ask respondents to allocate points to aspects of music programming. In that survey only 16% allocate the most points to music of the 70's, 80's, 90's, and today as the most important feature of music programming.

34. There are many ways in which one might select the features to use in constant-sum analyses and conjoint analyses. The most appropriate method is to undertake qualitative research with subscribers (and considerers) of satellite radio service so that we might use the features that customers themselves use in making decisions about subscribing to satellite radio service. This method is called the voice of the customer. It is used widely by corporations and other entities. For example, AMS alone has used voice-of-the-customer methods for 18 years to provide advice to over 130 clients including many Fortune 500 and Fortune 100 firms. Major decisions have been based on these analyses. I describe later in this report revised surveys in which constant-sum, willingness-to-pay, and anchored-importance analyses use features chosen based on the voice of the customer. The results are substantially different from those obtained in the Wind Report – even though, in one of the surveys, much of the methodology of the Wind Survey was repeated without change.

35. In contrast to a careful, scientific study of the voice of the customer, Dr. Wind's deposition suggests that counsel for SoundExchange was the only source in the selection of the features for both the constant-sum analyses and the conjoint

[32] Wind Report, page 37. Ordover Report page 23.
[33] Detailed calculations and interpretations are provided in Section XIII.

analyses. We do not expect counsel for SoundExchange to be unbiased, hence, by implication, neither the constant-sum analyses nor the conjoint analyses is unbiased. Dr. Wind himself admits that counsel for SoundExchange is not neutral in this case.[34]

36. In Dr. Wind's deposition,[35] Dr. Wind states that the features and levels in his conjoint analysis, as well as the programming categories[36] and non-programming features[37] came from discussions with SoundExchange's lawyers. The following quotes from Dr. Wind's deposition are illustrative.

> **Q. Did anyone else have any end put [sic] into the design of your survey?**
> **A.** No, but I had, obviously, discussions with data development, in terms of the methodology to be used. For example, the using of computer assistance interviewing.
> **Q. Right.**
> A. And I had discussions with the lawyers in the case as concerning the factors, and especially the levels for the conjoint analysis.
> ...
>
> **Q. Do you have any knowledge of -- well, let me ask you this. Are you a user of satellite radio?**
> A. Use it occasionally when I rent a car and it's in the car.
> **Q. Otherwise you don't own any satellite radio product?**
> A. No.
> **Q. And have you done any, other than talking to counsel, have you done any research into satellite radio, either the industry or the nature of the product?**
> A. No. Basically I relied on them in terms of the information that led to the selection of the factors and levels.[38]
>
> ...
>
> **Q. How did you pick these 20 non-programming features that you asked about?**
> A. It was basically as part of a discussion with the lawyers in terms of what else are the non-programming features of satellite radio, and discussion came out to basically the number of minutes of commercials from music, geographical coverage and price.

---

[34] "**Q. Well, you understand that they are not neutral in this case, right?** A. Yes, but they basically understand the category and expectation and discussion on design, that they would represent the facts as opposed to bias facts." (Wind Deposition, page 164).
[35] On a sequences on page 17-19, pp. 86-88 and on pp. 163-165.
[36] Questions 4, 5, 8 and 9 of both the "subscribers" and "considering subscribing" main questionnaires
[37] Questions 6a, 6b, 6c and 7 of both the "subscribers" and "considering subscribing" main questionnaires
[38] Deposition of Yoram Wind, Ph.D., New York, New York, 16 Friday, April 27, 2007, pp. 17-19.

> **Q. So in selecting these non-programming features, did you talk to anybody other than SoundExchange's lawyers?**
> A. No. They were basically my surrogates experts, substantive experts to the category, the same way in consulting project you will work with the people in the company as your substantive experts.

37. The quotes in the previous paragraph show that counsel for SoundExchange had a major role in selecting features. There is further indication in Dr. Wind's deposition that counsel for SoundExchange participated in reducing the number of programming categories in the Wind Survey.[39] Reducing the number of features made music appear to be relatively more important. Counsel for SoundExchange appears to be the only source of input for the features in the Wind Survey. Dr. Wind was not able to substantively add to the selection of features. He stated in his deposition that he is not a satellite radio user, except in rental cars, and performed no independent research to understand the services.[40]

38. To summarize this section, there are at least two major flaws in the Wind Survey each of which substantially inflates the measured value of music. In Question 9 of the Wind Survey, estimates of willingness to pay are inflated when the Wind Survey uses only the approach that is most favorable to SoundExchange. Estimates of relative value (constant-sum and conjoint-analysis questions) are inflated because the Wind Survey uses only those features provided by counsel for SoundExchange (rather than the voice of the customer). Both the Pelcovits Report and the Ordover Report rely explicitly on the inflated estimates of willingness to pay in the Wind Report, thus, by implication, the conclusions in the Pelcovits and Ordover Reports are themselves flawed.

V. Further Critique of the Wind Survey

39. In the previous section I focused on two major conceptual flaws in the Wind Survey. In this section, I critique other aspects of the Wind Survey that either inflate the measured value of music or call into question the reliability of the Wind Survey.

---

[39] Wind Deposition, pages 87-88.
[40] Wind Deposition, pages 18-19

40. Biases in the willingness-to-pay question (Question 9). Willingness to pay (WTP) is defined as the largest amount that a consumer will pay for a product or service. WTP can be larger than the current market price.[41] For example, a consumer might be able to purchase a gallon of gasoline for $2.99 at current market prices, but would be willing to pay as much as $4.00 before reducing his or her purchase of gasoline. In this case the WTP for gasoline would be $4.00 per gallon. The amount by which WTP exceeds market price is called consumer surplus. In most competitive markets we expect positive consumer surplus for at least some consumers.

41. The Wind Report (page 19) acknowledges that some respondents provided a WTP higher than the market price ($12.95 in the Wind Report) to questions in the pre-test survey. Based on the definition of WTP, these are reasonable responses. However, while accepting other pretest answers,[42] the Wind Report "excluded these respondents from the final survey."[43] The Wind Survey was then revised so that any answer greater than $12.95 was discouraged.[44] Specifically, Question 9 in the Wind Survey was designed to discourage any answer that would indicate a willingness to pay greater than $12.95.[45] Not allowing (or discouraging) the possibility of consumer surplus biases answers in Question 9 of the Wind Survey in a manner that favors SoundExchange. This is best illustrated with another thought experiment. Suppose that a respondent is willing to pay $19.95 for satellite radio service even though the market price is currently $12.95. This would reflect a consumer surplus of $7.00 per month – a value of consumer surplus that is not un-

[41] In the widely used Harvard Business School case on XM Satellite Radio, there is evidence that the measured WTP for XM's service was higher than that which was announced publicly for the launch of Sirius Satellite Radio. This case is listed as "Most Popular" on the Harvard Business School Publishing website, http://harvardbusinessonline.hbsp.harvard.edu/. Visited June 24, 2007.

[42] "Except as noted below, the respondents had no difficulty completing the tasks, and therefore the answers were included in the final results." Wind Report, page 19.

[43] Wind Report, page 19.

[44] Wind Report, page 19.

[45] A willingness to pay of $12.95 is not accepted in Question 9b of the Wind Survey. If a respondent answers more than $12.95, the respondent is directed to Question 9c which forces the respondent to confirm this answer. A question such as 9c is a demand artifact that discourages an answer above $12.95. An answer above $12.95 is recorded only if the respondent persists with a "YES" answer. If, in Question 9c, respondents answer "NO" indicating that the asking of Question 9c changed their initial answer, respondents are asked Question 9d. Question 9d asks willingness to pay, but specifically directs that "*NOTE: ANSWER MUST BE LESS THAN $12.95.*" Any answer with positive consumer surplus was discouraged by the structure of Question 9 in the Wind Survey.

reasonable given the answers I obtained in my mall-intercept survey.[46] Such a respondent might still be willing to pay $12.95 per month in the absence of music. Thus, it is not unreasonable that the respondent would be willing to pay just as much in the absence of music as in a service with music. This is the case because some of the drop in WTP due to the absence of music would be absorbed by the consumer surplus that the respondent is receiving from satellite radio. Such respondents would have a higher true WTP for satellite radio in the absence of music than would be measured by the Wind Survey. This bias causes the Wind Report to inflate its calculated value for music programming. Omitting the pretest respondents with positive consumer surplus from the analysis and discouraging subsequent respondents from reporting positive consumer surplus upwardly biases the Wind Report's estimate of the value of sound recordings.

42. The Wind Report is inconsistent in the way in which it treats $12.95 as the maximum WTP. For example, despite excluding respondents in the WTP question who provided a WTP of more than $12.95, the Wind Report allows for a price of $14.95 in the conjoint analysis. Because these scales are not consistent, the estimates from the WTP question and the conjoint analysis cannot confirm each other, nor can they converge on a final estimate.

43. The WTP question, Question 9 in the main questionnaire of the Wind Survey, is further biased toward lower values in many ways.

    i. Respondents are immediately reminded that the market price is $12.95. They are never told that it is possible that they might have consumer surplus. As a result their WTP for services without music is anchored on the $12.95 rather than their true WTP.

    ii. If respondents were anchored at their true WTP for satellite radio, which might be more than $12.95, they might have provided a higher WTP for a service without music.

    iii. In a one-sided question respondents are asked: "Furthermore, if you think that not having this programming type would lead you to cancel your subscription please say so." Dr. Wind concedes in his testimony

[46] Calculated as the WTP of $19.95 minus the market price of $12.95.

that it is possible that this is a leading question.[47] It is indeed a leading question. While it is reasonable to remind respondents that cancellation is possible, this question presents only one possibility – cancellation. A two-sided question would either present both possibilities – cancellation and continuation, or would measure cancellation in another unbiased manner. This is not a trivial distinction. As Stanley L. Payne indicates in his classic text on "The Art of Asking Questions," a one-sided question can increase responses in the direction of the bias by as much as 80%.[48]

44. Question 9 in the Wind Survey also leads to potential confusion because it does not take into account the complexities in the pricing of satellite radio subscriptions. It is possible that subscribers currently pay more than $12.95 for a subscription. For example, if a subscriber pays for service for an additional receiver, then the subscriber would pay an additional $6.99 per month. The Wind Survey does not clarify that respondents should focus only on their main subscription. Thus, some respondents could be confused by the $12.95 base price and thus provide answers that cannot be interpreted reliably. Furthermore, the net price to a subscriber is less than the nominal subscription fee because part of the subscription fee subsidizes the cost of the receivers (hardware).[49] It is possible that some respondents were aware of this net price affect and, as a result, gave a lower WTP for satellite radio without music. We do not have transcripts of the pretest interviews for the Wind Survey, and there is no evidence that Dr. Wind checked for

[47] Wind Testimony June 14, 2007, p. 280.

[48] Payne cites an example where simply stating clearly both sides of a question changed the response dramatically. When only one side of the issue was stated, 63% of the respondents in a national poll agreed with a statement that companies could avoid layoffs. When both sides of the issue were stated, this number dropped to 35%. Stanley L. Payne, *The Art of Asking Questions*, (Princeton NJ: Princeton University Press), 1951, 7-8. The two questions were, "Do you think most manufacturing companies that lay off workers during slack periods could arrange things to avoid layoffs and give steady work right through the year?", versus "Do you think most manufacturing companies that lay off workers during slack periods could avoid layoffs and provide steady work right through the year, or do you think layoffs are unavoidable?"

[49] The Harvard Business Review case provides many examples and discussions of how XM subsidizes equipment. From the case, it is relatively easy to demonstrate that the net price per month to subscribers is less than the nominal price per month. Subsidization of hardware to sell service is common in the cellular telephone industry and many consumers are likely to be aware that they (often) must sign up for cellular telephone service plans in order to obtain a reduced price on the telephone itself.

these biases, therefore we cannot determine whether or not these potential biases were present.

45. Inflation in the importance of music in the conjoint analysis. In the previous section I showed that the value of music is upwardly biased because the features used in the conjoint analysis are incomplete and based on the voice of counsel. There are two additional flaws in the Wind Report that inflate the implied value of music.

46. First, the Wind Report defines the importance of a feature as the "partworth" of the highest level minus the "partworth" of the lowest level. This is a common definition of importance as differences in partworths measure the value to a respondent in going from a low level of a feature to a higher level of a feature. However, the high level of the music feature in the Wind Survey is defined as: "Substantially more channels and more variety of music than currently offered."[50] Thus, the relative importance of music based on conjoint analysis, as stated in the Wind Report, is not the importance of music as provided by XM and Sirius, but rather the importance of providing substantially more channels and more variety than currently offered. Furthermore, as shown by my voice-of-the-customer research, there are many features that consumers value about music programming on satellite radio than simply the number of channels and the variety of sound recordings. So, even if the relative importance in the Wind Survey were calculated using levels for each feature that matched satellite radio, the set of features in the Wind Survey's conjoint analysis is incomplete. The relative importance of music, based on the Wind Survey's conjoint analysis, is thus inflated and could not properly capture the true value of satellite radio's music programming.

47. Second, the music feature in the conjoint analysis in the Wind Report conflates both sound recordings that are at issue in the case (1972 and later), with sound recordings that are not at issue in this case (earlier than 1972). The Internet survey that I describe in this report demonstrates that this alone would inflate the conjoint-analysis-importance of music. On average, music of the 70's, 80's, 90's, and today is given 15.8 points out of 100 when respondents are asked to value dif-

[50] Wind Report, Figure 4, page 15.

ferent aspects of music programming. Music of the 40's, 50's, 60's, and earlier is given 10.2 points. Thus, the value of music programming the music at issue in this case relative to all music ranges from 15.8% to 60.8%, the latter being the ratio of music at issue in this case to music of all time periods.[51]

48. We can observe some of the inflation in the conjoint analysis by calculating an average WTP from the conjoint analysis. In conjoint analysis, respondents' trade-offs are used to estimate a "partworth" for each level of each feature. Value to the customer, sometimes called "utility," in conjoint analysis is the sum of the partworths.[52] The whole (utility, here), in other words, may be described as the sum of its parts. As noted above, the importance of a feature is often calculated as the difference between the partworths of its most preferred and least preferred levels. Relative importance is often calculated as the importance of a feature divided by the sum of these differences (importances) across all features. The differences in partworths are called importances because they enable us to compare the relative value to consumers of extreme changes in features. If, for example, one feature is only half as important as another, changing from the worst to the best level of the less important feature adds only half of the value of changing from the worst to the best level in the more important feature. In Figure 24 of the Wind Report we read that the calculated relative importance of music is 30% and the importance of price is 15%.[53] The difference between the lowest and highest prices shown to respondents in the conjoint analysis is $6 ($14.95 - $8.95). We can use these figures to calculate a WTP value for music programming. Because, according to the Wind Report, music programming is twice as important as price (30% compared to 15%), the value of changing from the least preferred level of music to the most preferred level would be worth twice as much to consumers as the change in price from $14.95 to $8.95. In the conjoint stimuli of Wind's Survey, the change in price was $6. This implies that the value of music is $6 x 2 = $12 out of $12.95,

[51] Computed as 15.8/(15.8+10.2). This is a conservative estimate, as it is also possible to include in the denominator the some or all of the average importance for "I can hear live studio performances and concerts" in the calculation, since live performances are also not at issue in this case. This calculation would be 15.8/(15.8+10.2+6.6) = 48.5%.

[52] Occasionally, conjoint analysis will allow for interaction terms. The conjoint analysis in the Wind Report seems to be a "main-effect" model, hence this calculation is appropriate.

[53] Wind Report, Figure 24, page 42.

which is an unrealistically high estimate.[54] It is even more unrealistic when we use the conjoint analysis to compute the value of XM and Sirius service to these customers. Recall that the average relative importance of price in Wind's report is 15%. Thus, excluding price, the average relative importance of the other features is 85%. Using the mechanical computation of WTP for this high-service profile, other features are worth 5.67 times as much as the $6 change in price. Thus the total willingness to pay for the high level of service would be approximately 5.67 x $6, or $34, which is an unrealistically high willingness to pay for the average respondent.[55] This calculation would be even higher if the conjoint analysis were based on a more-complete set of features. I provide these computations to indicate some of the inflation in the conjoint analyses that results from the biased selection of which features to include. I do not opine that these are accurate calculations of WTP.

49. The Wind Report's analysis of the open-ended questions (Q1-3, 11) does not demonstrate that music predominates. The Wind Survey begins with a series of open-ended questions. Such questions are a valid means to encourage the respondent to start thinking about the category and to recall their state of mind when they made decisions about satellite radio. Although such questions probe top-of-mind awareness of features, such top-of-mind awareness does not indicate importance. For example, scientific evidence suggests that "important needs are no more likely to be mentioned by a customer than needs in general."[56] Nonetheless, the Wind Report uses these open-ended answers to motivate the biased estimates obtained from the willingness-to-pay and constant-sum questions. Closer inspec-

[54] Calculated as (30%/15%) x ($6). This is only an approximation. WTP is a non-linear function of the partworths and, possibly of the levels of price in the conjoint analysis. A more accurate calculation would be to calculate WTP for each respondent and then average. Here we simply use the overall average importances in a single calculation. This calculation is inflated for the numerous reasons that I cite elsewhere in my report.

[55] Calculated as (85%/15%) x ($6). The same caveats apply as in the previous footnote. We might expect some respondents to have a willingness to pay as high as $34. If the average willingness to pay for satellite radio service were $34, then it is likely that the willingness to pay for satellite radio service without music might be above $12.95 for many respondents. See discussion in paragraph 41.

[56] Griffin, Abbie and John R. Hauser (1993), "The Voice of the Customer," *Marketing Science*, vol. 12, No. 1, (Winter), page 19.

tion of the figures in the Wind Report suggests that the impact of music is overstated relative to the data.

50. The Wind Report states that "respondents cited music more than any other programming type or price, coverage, or commercial-free . . . ."[57] However, examining Figure 11, which is a summary of the answers to Question 1 of the Wind Survey, we see that music programming (no mention of commercial-free) is mentioned by only 17% of the respondents. On the other hand, commercials are mentioned by 20% of the respondents (commercial-free by 18%). Figure 11 directly contradicts the summary in the Wind Report.

51. The summary of the open-ended questions in Figure 9 is misleading. Figure 9 of the Wind Report shows the combined results of Questions 1 to 3 and Q11. Open-ended Questions 2 and 3 focus solely on programming. Unlike Question 1, which is the most open-ended question, Questions 2 and 3 focus on programming features. Nonetheless, Figure 9 conflates the answers from Questions 2 and 3 with those of Questions 1 and 11.[58] Music is a reasonable response to all four questions, but commercial-free is more explicitly a response to two of the four questions.[59] Nonetheless, the Wind Report opines based on Figure 9 that "These results show the clear dominance of music in the minds of subscribers when it comes to reasons to subscribe to satellite radio."[60] We see similar biases in the interpretations of Figures 12 and 14.

52. The use of a single coder in the content analysis of the open-ended questions. Content analysis of open-ended questions requires judgments. The academic literature has developed a series of methods to assess the reliability of judges (here, coders) that are used in content analyses such as the netting of open-ended responses like Wind's Q1-Q3 and Q11.[61] These methods are common in the scien-

---

[57] Wind Report, page 2.

[58] Question 11 is asked at the end of the Wind Survey and is a general question. However, because the bulk of the survey focuses on programming, it is likely that respondents were primed to answer about programming in Question 11.

[59] And, as indicated in the previous footnote, the focus of the survey biases against a non-programming response in Question 11.

[60] Wind Report, page 24.

[61] For example, Wright, Peter L. (1973), "The Cognitive Processes Mediating Acceptance of Advertising," *Journal of Marketing Research*, 10, (February), 53-62. 175 citations from ISI's Web of Science as of June 24, 2007. Garrett, Dennis E. and Marie Adele Hughes (1990), "Intercoder Reliability Estimation Ap-

tific literature and they are often used to assess the reliability of coders in litigation contexts. The Wind Report uses a single coder. With only a single coder we cannot assess the reliability of the coding of responses and, by implication, cannot assess the reliability of opinions based on the qualitative questions that were so coded. Indeed, Dr. Wind's testimony suggests that between 21 and 31 coding errors were made.[62]

53. To summarize this section, there are many additional flaws in the Wind Survey and the Wind Report that exacerbate the fundamental biases introduced by the two critical flaws cited in Section VI. The willingness-to-pay question, Question 9 of the Wind Survey, is biased upward and confusing. The value of music is inflated substantially in the conjoint analysis. Figure 11 contradicts conclusions, based on the open-ended questions, that music predominates. Conclusions are based on figures that conflate questions that encourage non-programming features, with questions that are limited to programming features. And, the use of a single coder does not allow us to assess the reliability of the content analysis.

VI. Two Surveys Correct Some of the Flaws in the Wind Survey

54. I designed and executed two surveys to examine the impact of some of the critical flaws in the Wind Survey. The first survey, a mall-intercept survey, corrects some of the flaws in the willingness-to-pay question and provides an alternative measure of feature importances. The second survey, an Internet survey, uses a constant-sum methodology to parse the value of music programming.

55. The results of the two surveys demonstrate that the value of music is substantially less than that obtained by the Wind Survey and, hence, substantially less than that used in the Pelcovits and Ordover Reports.

---

proaches in Marketing: A Gereralizability Theory Framework for Quantitative Data," *Journal of Marketing Research*, 27, (May), 185-195. 43 citations from ISI's Web of Science as of June 24, 2007. Perreault, Jr., William and Laurence E. Leigh (1989), "Reliability of Nominal Data Based on Qualitative Judgments," *Journal of Marketing Research*, 26, (May), 135-148. 187 citations in ISI's Web of Science as of June 24, 2007. Rust, Roland T. and Bruce Cooil (1994), "Reliability Measures for Qualitative Data: Theory and Implications," Journal of Marketing Research, Vol. XXXI (February), pp. 1-14 75 citations in ISI's Web of Science as of June 24, 2007. Nunnally, Jum. C and Ira H. Bernstein (1994), Psychometric Theory (Third Edition), McGraw-Hill, Inc., New York, New York, pp. 232-234.

[62] Wind Testimony June 18, 2007, p. 72.

56. Both surveys are based on the voice of the customer and, hence, correct the voice-of-counsel flaw in the Wind Survey. Using experienced qualitative interviewers to talk directly to subscribers and potential subscribers of satellite radio, I identified a list of features that is more-representative of those features that subscribers and potential subscribers use in their decisions about satellite radio.

57. The first survey replicates the mall-intercept and computer-aided interviewing methodology used by the Wind Survey.

58. The willingness-to-pay questions in the first survey correct the "tires-on-the-car" flaw in the Wind Survey. Using a methodology similar to that used by the Wind Survey, I asked respondents for their willingness to pay for alternative satellite radio services. However, unlike the Wind Survey, this mall-intercept survey used a more-representative set of features and removed these features in a random order.

59. Using proven scientific methods, respondents in the first survey were also asked to express their importance judgments for a more-representative set of features. As is appropriate for the number of features identified by the voice of the customer, I used anchored scales which are easier for the respondent to answer. Scientific research has demonstrated that such anchored scales are equally as accurate as constant-sum questions in terms of predicting behavior based on the measured importances of features.[63]

60. The second survey uses a different modality to test the robustness of the findings. The modality is an Internet survey based on a representative set of subscribers and potential subscribers. Internet surveys are an increasingly common form of market research. Almost 70% of the U.S. population[64] and over 77% of the adult population has access to the Internet.[65] Internet panels (lists of Internet users who have agreed to participate in surveys) are now large enough to represent the population and are considered sufficiently representative for good research. "Even

[63] For example, see Griffin, Abbie and John R. Hauser (1993), "The Voice of the Customer," *Marketing Science*, vol. 12, No. 1, (Winter), page 18, Table 2. AMS has extensive experience with anchored questions. Major corporations routinely based decisions on the results of these questions.
[64] http://www.internetworldstats.com/stats2.htm, November 17, 2006.
[65] Quirk's Marketing Research Review, July/August 2006, p. 10.

older, low-income consumers can be well-represented within online panels."[66] The largest corporations use these surveys to support multi-million dollar marketing decisions.[67] Increasingly, courts are accepting the results of Internet surveys in a wide range of cases.[68] Accuracy of data entry is an additional advantage of Internet surveys, and the format of the survey in this situation made an Internet survey particularly appropriate.[69] Using a smaller set of features, I asked respondents to allocate a constant-sum of 100 points to features of music programming.

61. Before describing the detailed results of the two surveys, I review the methodologies used in the two surveys.

VII. Qualitative Research to Identify the Voice of the Customer

62. In 1993 Prof. Abbie Griffin and I published an article in *Marketing Science* on the "Voice of the Customer." At the time of its publication this article received an award for the best article in the marketing sciences and an award for the best article based on a dissertation. This article is highly cited and was recently named as one of the top marketing science articles in the last 25 years.[70] This article develops and tests methods to identify "customer needs" for the use in methods such as constant-sum importances, anchored importances, or conjoint analysis. Voice-of-the-customer methods are used widely. AMS has actively applied voice of-the-customer methods for the past 18 years. They employ experienced interviewers who routinely interview customers to identify customer needs. In the context of this report, I have been using the word, "features," to describe customer needs.

63. I instructed AMS to use in-depth, experiential interviews. Experiential interviews are one-on-one discussions between a trained interviewer and a customer (sub-

---

[66] Quirk's Marketing Research Review, July/August 2006, p. 62.

[67] According to an annual study (reported in January, 2006) conducted by Inside Research®, 31% of survey research was conducted online in 2005.

[68] Robert H. Thornburg, *Trademark Surveys: Development of Computer-Based Survey Methods,* 4 J. Marshall Rev. Intell. Prop. L. 91 (2005)

[69] In my experience one obtains the same survey results (up to normal sampling variation) from Internet and from central facility respondents. For this assignment, I followed protocols designed to select a representative sample and to maximize the response rates to the surveys. It is my opinion that these protocols are sufficient to assure that the respondents are representative of the sampled population.

[70] See details in Paragraph 3.

scriber or potential subscriber) in which the interviewer encourages the respondent to talk about the respondent's experiences in choosing and using satellite radio. The interviewer listens carefully to the words and phrases used by the respondent while probing to understand more about the respondent's decision processes.[71]

64. At my direction, AMS conducted a total of 41 experiential interviews between February 12th and February 21st, 2007 in Boston and Cincinnati.[72] Forty-one interviews are more than sufficient to identify customer needs.[73] Based on these interviews, AMS provided me with a summary of the words and phrases that subscribers and potential subscribers use in evaluating satellite radio. These "features" formed the basis of the anchored importance questions that I used in the first survey. See Exhibit D. The headings were provided by the interviewers to organize the features.

65. I used a subset of these features in the willingness-to-pay questions in the mall-intercept survey and in the constant-sum questions in the Internet survey. In both cases a subset was necessary to avoid respondent wear-out due to a larger number of features. As a result, both the willingness-to-pay questions and the constant-sum questions are conservative in the sense that they over-estimate the value of music to XM and Sirius. That is, if additional features were included, those additional features might be judged to be important by some respondents and, thus, lower the percentages of respondents who consider music important. I selected a

---

[71] AMS calls their voice of the customer analysis "Vocalyst." In many cases there is a second phase of the Vocalyst process in which customers sort features (customer needs) so that product developers can better understand the structure of the customer needs. This second phase enables researchers to study the interdependence among features and, if necessary, develop scales that explore independent "factors," which are combinations of features. For the purposes of this report I wanted to measure importances directly with respect to the features customers identify rather than combinations of features. As a result, the features in my mall-intercept survey are not necessarily independent. The result is that we should be extremely cautious of any operation that attempts to add together importances to obtain the importance of a combined set of features. In some cases, Vocalyst interviews are transcribed so that multiple analysts can evaluate them. When interviews are transcribed, they are transcribed so that no customer needs are missed. To the extent that any customer needs were missed by not using multiple analysts, my analysis of the anchored-importance and constant-sum questions are conservative in the sense that they over-estimate the importance ratings for music (anchored scales and constant-sum scales) or the value of music (constant-sum scales).

[72] Twenty-one (21) in-person one-on-one interviews were conducted in Boston. Twenty (20) one-on-one interviews were conducted in Cincinnati, thirteen (13) of which were in person, and seven (7) of which were conducted by telephone.

[73] See Griffin and Hauser (1993), op. cit.

specific set of features for each question based on my experience with voice-of-the-customer methods. I endeavored to select the features that were discussed often by customers in our exploratory research. The features attempt to cover most of the customer needs expressed by customers. I included features regarding music of the 70s, 80s, 90s, and today, and music of the 40s, 50s, 60s because they were necessary to parse out the particular sound recording rights germane to this case. These features are not independent of the more-general music feature, hence, in this report, I do not treat these features as independent. Customers had mentioned music from different eras during our exploratory research.

VIII. Questionnaire Development

66. The voice-of-the-customer interviews enabled me to identify the appropriate features for satellite radio, using the words and phrases that consumers use to describe these features.

67. Based on the set of features and on the words and phrases used by customers in the qualitative interviews, I reworded key questions from Wind Survey to incorporate this representative set of features and to correct other identified flaws. The flow of the questionnaire is described Paragraphs 85-89, including decisions that I made in rewording. This questionnaire was programmed into a computer-based software system designed for administering and analyzing such questionnaires.[74] Examples of the final mall-intercept questionnaire that respondents were asked to complete is provided in Exhibit E. Recall that respondents answered these questions via the mall interview facilities' computers, with assistance or supervision from the interviewers (respondents could type at the computer themselves or have the interviewer enter answers for them). Exhibit E contains a text description of questionnaire as well as example reproductions of the computer screens. As in

[74] The questionnaire was programmed by Bernett Market Research (hereafter Bernett), in Confirmit. Bernett is an experienced market research firm, founded in 1972, which has conducted a large number of surveys on the Internet, in malls and via telephone. Confirmit is a well-known and widely-used software system for these types of applications. I have used Bernett in the past and am confident in their abilities to provide this function. AMS uses Bernett extensively in their day-to-day activities. The skip patterns were checked by AMS.

the Wind Survey, there are various skip patterns and randomizations; these can be reproduced from the text description.

68. The mall-intercept questionnaire was pre-tested with sixteen (16) respondents on May 16th through May 21st, 2005 to ensure that respondents understood the descriptions, instructions, and questions and that their answers adequately represented their beliefs. Minor changes in the wording and formatting of the questions were made as a result of the pretest to assure that respondents understood the questions and that the interview flowed smoothly. Respondents were debriefed to ensure that the questionnaire maintained a "double-blind" protocol. In a double-blind protocol, neither the interviewer nor the respondent is given either explicit or implicit cues from which to guess the purpose of the study. Following standard procedures, but unlike the Wind Survey, no pretest responses were included in the final sample.

69. In correcting the willingness-to-pay and importance questions, the mall-intercept survey asks respondents about a representative set of features of satellite radio. I wanted to avoid any implicit communication to interviewees that I was interested in the value of music.[75] Therefore, I did not, as part of that survey ask respondents about the components of music programming in the mall-intercept survey. Instead, I used a second survey to investigate the relative value of various components of music programming.

70. I developed the questions for the Internet survey based on the words and phrases identified in the qualitative interviewing. The components of music programming are those that subscribers and potential subscribers used in the voice-of-the-customer experiential interviews. The Internet survey was programmed by AMS. All skip patterns and randomizations were checked for accuracy. The Internet Survey asks constant-sum questions for those features that relate to music programming.

[75] Although the respondents see the survey once in a mall-intercept format, the interviewers see the survey many times. If the interviewers know, at the end of the interviewing some respondents, that there is a focus on programming, or music programming, then it is possible for the interviewers, by body language or other means, to communicate this focus to subsequent respondents. I note that the Wind Survey takes no precautions to avoid this type of "demand artifact." Because I have not been provided with any transcripts of the Wind Survey's pretest interviews, I cannot determine whether Dr. Wind tested for demand artifacts.

71. There was a pretest and a soft launch of the Internet survey. A total of ten (10) respondents completed the survey on June 6-7, 2007 to ensure that respondents understood the descriptions, instructions, and questions and that their answers adequately represented their beliefs. Minor changes in wording and formatting were made to ensure that the respondents understood the questions and that the interview flowed smoothly. Pretest respondents were debriefed to ensure that the protocol was double-blind. Following standard scientific procedures, but unlike the Wind survey, no pretest responses were included in the final sample.

72. On June 11-12, 2007 there was a soft-launch of the Internet survey to ensure that all programmed systems were working properly and that the data were being recorded. There were forty (40) respondents in the soft launch. There were no problems identified, so the survey was launched to a full set of respondents on June 19-July 2, 2007. I compared the results between the soft-launch respondents and the remaining respondents. Comparing the mean scores for the importance question, there were no significant differences at the 95% confidence level using tests that account for the simultaneous testing of multiple questions.[76] Based on these tests, I included the soft launch respondents in the analysis, so that the Internet survey has a total of 279 valid respondents.

IX. Identifying the Samples

73. For the mall-intercept survey I used the same sampling methodology employed by the Wind Survey. The universe for this survey was adults, 18 years of age or older, who currently subscribe to either the XM or Sirius satellite radio service, or who are considering subscribing in the next 30 days. Only respondents who indicated that they make or take part in making the decision to subscribe to satellite

[76] Using the appropriate multiple *t*-test for eight tests of mean differences, the critical *t*-value is 2.74, which was higher in magnitude than any of the individual *t*-test values for the eight differences in mean importances. The concept of multiple-test corrections is the following. Suppose we want to test differences for twenty scales at the 0.05 level. The 0.05 level corresponds to a $1/20^{th}$ chance that something is significant by chance. Intuitively, if we test twenty scales at the $1/20^{th}$ level we expect approximately one scale to be identified as *significant* by chance. The actual calculations are more complex and can be done for any number of scales. The calculations are based on the probabilities involved when eight tests are being done simultaneously. The calculations account for multiple, simultaneous tests by calculating the appropriate critical value of the *t*-statistic to be used with such multiple, simultaneous tests.

radio for their household were included in the universe. And only subscribers to a satellite radio service (as opposed to XM and Sirius's services over satellite television or the Internet) were included. I chose markets to mirror the Wind Survey. The same 24 markets (six from each of the four census areas) were selected.[77,78] Those markets are listed in Figure 1.

Figure 1. Survey Locations.

EAST	CENTRAL	SOUTH	WEST
Attleboro, MA*	Eau Claire, WI	Houston, TX	Seattle, WA
Rochester, NY*	Indianapolis, IN	Raleigh, NC	Los Angeles, CA
Taunton, MA*	Chicago, IL	Atlanta, GA	San Francisco, CA
Yorktown Heights, NY	Des Moines, IA*	Memphis, TN	Denver, CO
Philadelphia, PA	Detroit, MI	Tallahassee, FL	Portland, OR
Baltimore, MD[79]	Minneapolis, MN	Tulsa, OK	Las Vegas, NV

74. In each of these markets, a mall with an interviewing facility was selected randomly. Following the methodology in the Wind Survey, potential survey respondents were selected as randomly as feasible from all parts of the mall where the field site's survey people were allowed to recruit.[80] Some of the interviews were conducted on weekends and in the evenings to ensure the inclusion of working respondents.

75. Following the methodology in the Wind Survey, mall-intercept respondents were pre-screened on age and gender, which was intended to give a sample representative of the U.S. population as a whole.[81,82]

---

[77] The Wind Report states that these markets were selected randomly, in accordance with standard survey practice.

[78] Four sites had to be replaced due to excessive amounts of invalid interviews. Each site was replaced with a site in the same census region. Attleboro, MA replaced Springfield, MA; Rochester NY replaced White Plains, NY; Taunton, MA replaced Waterbury CT; Des Moines, IA replaced St. Louis, MI. The decision to replace interviewing cites was done before I examined the results of the survey (other than the validity checks).

[79] Wind included Baltimore as part of the northeast region. However, according to the U.S. Census Bureau (www.census.gov), the state of Maryland (and therefore Baltimore) is in the southern region.

[80] I am informed that most malls have strict regulations on where survey research facility staff may recruit shoppers for interviews. This contrasts with the statement in the Wind Report that interviewers recruited respondents from all parts of the mall (Wind Report, p. 8).

[81] The Wind Report does not vary quotas within census regions to match those in the population. For example, Tulsa, Oklahoma with a population of 382,457 has virtually the same quota as Los Angeles with a population of 3,844,829. As a result, the percent of respondents in the four census regions are 25%, 25%,

76. The pool of mall-intercept respondents was further screened to meet the universe definition, including whether they subscribe or intend to subscribe to XM or Sirius, and to satisfy the standard security requirements.[83] A copy of the screening questionnaire is attached as part of Exhibit F.

77. Responses to the mall-intercept survey were obtained from 337 respondents of whom 230 currently subscribe to a satellite radio service and of whom 107 are considering subscribing to a satellite radio service within the next 30 days (the "considering subscribers").[84,85] The mall-intercept sample disposition is provided in Exhibit F. There were 8,852 potential respondents contacted. Of that number, 529 respondents qualified by meeting the universe definition and the screening requirements and were not "over quota." Of the 529 who qualified and met quotas, 364 agreed to and completed the survey. Of those, 337 remained after we eliminated invalid respondents. Overall, the survey had a response rate of 68.2%, which is extremely high.[86]

78. Exhibit G provides a copy of the questions and screen shots from the Internet survey; Exhibit H provides the Invitations to Respondents; and Exhibit I provides the sample disposition and screening statistics for the Internet survey.

25%, and 25% for Northeast, Midwest, South, and West, respectively. This does not match the census population of 18.7%, 22.5%, 35.9%, and 22.9%. Without re-weighting, the Wind Survey is representative rather than random. The effect of these quotas on the results is likely small relative to the other biases in the Wind Survey. Thus, to avoid ambiguities in any comparison, I replicated the quotas in the Wind Survey.

[82] The gender and age demographics of satellite radio subscribers resulting from the Wind Survey's pre-screening method do not match those of satellite radio subscribers in other market research. In Appendix 1 I reweight the data of the mall-intercept and Internet surveys to match the gender and age demographics of actual satellite radio subscribers obtained from market research conducted by XM and Sirius. Based on comparing the reweighted data to the raw data, I identified no differences in the numbers in this report that were significant at the 95% confidence level.

[83] Security requirements included termination of respondents if they were personally known to the interviewer, or they were employed in a market research firm, an ad agency, the entertainment industry, or a satellite radio provider, or had taken part in any market research survey in the past three months.

[84] The subscription must have been a paid or trial subscription obtained directly from XM or Sirius for the respondent to be eligible for the survey. I made the further distinction that respondents who obtained paid access solely via the Internet from XM or Sirius were excluded from the survey. I am informed that the music royalties in question in this case do not apply to Internet broadcasts.

[85] I replicated the quota system used in the Wind Survey. This quota system of "maxima" does not guarantee a target proportion when the maxima are not reached. To retain comparability to the Wind Survey in my analyses, I used the Wind Report's proportions of 75% subscribers and 25% considerers.

[86] As described in an earlier footnote, four sites were ruled to have produced unacceptably low-quality results prior to examining or analyzing the WTP or importance results for those sites. These four sites were replaced and their screening statistics do not appear in Exhibit F. We replaced an additional 12 respondents, prior to looking at their data, based on the recommendation of the field sites.

79. For this survey, potential respondents were selected at random from Survey Sampling Inc.'s ("SSI") database and sent an invitation (Exhibit H) to go to a special website to complete the survey. Each invitation included a URL with an embedded password that was then matched against a list of valid passwords and against the list of passwords that had already been used. (The former assures that only valid respondents complete the questionnaire. The latter assures that each respondent completes the questionnaire at most once.) Respondents received an initial e-mail invitation and two e-mail reminders. SSI motivates respondents to participate in these surveys by giving them chances to receive prizes in monthly drawings.

80. Following the methodology in the Wind Survey, Internet survey respondents were pre-screened on age, gender and region, which was intended to give a sample representative of the U.S. population as a whole.[87]

81. The pool of Internet survey respondents was further screened to meet the universe definition, including whether they subscribe or intend to subscribe to XM or Sirius, and to satisfy the standard security requirements.[88] A copy of the screening questionnaire is attached as part of Exhibit G.

82. Responses to the Internet survey were obtained from 279 respondents of whom 219 currently subscribe to a satellite radio service and of whom 60 are considering subscribing to a satellite radio service within the next 30 days (the "considering subscribers").[89] Unlike the Wind and mall-intercept surveys, I placed no "over quota" maxima constraint on subscribers and considerers. However, in my analysis, for ease of comparison to the Wind Report, I retained the weighting in the Wind Report of 75% subscribers and 25% considerers. The Internet Survey sample disposition is provided in Exhibit I. There were 100,454 potential respondents contacted. Of that number, 18,793 respondents responded to the invitation and did not exit before qualifying questions could be asked. After eliminating

[87] The Wind Report does not vary quotas within census regions to match those in the population.

[88] Security requirements included termination of respondents if they were personally known to the interviewer, or they were employed in a market research firm, an ad agency, the entertainment industry, or a satellite radio provider, or had taken part in any market research survey in the past three months.

[89] The subscription must have been a paid or trial subscription obtained directly from XM or Sirius for the respondent to be eligible for the survey. I made the further distinction that respondents who obtained paid access solely via the Internet from XM or Sirius were excluded from the survey. I am informed that the music royalties in question in this case do not apply to Internet broadcasts.

unqualified respondents and respondents who were over quota, 319 completed the survey, and 279 remained after we eliminated invalid respondents. Overall, the survey had a response rate of 18.7 percent, which is high for an Internet survey.

X. Validations

83. Mall-intercept survey. At my direction, Bernett conducted the validation of the mall survey interviews. Respondents were contacted after the survey by telephone and asked questions to confirm that they had indeed taken the survey, that they were qualified to take the survey, their age, and that they had received the proper incentive.[90] A detailed description of this process can be found in Appendix 2. We were able to reach and validate 51% of the respondents. Based on our efforts, 4.7% of the respondents failed validation and were removed from the analysis.[91]

84. Internet survey. The validation process is different for an Internet survey, because only the Internet panel provider is allowed to contact the respondents. To provide an unbiased validation, I had a file containing the Internet panel provider's demographic data appended to the Internet survey data file. At my direction, AMS personnel compared the age and gender data reported by respondents in the survey to the data from the panel provider. Respondents with different gender in the two data sources were eliminated, as were those reporting themselves to be in a differ-

[90]On the issue of incentives, I agree with the Wind Report (page 8) that "Such incentive payments are common for mall-intercept surveys and, given the double-blind nature of the survey, have no impact on the results of the survey."

[91]16 respondents failed validation and were not included in the final analysis. One of them was one of the 12 respondents who was replaced at the recommendation of the field sites (see footnote 86). The 51% percentage reflects the percent of respondents who were reached and validated during the validation process. Of the remaining 49%, we were unable to reach 37.2% within 16 attempts, 1.5% or respondents refused validation, 3.6% had a wrong number, 2.1% had disconnected phone lines,. The remaining 4.7% are the 16 respondents who failed validation, i.e., they were contacted and they did not satisfactorily answer the validation survey.

ent age group than in the panel data.[92] For the Internet survey we were able to validate 87% of the respondents (see Exhibit I).

XI. Mall-Intercept and Internet Questionnaires

85. Mall-intercept questionnaire. After initial screening, Questions 1 and 2 ask how long respondents have been a satellite radio subscriber, how many satellite receivers they own, what type of satellite receiver they own, and where they listen to satellite radio. Satellite radio subscribers might not be homogeneous in the importance they place on music or in their willingness to pay for music. These questions enable me to test for homogeneity or heterogeneity. Although there were a few differences, for example, the mean importance for "provides excellent sound quality (better than either AM or FM radio)" is 82.5 for subscribers to XM-only and 67.9 for Sirius-only users on a 100 point scale, $t = 2.79$, significant at the 0.01 level), I did not identify any heterogeneity that materially affected my opinions about the willingness to pay for music or the importance of music.

86. Questions 3, 4, and 5 ask how respondents pay for satellite radio so that the willingness-to-pay questions can be asked in the format with which respondents are familiar.

87. Question 6 asks for the respondent's "reservation price," that is, the most they would be willing to pay for a satellite radio subscription. This is a question that was skipped in the Wind Survey. This question corrects that omission.

88. Question 7 replicates the willingness-to-pay question from the Wind Survey while correcting many of its flaws. A more-representative set of satellite radio features are used, these are deleted from the service in a random order, and the respondent is not biased to answer that they would cancel the service if a feature were removed.[93]

---

[92] Forty respondents out of 319 were eliminated from the study, prior to examining their responses vs. the rest of the sample. Panel data on age was given in the form of year of birth, so it is unlikely that respondents could simply have obsolete age data from that source.

[93] To avoid unnecessary complexity in the mall-intercept WTP question, the filter question used by the Wind Survey (Question 9(a) was not replicated. This question reads: "As you know, the single subscription price per month for satellite radio is $12.95. Let's assume that some of the current programming types

89. Question 8 measures the importance that respondents place on various features of satellite radio. The features are based on the voice of the customer and are representative of the features respondents use to evaluate satellite radio. Rather than a constant-sum format, I chose an anchored format. In an anchored format, respondents allocate 100 points to the most important feature or features. They then allocate between 0 and 100 points to all other features. When the number of features is small, anchored formats and constant-sum formats provide equally accurate predictions.[94] However, when there are more features respondents often find anchored formats easier to understand and more natural than constant-sum formats. In this case, the voice-of-the-customer methods identified forty-seven (47) features, which were summarized as twenty-nine (29) features in the mall-intercept survey. Twenty-nine features are too many for constant-sum scales. No attempt was made to assure that the twenty-nine features were independent. Indeed we can expect some overlap as is the case in any realistic description of customer needs.

90. For brevity, I focused on those aspects of the Wind Survey that were used by the Pelcovits and Ordover Reports. This focus should not be interpreted as an endorsement of the other questions in the Wind Survey. In previous paragraphs I provided a critique of many of those questions.

91. Internet survey questionnaire. Screening Question 1 is a security question. Screening Questions 2 ask for the respondent's age, state of residence, and gender. These questions are used as quotas in a stratified sampling methodology to obtain an efficient and representative sample. Screening Questions 3, 4, 5, and 6 qualify the respondent as either a satellite radio subscriber or as a considerer.

---

were not available. Assuming that all other programming and non-programming features of the service, remain the same (sic.). If (*INSERT PROGRAMMING TYPE*) were not available, would it affect the amount you would be willing to pay for satellite radio?" Skipping the filter question means that fewer respondents were measured as "no change" and, hence, the WTP in my mall-intercept survey is raised as a result of this omission. This favors SoundExchange. The true WTP for music is less than that measured by my mall-intercept survey. I provide an estimate of this true WTP by reweighting the data to reflect the filter question used in the Wind Survey.

[94] Griffin and Hauser (1993), op.cit., page 18, Table 2. Anchored and constant-sum scales are compared on their ability to predict consumer interest and consumer preference for new product concepts. The predictive ability of the two scales was identical.

92. Internet Questions 1 and 2 ask how long respondents have been subscribers (if they are subscribers), how many receivers they own, what types of receivers they own, and where they listen to satellite radio.

93. Internet Question 3 is asked only of considerers. Internet Question 3 provides the considerer respondents with information on XM, Sirius, or both, depending on their interest. This information replicates what considerers would receive from sources such as the XM and Sirius websites. This methodology is known as "information acceleration" and is an accepted methodology in marketing.[95]

94. Internet Question 4 focuses on music programming and asks respondents to allocate 100 points among eight (8) music programming features. In this question there are sufficiently few features that respondents can answer constant-sum questions about the features. (This was confirmed in the pretests.) The eight features are based on the voice-of-the-customer experiential interviews.

XII. Willingness to Pay for Music

95. The mall-intercept survey provides better data than that provided by the Wind Survey with which to calculate the willingness of subscribers and considerers of satellite radio to pay for music. These calculations are based on a question that is similar to the question used in the Wind Survey with two changes. The biases of the Wind Survey are reduced and the "tires-on-the-car" flaw is corrected.

96. These calculations are conservative for three reasons. First, to avoid an excessively lengthy question sequence, some of the features of satellite radio are not used in the question sequence. Second, as in the Wind Survey, willingness-to-pay is measured for music. Music prior to 1972 is also important to consumers. Music is not limited to music of the 70's, 80's, 90's, and today as demonstrated by

[95] Urban, Glen L., John R. Hauser, William J. Qualls, Bruce D. Weinberg, Jonathan D. Bohlmann and Roberta A. Chicos (1997), "Validation and Lessons from the Field: Applications of Information Acceleration," *Journal of Marketing Research*, 34, 1, (February), 143-153. Urban, Glen L., Bruce Weinberg and John R. Hauser (1996), "Premarket Forecasting of Really-New Products," *Journal of Marketing*, 60,1, (January), 47-60. The latter paper received the 1996 MSI Award for the most significant contribution to the advancement of the practice of marketing. The former article has been cited 28 times as indicated by ISI's Web of Science and was cited 43 times in Google Scholar. The latter article has 54 citations on ISI's Web of Science and 91 citations on Google Scholar. Data as of June 23, 2007.

both the mall-intercept and Internet surveys. The willingness to pay for the sound recording rights at issue in this case is less than that measured for music recordings, per se. For example, if we were to use the Internet survey constant-sum questions to split the willingness to pay between pre-1972 music (not at issue in this case) and post-1972 music (which is at issue in this case), the true willingness to pay would be estimated as approximately 60.8% of that measured in the mall-intercept survey.[96] Even this is conservative. There are other features of music programming, other than the sound recording rights, that are important to subscribers and considerers of satellite radio. When these are properly accounted for in the analysis, the willingness to pay for post-1972 music is only 15.8% of that measured in the mall-intercept survey.

97. Third, the Wind Survey used a filter question. The Wind Survey found that 141 out of 400 respondents (35.3%) were identified as "no change" by the filter question.[97] In the mall-intercept survey I chose to ask a series of questions that included WTP for satellite radio service without music, but also included WTP for satellite radio service without other features. This format made it awkward to ask a filter question for every sequential WTP. Thus, rather than replicate the Wind Survey's filter question, I chose to use the results of the Wind Survey's filter question and apply those results to the data I obtained from a more-appropriate WTP question. In subsequent paragraphs I report data weighted to reflect the Wind Survey's filter question. For completeness, I also report the unweighted data, that is, data that are not weighted to reflect the Wind Survey's filter question.

98. In the willingness-to-pay question, respondents were asked to provide WTP judgments for satellite radio services in which seven features were deleted sequentially. Of the 337 respondents, 33 respondents answered questions in which music was deleted first.[98] Because I did not use a filter question in the mall-

---

[96] Constant-sum importance of music from the 70's, 80's, 90's, and today is 15.8; constant-sum importance of music from the 40's, 50's, 60's, and earlier is 10.2. A more conservative calculation would include constant-sum importance of live studio performances and live concerts, which is 6.1.

[97] Wind Report, Figure 8, page 24.

[98] The order in which respondent were asked to evaluate satellite radio without music programming was not significantly different from random (χ^2= 2. 23, p=0.897, 6 d.f.). When the ordering of respondents is re-

intercept survey, only 3 out of 33 respondents (9.1%) were measured as "no change" in the second portion of the WTP question. If we believe that the filter question was accurate, then we can reweight the data in the mall-intercept survey to reflect the skipped filter question. Although this is, in my opinion, the more-accurate estimate, this adjustment will sometimes lower the WTP (and, hence, favor XM and Sirius). To be complete, I report the data both ways – weighted and unweighted, in the detailed sections of this report. Occasionally in the report, for ease of exposition, I sometimes report only the weighted values. I believe the weighted values to be more accurate estimates.[99]

99. In an attempt to balance ease of exposition with completeness, I have divided Exhibits J and K into Exhibits J-1 and J-2 and Exhibits K-1 and K-2. Exhibits J-1 and K-1 summarize the results of the willingness-to-pay (WTP) question when the data are unweighted, that is, they do not reflect the lack of a filter question. Exhibits J-2 and K-2 summarize the results of the WTP question when the data are reweighted to reflect the lack of a filter question. The first set of exhibits J-1 and J-2 give the value of satellite radio when a feature is removed. The second set of exhibits K-1 and K-2 subtracts this value from $12.95 to impute a value of the feature. When music is removed first, as in the Wind Survey, the WTP for music is $6.48 ($9.21 unweighted) . When music is removed last, a procedure that is no less appropriate than that in the Wind Survey, the WTP for music is $0.92 ($0.92 unweighted). When we average over all possible orders, the WTP for music is $2.93 ($3.37 unweighted). For further ease of exposition, Exhibits J and K, as well as subsequent exhibits do not display the confidence intervals for these estimates. Instead, I have provided all relevant confidence intervals in Appendix 3.

100. Based on Exhibits J-2 and J-2 and on the fact that music at issue in this case makes up a 60.8% portion of "music," I opine that a conservative (favorable to

---

weighted to reflect a purely random ordering, the resulting WTP for satellite radio without music programming is not significantly different from that obtained by the overall sample (t= -0.727, p=.468).

[99] This is for simplicity of exposition only in the body of the report. Exhibits that are part of this report, provide the unweighted estimates.

SoundExchange) estimate of the WTP for music is approximately $1.78 ($2.05 unweighted).[100]

XIII. The Importance of Music

101. The mall-intercept survey also gathered data on the measured importance of the features of satellite radio service. These data were gathered with anchored importance scales, which scientific experiments have demonstrated are equally as accurate as constant-sum scales in terms of measuring importance and predicting consumer preference. Unlike the features in the Wind Survey, which were based on the voice of SoundExchange's counsel, the features in the mall-intercept survey are based on the voice of the customer.

102. Exhibit L summarizes the anchored-importance data.[101] The first column describes the feature. The second column is the average anchored score. The third column indicates the percent of respondents who allocated the most points to that feature.[102] These features were presented to respondents in a random order, thus, for ease of display, I have presented the features in order of average anchored importance.

103. The feature that has the highest average anchored importance score is "I can listen to music," but that feature is ranked first by only 10.7% of the respondents. This is substantially less than the 74% estimate from the Wind Report that is quoted by the Ordover Report. However, "I can listen to music" includes sound recordings that are at issue in this case, sound recordings that are not at issue in this case, and live performances. If we examine the average importance of "I can listen to music from the 70's, 80's, 90's and today," we see that its average importance is less than features such as (paraphrasing) "music channels without commercials,"

---

[100] See Exhibit O as well. Another estimate might be made by using the fact that music of the 70's, 80's, 90's, and today makes up only 15.8% of the constant-sum importance of music programming. Using this fact provides a WTP estimate that is more-favorable to XM and Sirius of $0.46 ($0.53 unweighted).

[101] See Appendix 3 for confidence intervals for the importances in Exhibit L.

[102] If a respondent allocated the maximum points to more than one feature, then this percentage reflects that allocation. In an anchored scale, the respondent is instructed to allocate 100 points to the most important feature. Suppose that the respondent allocates 100 points to two features. Then, in computing percentages for each feature that respondent is split between the two features.

"finding what I want to listen to (and when)," "excellent sound quality" and "listening wherever I go." Sound recordings at issue in this case are ranked first by only 5.4% of respondents. Thus, using features based on the voice of the customer (and doing fair calculations) rather than the voice of counsel, changes the percentage from 74% to 5.4% – a dramatic effect.

XIV. Relative Importance of Sound Recording Rights, 1972 and Later, as a Percentage of the Importances of Music Programming Features[103]

104. The Internet Survey focuses on music programming features. Respondents are asked to allocate 100 points among the eight music programming features that were identified based on the voice of the customer. Only one of these eight features, "I can hear music from the 70's, 80's, 90's, and today," is based on the sound recording rights that are at issue in this case.

105. Exhibit M summarizes the results of the constant-sum allocation in the Internet Survey.[104] The first column is a description of the feature. The second set of columns is the average percentage allocation to that feature.[105] The third set of columns indicates the percent of respondents who allocated the most points to that feature.[106] The feature of music programming that has the largest overall average importance (24.1 out of 100) is "Most channels are commercial free." This feature is also ranked first by the most respondents (34.9%). This is a distinguishing feature of satellite radio and, hence, it is not surprising that respondents view this feature as most important. The feature, "I can hear music from the 70's, 80's, 90's and today," was the second-most important feature, with an average score of 15.8, only 2/3^{rds} of the feature, "Most channels are commercial free." The sum of the mean scores across features adds to 100. Following the Wind Report we can interpret these average scores as percent importances for various aspects of music

---

[104] Confidence intervals for the relative importances of music programming features are provided in Appendix 3.
[105] Because each respondent allocates the same number of points, we can take the averages in either order.
[106] Ties are broken as in Exhibit K.

programming. By this measure, as used in the Wind Report, the sound recording rights at issue in this case (music recorded from 1972 onward) are worth only about 15.8% of the total value of music programming on satellite radio.

106. We can also use the data in Exhibit M to further clarify the WTP as measured for satellite radio in the absence of music. In a measure favorable to SoundExchange, we could parse the WTP by looking only at the comparative importances of "music from the 70's, 80's, 90's, and today" versus "music from the 40's, 50's, 60's, and earlier." In a measure that takes into account more of the features that consumers found to be important, we can parse this WTP by the relative importance of "music of the 70's, 80's, 90's, and today" versus all other features included in the Internet survey. The former gives a parsing weight of 60.8% for the importance of music from the 70s, 80s, 90s and today in the WTP; the latter, more thorough parsing gives a weight of 15.8% for music from the 70s, 80s, 90s and today.

107. From Paragraph 99 we measured the WTP for music to be $2.93 ($3.37 unweighted). Using the results from the Internet survey favorable to SoundExchange (60.8%) we parse this value to $1.78 ($2.05 unweighted for the filter question). Using the more thorough weight (15.8%), which is favorable to XM and Sirius, we parse this value to $0.46 ($0.53 unweighted).

XV. Use by the Pelcovits Report of Data from the Wind Survey and Opinions Expressed in the Wind Report

108. On page 13 the Pelcovits Report cites the Wind Survey as suggesting that "56% of Sirius' subscriber revenues would be lost if Sirius offered no music channels." This percentage is based on Question 9 of the Wind Survey, which purports to show that 41% of the Sirius subscribers would cancel their subscriptions if there were no music available and 15% would be willing to pay at most (on average) $7.27 if there were no music available. The Pelcovits Report argues that Sirius would not offer satellite radio service if it were priced below $7.27.[107] I have demonstrated in this report that the questions upon which these opinions are based

[107] I am not expressing an opinion about whether Sirius (or XM) would offer service priced at or below $7.27.

are biased and that the Wind and Pelcovits Reports misinterpret the implications of those questions. When the flaws in the Wind Survey are corrected, the relevant values of lost revenue are much lower.

109. Exhibits N-1 and N-2 display the percent of respondents who would no longer subscribe to satellite radio if music were not available and the percent of respondents who be willing to pay something, but at most $7.27, to subscribe to satellite radio if music were no longer available.[108] The Pelcovits Report assumes that all customers who would pay less than $12.95 if music were not available would have their service cancelled, because they have an average willingness to pay of $7.27.[109] This is an incorrect assumption arising from the Pelcovits Report mistakenly attributing the average willingness to pay of $7.27 to all of these customers, when in fact their willingness to pay can fall anywhere in the range from $0.01 to $12.94. With this flaw in mind, we can nevertheless use data from the same question in the mall survey I conducted to show that $12.2% of respondents would cancel (pay nothing) and an additional 9.6% of respondents would pay less than $7.27 for their service.[110] Exhibits N-1 and N-2 provide these data using the same cut-off as in the Pelcovits Report. If I am asked to provide estimates for other cut-offs, I can do so with the data from the mall-intercept survey.

110. When music is removed on its own, ceteris paribus, as in the Wind Survey, the percent of respondents who would no longer subscribe or who would pay something less than $7.27 are 39.9% and 53.1%, respectively. When music is removed last, a procedure that is no less appropriate than that in the Wind Survey, these percentages are 4.4% and 6.7%, respectively. When we average over all possible orders, these percentages are 12.2% and 21.8%, respectively.

111. On page 25 the Pelcovits Report indicates that its analysis with the "Shapley model" is based on the results of the Wind Survey. In particular, the Pelcovits Report states that the "Survey determined the incremental revenues added by each

[108] Confidence intervals for the percents of respondents in Exhibits N are contained in Appendix 3.
[109] Pelcovits Report, n. 14.
[110] I summarize the results using the $7.27 cut-off that is used by the Pelcovits Report (Footnote 13, page 14). Data are also available to calculate results for other cut-off levels such as the $7.18 average in the Wind Report, Fig. 8, p. 24, or for any other cut-off that might be proposed. I am not opining that $7.27 is the appropriate cut-off.

type of programming, assuming that the other types of programming already were offered."[111] The questions in the Wind Survey are biased, the methodology in the Wind Report does not determine the appropriate incremental value for music, and there are other aspects of XM's and Sirius' services other than programming that add value. Thus, the inputs to the Shapley-value calculations are fundamentally flawed.

112. On page 26 the Pelcovits Report assumes "that unless content representing 50% of the total value, as calculated above, is present, the game 'fails,' i.e., the value of the game is zero." "As calculated above" refers to incremental revenue determined by the Wind Survey, "stated as a percentage of total revenues when all four program types were offered." I have shown in this report that the incremental revenue from music is substantially less than that used by Pelcovits. The data from my surveys also indicate that the relative values of other forms of programming and non-programming features are not measured reliably or validly by the Wind Survey. Thus, the Shapley-value calculations in the Pelcovits Report are based on assumptions of game failure or non-failure that are invalid.

XVI. Use by the Ordover Report of Data from the Wind Survey and Opinions Expressed in the Wind Report

113. On page 23 the Ordover Report cites the Wind Report as "highly informative regarding the role of music in attracting SDARS subscribers."[112] For example, the Ordover Report cites that "nearly one-half (43%) of all respondents indicated that they would cancel the service if it lacked music." I have demonstrated in this report that this estimate is based on biased questions and on a misinterpretation of

[111] The Pelcovits Report (page 26) uses values of 53.3% for sound recordings, 22.6% for news, 23.3% for sports, and 23.4% for talk/entertainment. The Wind Report, based on erroneous interpretations, reports willingness to pay of $6.15, $10.14, $9.99, and $9.99 for programming without music, news, sports, and talk/entertainment, respectively. Even thought the Wind Survey uses only a subset of the programming types and totally ignores other features of satellite radio service, these percentages add to more than 100% of the market price of satellite radio service. This is a "tires-on-the-car" phenomenon that the Pelcovits Report recognizes and tries to correct by renormalizing these values to 52.5%, 21.7%, 22.9%, and 22.9% respectively. However, this renormalization does not account for the "voice-of-counsel" criticism nor does it account for the other flaws in the Wind Survey. The renormalized data remain flawed.

[112] SDARS = satellite digital audio radio services.

the implications of the Question 9 in the Wind Survey. The Ordover Report further states that when respondents were asked in Question 4 to assign 100 points among seven types of programming that music received "triple the average ascribed to any other programming type." The Ordover Report further states that "74% of the respondents assigned the highest number of points to music programming." The constant-sum question in the Wind Survey conflates sound recording rights that are at issue in this case with sound recording rights that are not at issue in this case. In addition, the items in the constant-sum question were obtained by Dr. Wind primarily from counsel for SoundExchange and do not include other aspects of XM's and Sirius' service that are important to consumers. Furthermore, the 74% breaks ties arbitrarily in favor of music.[113] When importances are re-measured using features identified by customers and when the analysis done in a fair manner,[114] substantially fewer respondents assign the most points to music of the 70's, 80's, 90's, and today (5.4%).[115]

114. On page 41, the Ordover Report states: "I agree with Dr. Pelcovits that it is plausible to conclude that music accounts for approximately 55% of the value of all programming content distributed by the SDARS." This 55% estimate, which is drawn from the Pelcovits Report's interpretation of the results of Question 9 of the Wind Survey, is restated on pages 46 and 51 of the Ordover Report to substantiate the percent of revenues that is attributed to music. The Shapley-value calculations discussed on pp. 24 – 26 of the Pelcovits Report are dependent on the data in the Wind Survey which I demonstrate are flawed. Were we to use more accurate data, it is likely that the results of the simulations would be substantially different. Any conclusions by the Ordover Report that are based on the calculations

[113] For example, if the respondent allocated 15 points to each of six items, including music, and 10 points to the last item, this rule would state erroneously that the most points were allocated to music. A fairer interpretation would be to count this respondent as if 1/6th of the time music received the most points. A conservative interpretation would not count this respondent.

[114] If two or more features are tied for first, first-place votes are distributed equally among the tied features.

[115] The features were developed based on the "voice of the customer." The feature to which I refer was "I can listen to music of the 70's, 80's, 90's, and today." The survey included features and no attempt was made to assure that the features were independent. Without further data collection it is not appropriate in this survey to combine the importances of different features as one might do in an additive model of consumer "utility." Music per se, which includes music at issue in this case and music not at issue in this case, was given the most points by only 10.7% of respondents (See Exhibit L).

in the Pelcovits Report, which are in turn based on the Wind Survey, are thus neither reliable nor valid.

XVII. Results of Correcting Data from the Wind Survey and Opinions from the Wind Report Used in the Ordover and Pelcovits Reports

115. Both the Pelcovits Report and the Ordover Report rely on data from the Wind Report. In this report I have shown that the Wind Survey is fundamentally flawed due to the "tires-on-the-car" and "voice-of-counsel" flaws. I have also shown that there are numerous biases in the Wind Survey that cause the Wind Report to overestimate the relative contribution of the sound recording rights that are at issue in this case. With the mall-intercept and Internet surveys I corrected some of the flaws in the Wind Survey and, hence, provided more-accurate data that can be used in calculating an equitable royalty.

116. I am providing opinions in this case as a marketing and marketing research expert. I am not providing opinions in this case as an economics expert. I have no opinion with respect to the Shapley-value calculations in the Pelcovits Report, other than to opine that they are based on flawed data. Similarly, I have no opinion with respect to the calculations in the Ordover Report, other than to opine that they are based on flawed data. The data provided by the mall-intercept and Internet surveys are more accurate and provide better input to the Shapley-value calculations and the other calculations in the Pelcovits and Ordover Reports.

117. As an illustration, below I redo the some of the calculations in the Howard-Stern analysis in the original and amended Pelcovits Report using the more-accurate data obtained from the mall-intercept and Internet surveys. I do not opine that these are the appropriate calculations for computing royalties. I do opine that, were we to use the more-accurate data from my surveys, the result would be substantially lower suggested royalties in the Pelcovits and Ordover Reports, to the extent those Reports rely on data from the Wind Survey.

118. The Pelcovits Report uses an estimate from the Wind Survey that 56% of the respondents would be lost if music were not available. This percentage includes

those respondents who the Wind Survey suggests would cancel their subscriptions without music and those respondents who the Wind Survey suggests would pay (on average) $7.27 or less without music.[116] The Pelcovits Report assumes, based on its analysis of the Howard Stern programming, that music content should "receive 50% of the revenue for the 56% of the customers attracted to the SDARS by music." Using the data from Paragraph 110 of this report, the 56% from the Wind Survey estimate is more accurately estimated as 21.8% (25.8% unweighted). Using the data from the Internet survey, we attribute either 60.8% (as favorable to SoundExchange) or 15.8% (as favorable to XM and Sirius) of the impact of music to the sound recording rights that are at issue in this case. Multiplying these factors reproduces the Pelcovits Report calculations, but with more-accurate data: (50% as in the Pelcovits Report) x (60.8% [or 15.8%] for music 1972 and later as opposed to music before 1972) x (21.8% [or 25.8% unweighted] lost subscribers from Paragraph 110). Depending upon the assumptions we obtain the following numbers:

i. Most favorable to SoundExchange – no reweighting for the filter question and parsing that is favorable to SoundExchange: 7.8% (less the adjustments discussed below).
ii. Reweighting to account for the lack of a filter question and parsing that is favorable to SoundExchange: 6.6% (less the adjustments discussed below).
iii. No reweighting for the filter question and parsing that is favorable to XM and Sirius: 2.0% (less the adjustments discussed below).
iv. Most favorable to XM and Sirius – reweighting to account for the lack of a filter question and parsing that is favorable to XM and Sirius: 1.7% (less the adjustments discussed below).

The Pelcovits Report then subtracts 3.5% for the publishers' royalties from these figures, and the Amended Pelcovits Report subtracts an additional 1.5% to account for the SDARS' internal production costs.[117] I have no opinion as to

[116] Pelcovits Report, page 13.
[117] Pelcovits Amended Report, page 8. SDARS = satellite digital audio radio services.

whether or not these adjustments are the correct adjustments. However, were we to make these adjustments, then the calculations in the Pelcovits Report, using assumptions that are most favorable to SoundExchange, result in a value that is 2.8% of revenue. Using assumptions that are most favorable to XM and Sirius, the calculations in the Pelcovits Report result in an estimated royalty of 0%.[118]

119. The Shapley-value calculations in the Pelcovits Report are based on the willingness-to-pay data in Figure 8, page 24 of the Wind Report. The data from the mall-intercept and Internet Surveys demonstrate that the revenue due to the sound recording rights at issue in this case is grossly inflated by the Wind Survey. Exhibits J-1, J-2, K-1, K -2 provide more-accurate estimates of the effect of music (and other programming types) on respondents' willingness to pay. I reproduce these data as Exhibit O, breaking out music into recordings before the 70's, recordings from the 70's and later.[119] If the Shapley-value calculations are redone with these values, rather than the inflated values from the Wind Report, the estimated royalty for sound recording rights for 1972 and later would be substantially different from that estimated in the Pelcovits Report. It would differ even more if the Shapley-value games included the features of satellite radio which are important to customers and which are not included in the Wind Survey. Intuitively, it is likely that the estimated royalty would be substantially less, but, confirmation would require that the Shapley-value calculations are revised based on the more-accurate data.

120. The estimates in the Ordover Report rely heavily on the estimates in the Pelcovits Report, thus, they, too, would change dramatically if we use the more-accurate data from the mall-intercept and Internet Surveys.

121. To summarize this section, the calculations in the Pelcovits Report and the Ordover Report are neither reliable nor valid because they are based on data from the Wind Survey and Wind Report that are biased substantially in favor of SoundExchange. If these calculations are redone using more-accurate data from the mall-intercept and Internet surveys, the estimates of royalties that the Pelcovits

[118] Assuming royalties are bounded from below by zero.
[119] Confidence intervals for Exhibit O are provided in Appendix 3.

and Ordover Reports obtain would be substantially less, even putting aside whatever other errors or omissions might exist.

Before the
COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of	)	
	)	Docket No. 2006-1 CRB DSTRA
Adjustment of Rates and Terms for Preexisting Subscription and Satellite Digital Audio Radio Services	)	

DECLARATION OF DR. JOHN R. HAUSER

I, John Hauser, declare under penalty of perjury that the statements contained in my Written Rebuttal Testimony in the above-captioned matter are true and correct to the best of my knowledge, information and belief. Executed this 24th day of July 2007.

Dr. John R. Hauser

A

June 2007

ACADEMIC VITA (long version)

John R. Hauser

Address

MIT Sloan School of Management
Massachusetts Institute of Technology, E40-179
Cambridge, Massachusetts 02142
(617) 253-2929 Fax: (617) 258-7597
jhauser@mit.edu; web.mit.edu/hauser/www; mitsloan.mit.edu/vc

Education

Sc.D M.I.T., 1975, Operations Research Dissertation: "A Normative Methodology for Predicting Consumer Response to Design Decisions: Issues, Models, Theory and Use."

S.M. M.I.T., 1973, Civil Engineering (Transportation Systems Division)

S.M. M.I.T., 1973, Electrical Engineering

S.B. M.I.T., 1973, Electrical Engineering
Joint Thesis (S.M.'s and S.B.): "An Efficient Method to Predict the Impacts of Operating Decisions for Conventional Bus Systems"

Lifetime Achievement Awards

Parlin Award 2001, The American Marketing Association describes this award as "the oldest and most distinguished award in the marketing research field"

Converse Award 1996, the American Marketing Association, for "outstanding contributions to the development of the science of marketing."

Fellow of the Institute for Operations Research and Management Science (INFORMS)

Highly Cited Researcher (ISI), Since 2006.

Awards for Published Papers

INFORMS:	John D.C. Little Best-paper Award, 2003, First Place
	John D.C. Little Best-paper Award, 1998, Finalist
(formerly The Institute of Management Science)	John D.C. Little Best-paper Award, 1994, Finalist
	John D.C. Little Best-paper Award, 1993, First Place
	John D.C. Little Best-paper Award, 1990, Honorable Mention
	Best paper in Marketing Sciences Literature, 1984, Honorable mention.
	Best Paper in Marketing Sciences Literature, 1983, First Place.
	Best Paper in Marketing Sciences Literature, 1982, First Place.
	Two published articles were cited in 2007 as one of "the top 20 marketing science articles in the past 25 years.
American Marketing Association:	Explor Award (Leadership is on-line market research), 2004, First-Place
	Finalist, Paul Green Award for contributions to marketing research, 2004

	MSI Award for Most Significant Contribution to Practice of Marketing in 1996. Finalist, O'dell Award for best paper in the *Journal of Marketing Research*, published in 1986, awarded in 1991.
Product Development Management Assoc.	Best Paper Award, Finalist, 2003. Best Paper Award, Finalist, 2002. One of ten most-cited papers in the *Journal of Product Innovation Management*. One of the top articles in educational citations in the last twenty years.
Sawtooth Software Conference	Best Presentation and Paper, 2006
European Society of Marketing Research:	Best Paper at Rome conference, September 1984.
Doctoral Consortia Faculty	American Marketing Association, 1979, 1984, 1985, 1986, 1988, 1989, 1991, 1993, 1995, 1997, 1998, 2001, 2003, 2004, 2005, 2006, 2007. INFORMS Society of Marketing Science, 2002 (founding member), 2003, 2004. European Marketing Academy, 1985

Awards, Teaching

Sloan School of Management:	Nominated for Excellence in Teaching Award 2000, 2007. Named "Outstanding Faculty" by *Business Week Guide to the Best Business Schools* (1995). Excellence in Teaching Award 1994 (Awarded by the Master's Student class).

Awards for Thesis Supervision

American Marketing Association (Ph.D.):	Co-winner John Howard Dissertation Award (2005, Olivier Toubia) 1st Place (1981, Ken Wisniewski) Honorable Mention (1979, Patricia Simmie).
INFORMS (Ph.D.)	Winner of the Frank Bass Award (2004, Olivier Toubia, awarded 2005) Winner of the Frank Bass Award (1989, Abbie Griffin, awarded 1995)
Sloan School of Management (Ph.D.):	1st Place (1987, Peter Fader)
Sloan School of Management (Master's):	1st Place (1991, Jon Silver and John Thompson) 1st Place (1983, Steve Gaskin) Honorable Mention (1982, Larry Kahn).

Awards, Other

Who's Who in America	Since 1997
Who's Who in Management Science	Since 2000
Who's Who in Economics	Since 2003
Harvard Business School:	Marvin Bower Fellow, 1987 - 1988.
National Science Foundation Fellowship:	1971 - 1974.
M.I.T.:	National Scholar, 1967 - 1971.

Honor Societies:	Tau Beta Pi, Eta Kappa Nu, Sigma Xi

Directorships, Trustee, Advisory Board

1988 – Present	Founder, Principal, Board Member, Applied Marketing Science, Inc.
March 2003 – Present	Trustee, Marketing Science Institute
January 2004 – Present	Advisory Board, Affinnova, Inc.

Academic Appointments

January 1989 - Present:	Kirin Professor of Marketing Alfred P. Sloan School of Management Massachusetts Institute of Technology Cambridge, Massachusetts 02142
July 2005 – Present:	Area Head, Management Science Area
July 1988 – June 2003:	Head, Marketing Group
September 1993 - May 2000:	co-Director, International Center for Research on the Management of Technology
September 1997 - May 2000:	Research Director, Center for Innovation in Product Development
June 2001 – June 2006:	Virtual Customer Initiative Leader, Center for Innovation in Product Development
July 1984 - January 1989:	Professor of Management Science Alfred P. Sloan School of Management Massachusetts Institute of Technology Cambridge, Massachusetts 02142
July 1987 - June 1988:	Marvin Bower Fellow Harvard Business School Harvard University Cambridge, Massachusetts 02163
March 1985 - May 1985:	Visiting Lecturer European Institute of Business Administration Fontainebleau, FRANCE
September 1980 - June 1984:	Associate Professor of Management Science Alfred P. Sloan School of Management Massachusetts Institute of Technology Cambridge, Massachusetts 02142
September 1975 - August 1980:	Assistant Professor of Marketing and of Transportation (granted tenure and promoted in 1980) Graduate School of Management and Transportation Center Northwestern University Evanston, Illinois 60201

Teaching Interests

Marketing Management, New Product and Service Development, Competitive Marketing Strategy, Marketing Models, Measurement and Marketing Research, Research Methodology.

Research Interests

Virtual customer methods for rapid customer feedback via the web; polyhedral methods, Greedoid methods, and related theory for the analysis of non-compensatory decision making; customer satisfaction measurement and incentive systems; quality function deployment and customer driven engineering; market measurement, especially voice of the customer; marketing strategy, especially positioning, pricing, and advertising strategy; consumer behavior including information search, agendas, and market structure; prelaunch forecasting and information acceleration for new products; and design and marketing of new products and services, hierarchical Bayes methods for continuous-time Markov processes.

Texts

Urban, G. L. and J. R. Hauser, *Design and Marketing of New Products*, Prentice-Hall, Second Edition 1993.

A comprehensive text that integrates advanced, state-of-the-art techniques to provide graduate-level students and marketing professionals with an understanding of the techniques and an operating ability to design, test, and implement new products and services.

This text has been honored by being selected for both the Prentice-Hall International Series in Management and the Series in Marketing. It has been adopted at a number of major universities. In a 1988 survey it was identified as the most widely used new product textbook at the graduate level.

The revision includes new material on designing for quality, reduced cycle times, prelaunch forecasting, quality improvement, defensive and competitive strategy, value mapping, the integration of marketing and engineering, new issues of organization, customer satisfaction, and new international examples. It is available in Korean and is being translated into Japanese and Chinese.

Urban, G. L., J. R. Hauser, and N. Dholakia, *Essentials of New Product Management*, Prentice Hall, 1986.

This is an undergraduate textbook which presents the essential concepts but written for a non-technical audience. It has been translated to Japanese and has sold well in Japan.

Hauser, J. R., *Applying Marketing Management: Four Simulations*, Scientific Press, 1986.

This mini-text and software package contains four tutorial exercises for marketing management concepts. With this package students learn positioning, competitive strategy, new product development, and life cycle forecasting while using the personal computer to simulate marketing management problems. A detailed instructor's manual and transparency masters are also available. It is available in Japanese.

Hauser, J. R., *ENTERPRISE: An Integrating Management Exercise*, Scientific Press, 1989.

This mini-text and software package contains a comprehensive competitive simulation. Students compete in six markets by making marketing and production decisions. A detailed instructor's manual and administrative software is also available. It is available in Japanese.

Journal Editor

Marketing Science, Editor-in-Chief for volumes 8, 9, 10, 11, 12, and 13 (1989-1994). Four issues per year including periodic editorials and journal management. Processed about 120 new papers per year.

Journal Publications

Toubia, Olivier, John R. Hauser and Rosanna Garcia (2006), "Probabilistic Polyhedral Methods for Adaptive Choice-Based Conjoint Analysis: Theory and Application," forthcoming *Marketing Science*.

Co-winner, American Marketing Association, John Howard Dissertation Award, 2005

Yee, Michael, Ely Dahan, John Hauser, and James Orlin (2006), "Greedoid-Based Non-compensatory Two-Stage Consideration-then-Choice Inference," forthcoming, *Marketing Science*.

First Place, American Marketing Association Explor Award, 2004

Hauser, John R., Gerald Tellis, and Abbie Griffin (2006), "Research on Innovation: A Review and Agenda for Marketing Science," *Marketing Science*, 25, 6, (November-December), 687-717.

Garcia, Rosanna, Paul Rummel, and John R. Hauser (2006), "Validating Agent-Based Marketing Models Using Conjoint-Analysis," forthcoming, *Journal of Business Research*.

Toubia, Olivier and John R. Hauser (2006), "On Managerial Efficient Designs," forthcoming, *Marketing Science*.

Hauser, John R. and Olivier Toubia (2005), "The Impact of Utility Balance and Endogeneity in Conjoint Analysis," *Marketing Science*, 24, 3, (Summer), 498-507.

Glen L. Urban and John R. Hauser (2004), "'Listening-In' to Find and Explore New Combinations of Customer Needs," *Journal of Marketing*, 68, (April), 72-87.

Toubia, Olivier, John R. Hauser, and Duncan Simester (2004), "Polyhedral Methods for Adaptive Choice-based Conjoint Analysis," *Journal of Marketing Research*, 41, 1, (February), 116-131.

Finalist, Paul Green Award for contributions to the practice of marketing research.

Toubia, Olivier, Duncan I. Simester, John R. Hauser, and Ely Dahan (2003), "Fast Polyhedral Adaptive Conjoint Estimation," *Marketing Science*, 22, 3, (Summer), 273-303.

First Place, John D. C. Little Award for Best Article in the Marketing Sciences Literature, 2003

First Place, Frank M. Bass Award for Best Article Based on a Dissertation, 2005.

Dahan, Ely and John R. Hauser (2002), "The Virtual Customer," *Journal of Product Innovation Management*, 19, 5, (September), 332-354.

Finalist, PDMA Best Paper Award in 2003.

Hauser, John R. (2001), "Metrics Thermostat," *Journal of Product Innovation Management*, 18, (May), 18, 3. (May), 134-153.

Finalist PDMA Best Paper Award in 2002.

Cited by the PDMA in 2007 as one of the top articles in the last twenty years in educational citations.

Simester, Duncan I, John R. Hauser, Birger Wernerfelt, and Roland Rust (2000), "Implementing Quality Improvement Programs Designed to Enhance Customer Satisfaction: Quasi-experiments in the United States and Spain," *Journal of Marketing Research*, 37, 1, (February), 102-112.

Hauser, John R. (1998), "Research, Development, and Engineering Metrics." *Management Science*, 44, 12, December, 1670-1689.

Hauser, John R. and Gerry Katz (1998), "Metrics: You Are What You Measure!." *European Management Journal*, 16, 5, (October), 516-528. Highlighted in "A Round-up of Important Articles from Business Periodicals," in *Mastering Management Review* published by the *Financial Times*.

Hauser, John R., Duncan I. Simester, and Birger Wernerfelt (1997), "Side Payments in Marketing," *Marketing Science*, 16, 3, 246-255.

Finalist, John D. C. Little Award for Best Article in the Marketing Sciences Literature, 1997.

Urban, Glen L., John R. Hauser, William J. Qualls, Bruce D. Weinberg, Jonathan D. Bohlmann and Roberta A. Chicos (1997), "Validation and Lessons from the Field: Applications of Information Acceleration," *Journal of Marketing Research*, 34, 1, (February), 143-153.

Hauser, John R. and Florian Zettelmeyer (1997), "Metrics to Evaluate R,D&E," *Research Technology Management*, 40, 4, (July-August), 32-38.

Griffin, Abbie, and John R. Hauser (1996), "Integrating Mechanisms for Marketing and R&D," *Journal of Product Innovation Management*, 13, 3, (May), 191-215.

One of ten most-cited papers in the *Journal of Product Innovation Management* (JPIM 24, 3, 2007, p.209)

Hauser, John R., Duncan I. Simester, and Birger Wernerfelt (1996), "Internal Customers and Internal Suppliers," *Journal of Marketing Research*, 33, 3, (August), 268-280.

Urban, Glen L., Bruce Weinberg and John R. Hauser (1996), "Premarket Forecasting of Really-New Products," *Journal of Marketing*, 60,1, (January), 47-60. Abstracted in the Journal of Financial Abstracts, 2, 23A, (June) 1995.

1996 MSI Award for the most significant contribution to the advancement of the practice of marketing.

Hauser, John R., Duncan I. Simester, and Birger Wernerfelt (1994), "Customer Satisfaction Incentives," *Marketing Science*, 13, 4, (Fall), 327-350.

Finalist, John D. C. Little Award for Best Article in the Marketing Sciences Literature, 1994.

Hauser, John R., Glen L. Urban, and Bruce Weinberg (1993), "How Consumers Allocate their Time When Searching for Information," *Journal of Marketing Research*,30, 4, (November), 452-466.

Hauser, John R. (1993), "How Puritan Bennett Used the House of Quality," *Sloan Management Review*, 34, 3, (Spring), 61-70. Reprinted in *Taiwan Philips News* (in Chinese), 23, 1, (Feb), 1994.

Griffin, Abbie and John R. Hauser (1993), "The Voice of the Customer," *Marketing Science*, vol. 12, No. 1, (Winter), 1-27.

First-place, John D. C. Little Award for Best Article in Marketing Sciences Literature, 1993.

First Place, Frank M. Bass Award for Best Article Based on a Dissertation, 1995.

Cited in 2007 by the INFORMS Society of Marketing Science as one "of the top 20 marketing science articles in the past 25 years.

Griffin, Abbie and John R. Hauser (1992), "Patterns of Communication Among Marketing, Engineering, and Manufacturing -- A Comparison between Two New Product Teams," *Management Science*, vol. 38, No. 3, (March), 360-373.

Urban, Glen. L., John. R. Hauser, and John. H. Roberts (1990), "Prelaunch Forecasting of New Automobiles: Models and Implementation," *Management Science*, Vol. 36, No. 4, (April), 401-421. Reprinted in *Modeling for Management, Vol. 1*, George P. Richardson, ed., Dartmouth Publishing Co., Hampshire England.

INFORMS (TIMS) Finalist, Best Article in Marketing Science Literature, 1990.

Hauser, John R. and Birger Wernerfelt (1990), "An Evaluation Cost Model of Consideration Sets," *Journal of Consumer Research*, Vol. 16, (March), 393-408.

Hauser, John R. and Birger Wernerfelt (1989), "The Competitive Implications of Relevant-Set/Response Analysis," *Journal of Marketing Research*, Vol. 26, No. 4, (November), 391-405.

Hauser, John R. and Don Clausing (1988), "The House of Quality," *Harvard Business Review*, Vol. No. 3, (May-June), 63-73. Reprinted in *The Product Development Challenge*, Kim B. Clark and Steven C. Wheelwright, eds., Harvard Business Review Book, Boston MA 1995. Reprinted in *IEEE Engineering Management Review*, 24, 1, Spring 1996. Translated into German and published in Hermann Simon and Christian Homburg (1998), *Kunderzufriedenheit*, (Druck and Buchbinder, Hubert & Co.: Gottingen, Germany).

Fader, Peter and John R. Hauser (1988), "Implicit Coalitions in a Generalized Prisoner's Dilemma," *Journal of Conflict Resolution*, Vol. 32, No. 3, (September), 553-582.

Hauser, John R. (1988), "Competitive Price and Positioning Strategies," *Marketing Science*, vol. 7, No. 1, (Winter), 76-91.

Hauser, John R. (1986), "Agendas and Consumer Choice," *Journal of Marketing Research*, Vol. 2,3, No. 2, (August), 199-212. (Includes unpublished appendix containing "Proofs of Theorems and Other Results.") Reprinted in Gregory S. Carpenter, Rashi Glazer, and Kent Nakamota (1997), *Readings on Market-Driving Strategies, Towards a New Theory of Competitive Advantage,* (Reading, MA: Addison-Wesley Longman ,Inc.)

Finalist, 1991 American Marketing Associations O'dell Award for Best Paper in *JMR* (5-year lag)

Hauser, John R. and Glen L. Urban (1986), "Value Priority Hypotheses for Consumer Budget Plans," *Journal of Consumer Research*, Vol. 12, No. 4, (March), 446-462.

Eliashberg, Jehoshua and John R. Hauser (1985), "A Measurement Error Approach for Modeling Consumer Risk Preference," *Management Science*, Vol. 31, No. 1, (January), 1-25.

Hauser, John R., and Steven P. Gaskin (1984), "Application of the `DEFENDER' Consumer Model," *Marketing Science*, Vol. 3, No. 4, (Fall), 327-351. Reprinted (in French) in *Recherche et Applications on Marketing*, Vol. 1, April 1986, pp. 59-92.

Urban, Glen L., P. L. Johnson and John R. Hauser (1984), "Testing Competitive Market Structures," *Marketing Science*, Vol. 3, No. 2, (Spring), 83-112.

INFORMS (TIMS) Finalist, Best Article in Marketing Science Literature, 1984.

Hauser, John R. (1984), "Consumer Research to Focus R&D Projects" *Journal of Product Innovation Management*, Vol. 1, No. 2, (January), 70.84.

Hauser, John R., and Steven M. Shugan (1983), "Defensive Marketing Strategy," *Marketing Science*, Vol. 2, No. 4, (Fall), 319-360.

INFORMS (TIMS) Best Article in Marketing Science Literature, 1983.

Cited in 2007 by the INFORMS Society of Marketing Science as one "of the top 20 marketing science articles in the past 25 years.

Hauser, John R., and Kenneth J. Wisniewski (1982), "Application Predictive Test, and Strategy Implications of a Dynamic Model of Consumer Response," *Marketing Science*, Vol. 1, No. 2, (Spring), 143-179.

Hauser, John R., and Kenneth J. Wisniewski (1982), "Dynamic Analysis of Consumer Response to Marketing Strategies," *Management Science*, Vol. 28, No. 5, (May), 455-486.

INFORMS (TIMS) Best Article in Marketing Science Literature, 1982.

Tybout, Alice M. and John R. Hauser (1981), "A Marketing Audit Using a Conceptual Model of Consumer Behavior: Application and Evaluation," *Journal of Marketing*, Vol. 45, No. 3, (Summer), 81-101.

Hauser, John R., and Patricia Simmie (1981), "Profit Maximizing Perceptual Positions: An Integrated Theory for the Selection of Product Features and Price," *Management Science*, Vol. 27, No. 2, (January), 33-56.

Hauser, John R., Frank S. Koppelman and Alice M. Tybout (1981), "Consumer-Oriented Transportation Service Planning: "Consumer Analysis and Strategies," *Applications of Management Science*, Vol. 1, 91-138.

Hauser, John R., and Steven M. Shugan (1980), "Intensity Measures of Consumer Preference," Operation Research, Vol. 28, No. 2, (March-April), 278-320.

Hauser, John R., and Frank S. Koppelman (1979), "Alternative Perceptual Mapping Techniques: Relative Accuracy and Usefulness, *Journal of Marketing Research*, Vol. 16, No. 4, (November), 495-506.

Hauser, John R., and Glen L. Urban (1979), "Assessment of Attribute Importances and Consumer Utility Functions: von Neumann-Morgenstern Theory Applied to Consumer Behavior," *Journal of Consumer Research*, Vol. 5, (March), 251-262.

Koppelman, Frank S. and John R. Hauser (1979), "Destination Choice Behavior for Non-Grocery Shopping Trips," *Transportation Research Record*, No. 673, 157-165.

Hauser, John R. (1978), "Consumer Preference Axioms: Behavioral Postulates for Describing and Predicting Stochastic Choice," *Management Science*, Vol. 24, No. 13, (September), 1331-1341.

Hauser, John R. (1978), "Testing the Accuracy, Usefulness and Significance of Probabilistic Models: An Information Theoretic Approach," *Operations Research*, Vol. 26, No. 3, (May-June), 406-421.

Hauser, John R. and Glen L. Urban (1977), "A Normative Methodology for Modeling Consumer Response to Innovation," *Operations Research*, Vol. 25, No. 4. (July-August), 579-619.

Published Notes

Hauser, John R. (2006), "Twenty-Five Years of Eclectic Growth in Marketing Science," *Marketing Science* (invited commentary), 25, 6, (November-December), 557-558.

Hauser, John R., Greg Allenby, Frederic H. Murphy, Jagmohan Raju, Richard Staelin, and Joel Steckel (2005), "Marketing Science – Growth and Evolution," *Marketing Science*, 24, 1, (Winter), 1-2, invited editorial.

Hauser, John R., Scott Carr, Barbara Kahn, James Hess, and Richard Staelin (2002), "Marketing Science: A Strong Franchise with a Bright Future," *Marketing Science*, 21, 1, (Winter), invited editorial.

Hauser, John R. and Birger Wernerfelt (1988), "Existence and Uniqueness of Price Equilibria in Defender," *Marketing Science*, Vol. 7, No. 1, (Winter), 92-93.

Hauser, John R. (1984), "Price Theory and the Role of Marketing Science," *Journal of Business*, Vol. 57, No. 1, (January), S65-S72.

Hauser, John R. (1980), "Comments on 'Econometric Models of Probabilistic Choice Among Products'," *Journal of Business*, Vol. 53, No. 3, Part 2, (July 1980), S31-S34.

Papers in Edited Volumes and/or Proceedings

Hauser, John R. and Ely Dahan (2007), "New Product Development," in Rajiv Grover, Ed., *Essential Marketing Knowledge ... And Wisdom,* (Columbus, OH: McGraw Hill, Inc.), forthcoming.

Toubia, Olivier, Theodoros Evgeniou, and John Hauser (2007), "Optimization-Based and Machine-Learning Methods for Conjoint Analysis: Estimation and Question Design," in Anders Gustafsson, Andreas Herrmann and Frank Huber, Eds, *Conjoint Measurement: Methods and Applications,* 4E, (New York, NY: Springer), forthcoming.

Hauser, John R., Ely Dahan, Michael Yee, and James Orlin (2006), ""Must Have" Aspects vs. Tradeoff Aspects in Models of Customer Decisions," *Proceedings of the Sawtooth Software Conference* in Del Ray Beach, FL, March 29-31, 2006

Hauser, John R. and Vithala Rao (2004), "Conjoint Analysis, Related Modeling, and Applications," *Advances in Market Research and Modeling: Progress and Prospects,,* Jerry Wind and Paul Green, Eds., (Boston, MA: Kluwer Academic Publishers), 141-168.

Dahan, Ely and John R. Hauser (2003), "Product Management: New Product Development and Launching," *Handbook of Marketing*, Barton Weitz and Robin Wensley, Eds, Sage Press, (June), 179-222.

Hauser, John R. (1997), "The Role of Mathematical Models in the Study of Product Development," *Proceedings of the 14th Paul D. Converse Awards Conference*, University of Illinois, Champaign-Urbana, IL, 72-90.

Swanson, Derby A. and John R. Hauser (1995), "The Voice of the Customer: How Can You Be Sure You Know What Customers Really Want?," *Proceedings* of the 1st Pacific Rim Symposium of Quality Function Deployment, MacQuarie University, NSW Australia, February 15-17.

Little, John D. C., Leonard M. Lodish, John R. Hauser, and Glen L. Urban (1993), "Comment on `Marketing Science's Pilgrimage to the Ivory Tower' by Hermann Simon," in *Research Traditions in Marketing*, Gary L. Lilien, Bernard Pras, and Gilles Laurent, eds, (Kluwer), 45-51.

Hauser, John R. (1986), "Theory and Application of Defensive Strategy" in *The Economics of Strategic Planning,* Lacy G. Thomas, ed., (Lexington Books, D. C. Heath & Co.: Lexington, MA), 113-140. Reprinted by the Marketing Science Institute.

Hauser, John R. (1985), "The Coming revolution in Marketing Theory," in R. Russell, ed., *Marketing in an Electronic Age*, (Harvard Business School Press: Boston, MA), 344-363.

Hauser, John R. and Glen L. Urban (1984), "Consumer Durables: Actual Budgets Compared to Value Priority Model - Preliminary Results and Managerial Implications," *Proceedings* of the ESOMAR-Congress, Rome, Italy, (September). (Awarded Best Paper at Conference).

Hauser, John R., John H. Roberts and Glen L. Urban (1983), "Forecasting Sales of a New Consumer Durable: A Prelaunch Modeling and Measurement Methodology," *Advances and Practices of Marketing Science*, Fred S. Zufryden, ed., (The Institute of Management Science: Providence, RI), 115-128.

Hauser, John R., and Glen L. Urban (1982), "Prelaunch Forecasting of New Consumer Durables: Ideas on a Consumer Value-Priority Model," in A. D. Shocker and R. Srivastava, eds., *Analytic Approaches to Product and*

Market Planning, Vol. 2, (Marketing Science Institute: Cambridge Massachusetts), 276-296.

Hauser, John R. (1982), "Comments on 'A Survey of Experimental Market Mechanisms for Classical Environments'," *Research in Marketing, Supplement 1: Choice Models for Buyer Behavior*, L. McAlister, ed., (JAI Press: Greenwich, CT), Spring, 49-56.

Hauser, John R. (1981), "Comments on 'Violations of Regularity and the Similarity Hypothesis by Adding Asymmetrically Dominated Alternatives to the Choice Set'," *Proceedings of the Special Conference on Choice Theory*, Joel Huber, ed., (Duke University: Durham, NC), June.

Hauser, John R., and Frank S. Koppelman (1979), "An Empirical Comparison of Techniques to Model Consumer Perceptions and Preferences," in A. D. Shocker, ed., *Analytic Approaches to Product and Marketing Planning*, (Marketing Science Institute: Cambridge, Massachusetts), 216-238.

Tybout, Alice M., John R. Hauser, and Frank S. Koppelman (1977), "Consumer-Oriented Transportation Planning: An Integrated Methodology for Modeling Consumer Perceptions, Preferences and Behavior," *Advances in Consumer Research*, Vol. 5, (Chicago, Illinois), October.

Hauser, John R. and Steven M. Shugan (1977), "Extended Conjoint Analysis with Intensity Measures and Computer Assisted Interviews: Applications to Telecommunications and Travel, " *Advances in Consumer Research*, Vol. 5, (Chicago, Illinois), October.

Hauser, John R. and Frank S. Koppelman (1977), "Designing Transportation Services: A Marketing Approach." *Proceedings of the Transportation Research Forum*, (Atlanta, GA), October, 638-652.

Hauser, John R. and Peter R. Stopher (1976), "Choosing an Objective Function Based on Modeling Consumer Perceptions and Preferences," *Proceedings of the International Conference on Cybernetics and Society*, (Washington, D.C.), November, 26-31.

Magazine Articles

Hauser, John R. (2002), "Marketing Makes a Difference," *Marketing Management*, (January/February), 11, 1, 46-47.

Hauser, John R. (2000), "Going Overboard on Platforms," *AMS Voices,* 8.

Hauser, John R. (1997), "The Problem with Pinball," *AMS Voices,* 4.

Hauser, John R. (1996), "You Are What You Measure," *AMS Voices*, 1.

Hauser, John R. (1995), "Internal Customers," *Insight*, 4, 1.

Hauser, John R. (1994), "Quality Function Deployment," *Marketing Encyclopedia for the Year 2000*, Jeffrey Heilbrunn, ed., American Marketing Association, Chicago, IL, 60606.

Hauser, John R. (1993), "Are Customer-Satisfaction Programs Profitable?, *Insight*, 3.

Hauser, John R. (1988), "Customer Driven Engineering," *Design News*, (July 18), p. 50.

Hauser, John R. and Robert L. Klein (1988), "Without Good Research, Quality is a Shot in the Dark," *Marketing News*, Vol. 22, No. 1, January 4. Page 1.

Hauser, John R. (1986), "`Defender' Helps Mature Brands Ward off New Foes," *Marketing Educator*, 5, 3, (Fall), 5.

Submitted Papers and Working Papers

Ding, Min and John R. Hauser (2005), A Truth-telling Guessing Game for Survey Research," draft working paper, June.

Zettelmeyer, Florian and John R. Hauser (1995), "Metrics to Evaluate R&D Groups: Phase I, Qualitative Interviews," Working Paper, International Center for Research on the Management of Technology, MIT, Cambridge, MA, 02142, (March).

Hauser, John R. (1991), "Comparison of Importance Measurement Methodologies and their Relationship to Consumer Satisfaction," M.I.T. Sloan School of Management Working Paper, Cambridge, MA 02142. (January).

Research in Progress

Disjunctions of conjunctions: alternative models of non-compensatory decision making. With Rene Befurt, Olivier Toubia, and Theodoros Evgeniou.

The application of hierarchical Bayes continuous-time Markov-process models to the analysis of field experiments to increase consideration of automobiles. With Glen Urban and Eric Bradlow.

Morphing Websites, with Glen Urban, Guildherme Liberali, and Michael Braun.

Agent-based Models of the Diffusion of Wine Closures, with Rosanna Garcia.

Genetic Algorithms for Understanding Consumer Preferences with Kamal Malek and Kevin Karty.

Research Reports (not otherwise listed)

Hauser, John R. (1996), "R&D Metrics: An Annotated Bibliography," ICRMOT Working Paper, M.I.T., Cambridge, MA 02142. (June) Also available as a Marketing Science Institute Working Paper (November).

Hauser, John R. and Greg Cirmak (1987), "Consumer Driven Engineering for the CHEK Automobiles," Information Resources, Inc. Report to General Motors, Inc. Details the results of a major study on consumer perceptions and preferences of luxury automobiles. April.

Hauser, John R. (1983), "Critique of Market Studies for Cellular Radio Telephone:. Affidavits before the FCC evaluating market studies, June and September.

Hauser, John R. (1983), "Forecasts of Demand and Cellular Radio Telephone,: Affidavits before the FCC for five major and nine minor markets. June and April.

Hauser, John R., and J. Bertan (1982), "Auto Show Interviews," Internal Report to Buick Division of General Motors, June.

Hauser, John R., and Kenneth J. Wisniewski (1981), "Monitoring the Implementation of Innovative Transportation Services, Phase I: Final Report," Technical Report to the Urban Mass Transit Administration, Research Grant IL-11-0012, May.

Hauser, John R. and Kenneth J. Wisniewski (1979), "Consumer Analysis for General Travel Destinations," Technical Report, Transportation Center, Northwestern University, March.

Hauser, John R. and Steven M. Shugan (1978), "Designing and Building a Market Research Information System," Technical Report, Transportation Center, Northwestern University, February.

Hauser, John R. (1978), "Forecasting and Influencing the Adoption of Technological Innovations," Technical Report, Transportation Center, Northwestern University, October.

Hauser, John R., Alice M. Tybout and Frank S. Koppelman (1978), "Consumer-Oriented Transportation Services Planning: The Development and Implementation of a Questionnaire to Determine Consumer Wants and Needs," Technical Report, Transportation Center, Northwestern University, October.

Tybout, Alice M., Frank S. Koppelman and John R. Hauser (1977), "Consumer Views of Transportation in Evanston: A Report Based on Focus Group Interviews," Technical Report, Transportation Center, Northwestern University, June.

Koppelman, Frank S., John R. Hauser and Alice M. Tybout (1977), "Preliminary Analysis of Perceptions, Preferences, Beliefs and Usage of Transportation Services for Travel to Downtown Evanston," Technical, Report, Transportation Center, Northwestern University, May.

Hauser, John R. (1977), "Results of the Focus Group Interviews for Shared Ride Auto Transit," Cambridge Systematics Consultant's Report, May.

Hauser, John R. (1976), "Report on the Applicability of Attitudinal research for Improving the Effectiveness of Transportation Demand Models," Position Paper commissioned by Cambridge Systematics, Inc., April.

Wilson, Nigel, R. W. Weissberg and John R. Hauser (1976), "Advanced Dial-a-Ride Algorithms--Final Report," M.I.T. Department of Civil Engineering Technical Report, April.

Hauser, John R., et al. (1974), "The Chemung County Transit Survey." Volunteers in Technical Assistance (a division of VISTA) publication for Chemung County, NY, June. (Includes analysis of transportation options based on the results of the survey designed and implemented by the technical team.)

Hauser, John R. (1974), "A Cost Model for RTS (Rochester, NY) Conventional Bus Routes," M.I.T., Department of Civil Engineering Report, January.

Hauser, John R. (1973), "An Efficient Model for Planning Bus Routes in Communities with Populations Between 20,000 and 250,000," M.I.T., Operations Research Center Working Paper OR-029-993, November.

Research Grants

June 2000 – May 2006	Center for Innovation in Product Development, MIT, Initiative Leader, Virtual Customer.
January 2001 – May 2002	eBusiness Center at MIT. Design and Delivery of Online Promotions. (with John Little, Duncan Simester, and Glen Urban).
January 1997 – May 2000	Center for Innovation in Product Development, Engineering Research Center Grant from the National Science Foundation. Research Director. In addition, research grants for non-monetary incentives, procurement metrics, and virtual customer methods.
June 1999 – May 2000	"Metrics Thermostat," International Center for Research on the Management of Technology (Principal Investigator).
June 1999- May 2001	"New Product Metrics at Ford and the US Navy," Center for Innovation in Product Development
June 1999- May 2001	"Lean Sustainment Metrics at the USAF," Lean Sustainment Initiative at MIT

June 1994 - May 1999	"Metrics to Value R&D," International Center for Research on the Management of Technology (Principal Investigator). General topic. Detailed proposals were for various aspects of the problem.
June 1991 - May 1994	"Customer Needs, Customer Satisfaction, Sales, and Profit: Providing the Right Incentives to Engineering and R&D," International Center for Research on the Management of Technology (co-Principal Investigator with Birger Wernerfelt)
January 1990 - June 1992	"Information Acceleration and Preproduction Forecasting of New Autos, Phases I and II." General Motors Electric Vehicle Project. (Associate)
December 1988 - June 1990	"Improved Methodologies to Measure Consumer Needs," Procter & Gamble Company. (Principal Investigator)
September 1981 - December 1985	"Prelaunch Forecasting System for New Consumer Durables and Its Applications to Auto Purchases," General Motors, Buick Division (co-Principal Investigator with Glen L. Urban).
January 1981 - May 1981	"Marketing Approaches in Travel Demand," United Parcel Service Grant (Faculty Advisor).
January 1979 - August 1980	"Monitoring the Implementation of Innovative Public Transportation Services" from University Research Program of the Urban Mass Transportation Administration (Principal Investigator).
July 1975 - September 1977	"Consumer-Oriented Transportation Service Planning." from the Program of University Research, U.S. Department of Transportation (Faculty Associate).
September 1977 - January 1978	"Consumer-oriented Transportation Service: Modification and Evaluation" from Program of University Research, USDOT (Faculty Associate).
May 1976 - September 1978	"Enhancement of Communications with a Small Scientific Community Using Slow-Scan Televideo Terminals and Voice-Grade Telephone Lines" from the National Science Foundation (Faculty Associate).
January 1976 - December 1976	"A Method for Assessing Pricing and Structural Changes on Transport Mode Use," U.S. Department of Transportation (Faculty Associate).
September 1976 - June 1977	"Prediction of Urban Recreational Demand" from the National Science Foundation (Faculty Consultant).

Invited Lectures (Outside the Sloan School)

Max Planck Institute for Human Development, Center for Adaptive Behavior and Cognition, Summer Institute on Bounded Rationality in Psychology and Economics, August 2006, "Greedoid-Based Non-Compensatory Consider-then-Choice Inference."

Northwestern University, Evanston, IL, April 2006, "Greedoid-based Non-compensatory Inference."

University of Michigan, Seminar Series, October 2004, "Table Stakes: Non-compensatory Consideration-then-Choice Inference."

Management Roundtable Special Conference on "Taking the Voice of the Customer to the Next Level," Boston, MA October 2004, "The Virtual Customer."

Marketing Science Institute Research Generation Conference, Atlanta, GA, May 2004, "New Products/Innovation," (with Gerry Tellis).

Marketing Science Institute Conference on Emerging Approaches for Successful Innovation, Chicago, IL, May 2003, "'Listening-In' to Find Unmet Customer Needs and Solutions."

University of California at Los Angeles, "Polyhedral CBC (and other fun stuff), February 2003

New York University, "Polyhedral Methods," March 2003.

Industrial Liaison Program – Research Directors' Conference, April 2002, "The Virtual Customer."

University of Maryland, "Polyhedral Methods for Conjoint Analysis," March 2002.

Marketing Science Institute Trustees Meeting on Marketing Outside the Silo, Boston, MA, April 2002, "Challenges and Visions for Marketing's Role in Product Development Processes."

Managing Corporate Innovation -- ILP Symposium celebrating ten years of Management of Technology Research at MIT. "Dealing with the Virtual Customer: Fast Web-based Customer Input." April 2001

Epoch Foundation, Cambridge, MA, October 2000, "The Virtual Customer."

Yale University Research Seminar in Marketing, New Haven, CN, March 2000, "Metrics Thermostat."

Analysis Group Economics Seminar, Boston, MA, December 1999, "The Use of Marketing Research in Litigation." Also New York, NY, March 2000 and Washington, D. C., March 2002.

Boston Chapter of the Society for Concurrent Engineering, Waltham, MA, October 1999, "Metrics Thermostat."

University of Michigan DuPont Distinguished Speakers' Series, Ann Arbor, MI, March 1998, "New Product Metrics."

Kirin Brewery Co. Limited, Tokyo, JAPAN, December 1998, "You Are What You Measure!" and "Scientific Studies of the Voice of the Customer."

NEC Corporation, Tokyo, JAPA, December 1998, "Scientific Studies of the Voice of the Customer."

University of California at Los Angeles, Los Angeles, CA, February 1997, "Research, Development, and Engineering Metrics"

Stanford University, Stanford, CA, December 1996, "Metrics to Value R,D&E"

University of California at Los Angeles, Los Angeles, CA, February 1997, "Research, Development, and Engineering Metrics"

Duke University, Durham, NC, "Internal Customers and Internal Suppliers," Nov. 1995.

University of Minnesota, Minneapolis, MN, "Voice of the Customer," "Internal Customers and Captive Suppliers," May 1995.

Winter Retreat, University of Florida, Gainesville, FL, "Internal Customers and Captive Suppliers," December 1993.

Product Development Association - Boston, "Design and Marketing of New Products II: Advances in Product Development Management over the Last 13 Years," May 1993.

3M, Minneapolis, MN, "Incentives to Encourage a Long-term Perspective and a Customer Focus," Workshop on "Towards a World-class Research, Development, and Engineering Organization," November 1992.

Baxter Health Care, Orange County, CA, "The Voice of the Customer," August 1992.

TIMS College on the Practice of Management Science (*New Directions in Management Science*), Cambridge, MA: "The Voice of the Customer," October 1991.

IBM, Inc., Boca Raton, FL: "Voice of the Customer for Performance Graphics," May 1991.

Kirin Brewery Company, Ltd. Tokyo, JAPAN: "New Product Development" and "Customer Satisfaction and Customer Needs," April 1991.

American Iron and Steel Institute, Detroit, MI: "Satisfying the Customer -- Technical Issues," February 1991.

Warner Lambert, Inc., Mountain Laurel, PA: "Communication Among R&D and Marketing," October 1990.

Digital Equipment Corporation, Maynard, MA: "Voice of the Customer," May 1990.

Life Insurance Marketing and Research Association, Inc.: 31st Research Planning Conference, Boston, MA, "The House of Quality." June 1989.

University of Illinois: "Customer Driven Engineering." April, 1988.

Marketing Science Institute and IBM Thornwood Educational Facility: Quality through Customer Driven Engineering." April, 1988.

Harvard Business School: "Customer Driven Engineering: Integrating Marketing and Engineering." February, 1988.

Vanderbilt University: "Competitive Price and Advertising Strategies" and "Customer Driven Engineering." October, 1988.

Columbia University: "Price, Positioning, and Advertising Games: To Equilibrate of Not, Does it Pay to be Smart?" May, 1987.

New York Marketing Modelers' Club: "Would You Really Rather Have a Buick?: Prelaunch Forecasting of New Automobiles," May 1987.

M.I.T. Applied Economics: "Competitive Product Selection and Advertising Models." April, 1987.

Northwestern University: "Agendas and Consumer Choice," August, 1986.

AMA Faculty Consortium on Marketing Strategy at the University Tennessee, Knoxville. "Defender: Analyses for Competitive Strategy," July, 1986.

Ohio State University: "Defensive and Competitive Strategy." May, 1986.

Boston University: "Research in Competitive Strategy." November, 1985.

Midwest Electronics Association, Minneapolis, MN: "New Products for High-Tech Firms." October, 1985.

University of Pennsylvania: "Agendas and Consumer Choice," August, 1985.

Herstein Institute, Vienna Austria: "Competitive Strategy," May, 1985.

Cadbury-Schweppes, Birmingham, England: "New Product Development and Defensive Strategy." May, 1985.

Rhone-Poulenc and Aluminum Pechiney, Paris, France: "New Product Development." April, 1985.

University of Michigan: "Defensive and Competitive Strategy." February, 1985.

Marketing Science Institute Special Mini-Conference: "Defensive Marketing Strategies for Consumer Firms." September 1983.

University of Chicago, Graduate School of Business, Chicago, IL. "Agendas and Consumer Choice," May 1984.

European Institute for Business Administration (INSEAD), Fontainebleau, FRANCE. "Agendas and Consumer Choice," June 1984.

University of Connecticut. "Defensive Marketing: Theory, Measurement, and Models," April, 1983.

University of Osaka, JAPAN "Defensive Marketing: Theory, Measurement, and Models," August, 1983.

Kao Soap, Ltd., Tokyo, JAPAN: "Defensive Marketing," August, 1983.

Johnson & Johnson, K. K., Tokyo, JAPAN: "Defensive Marketing," August, 1983.

Analog Devices, Inc., Norwood, MA. "New Product Development," May, 1982.

University of Rochester Research Seminar, "Prelaunch Forecasting of New Consumer Durables," April 1982.

Frito-Lay R & D Laboratory, Dallas, TX, "Marketing and R & D for New Products," October 1981.

University of California at Los Angels Research Seminar, "Defensive Marketing Strategies," July, 1981.

Purdue University Research Seminar, "Product Realization," October 1979.

Stanford University Research Seminar, "Product Realization," October 1979.

Elrick and Lavidge, Inc., Chicago, Illinois, "Product Realization," October 1979.

Booz, Allen and Hamilton, Inc., Chicago, Illinois, "New Service Planning for Hospitals," April 1979.

Cornell University Research Seminar, "Intensity Measures of Consumer Preference," February 1979.

University of Rochester Research Seminar, "Product Realization: Synthesis of Marketing and Economic Theory," December 1978.

Region VI Center of Health Planning, New Orleans, LA, "Finding the Linkage Through Marketing,: August 1978.

Nebraska Hospital Association, Kearney, NE, "Hospital Marketing Surveys," May 1978.

Executive Development Group, Waterloo Management Education Centre, Toronto, Ontario, Canada, "Designing New Industrial Products," February 1978.

Academic Update, Xavier University Graduate Program in Hospital and Health Administration, Cincinnati, OH, "Designing Hospital Services: A Marketing Approach," October 1977.

The Hospital Marketing Workshop, Ireland Educational Corporation, Chicago, Illinois, "Analyzing the Hospital Markets," January 1977 and May 1977.

Association for College Unions - International, 1976 Fall Conference in Green Bay, WI, Keynote Speech - "Designing Successful Services: A Marketing Approach," October 1976.

University of Chicago, Graduate School of Business, Research Seminar, "Testing Probabilistic Models," April 1976.

Council for the Advancement and Support of Education, Conference on Marketing Alumni Program, New York, NY, Keynote Speech, February 1976.

Presentations at Professional Meetings (No published proceedings, some co-presented or presented by co-author[s])

Agent-based Models of Market Dynamics and Consumer Behaviour, University of Surrey, Guildford, UK, January 2006, "Co-opetition for the Diffusion of Resistant Innovations: A Case Study in the Global Wine Industry using an Agent-based Model." with Rosanna Garcia. Also presented at the American Marketing Association's Advanced Research Techniques (ART) Forum in June 2006 at Monterrey CA.

AMA Doctoral Consortium, University of Maryland, College Park, MD, July 2006, "Creating Value: Products and Brands."

Marketing Science Conference, University of Pittsburgh, Pittsburgh, PA, June 2006, "A Truth-telling Sleuthing Game for Survey Research," with Min Ding.

Marketing Science Conference, University of Pittsburgh, Pittsburgh, PA, June 2006, On Managerially Efficient Experimental Designs,: with Olivier Toubia.

Sawtooth Software Conference on Conjoint Analysis, Delray Beach, FL, March 2006, "Must Have" Aspects vs. Tradeoff Aspects in Models of Customer Decisions," with Michael Yee, James Orlin, Ely Dahan.

AMA Doctoral Consortium, University of Connecticut, Storrs CT, June 2005, "The Virtual Customer."

Marketing Science Conference, Emory, Atlanta, GA, June 2005, "Direct, Nonparametric Product Optimization Using Interactive Genetic Algorithms," with Kamal Malek and Kevin Karty.

Marketing Science Conference, Emory, Atlanta, GA, June 2005, "Non-Deterministic Polyhedral Methods for Adaptive Choice-Based Conjoint Analysis: Application to the Diffusion of the New Wine Cork," with Olivier Toubia and Rosanna Garcia.

Marketing Science Conference, Emory, Atlanta, GA, June 2005, "Greedoid-Based Non-compensatory Two-Stage Consideration-then-Choice Inference," with Michael Yee, Jim Orlin, and Ely Dahan.

Marketing Science Doctoral Consortium, Rotterdam, The Netherlands, June 2004, "Research that Has Impact."

Marketing Science Conference, Rotterdam, The Netherlands, June 2004, "Improving Choice-Based Polyhedral Methods by Taking Response Error into Account," with Olivier Toubia.

Marketing Science Conference, Rotterdam, The Netherlands, June 2004, "The Dream Versus Reality of CRM," with Glen L. Urban, Eric Bradlow, and, Mahesh Kumar.

Marketing Science Conference, Rotterdam, The Netherlands, June 2004, "Non-compensatory Consideration-then-Choice Adaptive Conjoint Analysis," with Michael Yee and James Orlin.

AMA Doctoral Consortium, Texas A&M University, College Station, TX, June 2004, "Virtual Customer Initiative."

AMA Advanced Research Techniques Forum, June 2004, "Conjoint Adaptive Ranking Database System (CARDS)," with Ely Dahan, James Orlin, and Michael Yee.

AMA Doctoral Consortium, University of Minnesota, Minneapolis, MN, June 2003, "The Review Process."

Marketing Science Doctoral Consortium, University of Maryland, June 2003, "Roots of Marketing Science Thought," with John Little.

Marketing Science Conference, University of Maryland, June 12-15, 2003, "Individual-level Adaptation of Choice-Based Conjoint Questions: More Efficient Questions and More Accurate Estimation," (with Olivier Toubia and Duncan Simester).

Marketing Science Conference, University of Alberta, Canada, June 28, 2002, "Configurators, Utility Balance, and Managerial Use," (with Duncan Simester and Olivier Toubia).

Marketing Science Doctoral Consortium, University of Alberta, Canada, "Helping Managers Structure and Make Decisions," June 27, 2002. (Founding Consortium).

Marketing Science Conference, University of Alberta, Canada, June 28, 2002, "Adaptive Choice-Based Conjoint Analysis with Polyhedral Methods," (with Duncan Simester and Olivier Toubia*).

Advances in Marketing Research and Modeling: The Academic and Industry Impact of Paul E. Green, Wharton, Philadelphia, PA, May 2002, "New Methods of Data Collection and Estimation Using Polyhedral Estimation Techniques."

Production and Operations Management Society (POMS) Conference 2002 - High Tech POM, San Francisco, CA, April 2002, "The Virtual Customer," (with Ely Dahan*).

Product Development Association (PDMA) International Research Conference, Santa Clara, CA, October 2001, "The Virtual Customer," (with Ely Dahan*).

New England Marketing Conference, Cambridge, MA, September 2002, "Fast Polyhedral Adaptive Conjoint Estimation," (with Ely Dahan, Duncan Simester, and Olivier Toubia).

Marketing Science Conference, Wiesbaden, Germany, July 2001, "Empirical Test of Web-based Conjoint Analysis Including ACA, Efficient Fixed Designs, Polyhedral Methods, and Hybrid Methods," (with Ely Dahan, Duncan Simester, and Olivier Toubia*)

Marketing Science Conference, Wiesbaden, Germany, July 2001, "Evaluation of Fast Polyhedral Adaptive Conjoint Estimation," (with Duncan Simester and Olivier Toubia).

The 12th Annual Advanced Research Techniques Forum, Amelia Island, Florida, June 2001, "The Virtual Customer: Communication, Conceptualization, and Computation," (with Ely Dahan*).

AMA Doctoral Consortium, University of Miami, June 2001, "Role of Technology in Marketing."

Marketing Science Conference, UCLA, June 2000, "Applications of the Metrics Thermostat."

Marketing Science Conference, UCLA, June 2000, "The Virtual Customer." (with Ely Dahan and Duncan Simester).

Marketing Science Institute Marketing Metrics Workshop, Washington, D.C. October 1999, "Metrics for New Product Development: Making Agency Theory Practical," Plenary Speaker.

Marketing Science Conference, Syracuse, NY, May 1999, "Balancing Customer Input, Speed to Market, and Reduced Cost in New Product Development: What is the Most Profitable Strategy"

ICRMOT Conference on Technology Alliances and New Product Development: A Cross-cultural Perspective, Mishima, JAPAN, December 1998, "You Are What You Measure!"

AMA Doctoral Consortium, Athens, Georgia, August 1998, "Quantitative Advances in Marketing Models."

AMA Winter Educators' Conference, Austin, TX, February 1998 (Plenary Speaker), "New Challenges in the Marketing-Product Development Interface."

AMA Doctoral Consortium, Cincinnati OH, August 1997, "Working with Industry."

Marketing Science Conference, Berkeley CA, March 1997, "Cultivating Technological Managers for Customer Expertise."

Marketing Science Institute Conference on Interfunctional Interfaces: The Management of Corporate Fault Zones, Palo Alto, CA, December 1996, "Multi-Stage Modeling of R&D/Marketing Interfaces in New Product Development."

Marketing Science Conference, Berkeley CA, March 1997, "Cultivating Technological Managers for Customer Expertise."

Envisioning the Future on Internet Marketing: Research and Strategy Implications, M.I.T., September 1996, "Agents and Intermediaries: Roles, Trust, and Value."

"Can R&D be Evaluated on Market-Driven Criteria?," (with Florian Zettelmeyer). Marketing Science Conference, University of Florida, Gainesville, March 1996

"Information Acceleration," (with Glen Urban, William Qualls, Bruce Weinberg, Jon Bohlmann, and Roberta Chicos). Wharton Conference on Innovation in Product Development, Philadelphia, PA, May 1995.

"Metrics by Which Managers Evaluate R&D Groups," (with Florian Zettelmeyer). Association of Consumer Research, Boston, MA, October 1994.

"Satisfying the Internal Customer," (with Birger Wernerfelt and Duncan Simester) Marketing Science Conference, University of Arizona, Tucson, AZ, March 1994.

"Customer-Satisfaction Based Incentive Systems," AMA Educator's Conference, Boston, MA, August 1993.

"Marketing in the 1990s: Emerging Issues," AMA Doctoral Consortium, University of Illinois, August 1993.

"Quality Function Deployment and the Voice of the Customer," Pharmaceutical Management Science Association, Phoenix AZ, May 1993.

"In a World of Active Time-constrained Customers, How Can a Firm be the Great Communicator," (with Birger Wernerfelt), Marketing Science Conference, Washington University, St. Louis, MO, March 1993.

"Customer Needs, Customer Satisfaction, Sales, and Profit," (with Birger Wernerfelt, Ronit Bodner, and Duncan

Simester), ORSA/TIMS Joint National Conference, San Francisco, CA, November 1992.

"Customer Satisfaction and Employee Rewards," (with Birger Wernerfelt, Ronit Bodner, and Duncan Semester), Marketing Science Conference, London, England, June 1992.

"Information Acceleration and Preproduction Forecasting of Electric Autos," (with Glen L. Urban and Bruce Weinberg), Marketing Science Conference, London, England, June 1992.

"The Voice of the Customer and Customer Satisfaction," ORSA/TIMS Joint National Meeting, Anaheim, CA, October 1991.

"Modeling Marketing Phenomena," AMA Doctoral Consortium, University of Southern Calif. August 1991.

"Relationship of Satisfaction to Customer Needs and to Market Share," 1st Congress on Customer Satisfaction and Market-Driven Quality, American Marketing Association, Orlando FL, May 1991.

"Time Flies When You're Having Fun: How Consumers Allocate Their Time When Evaluating Products" (with Bruce Weinberg, Glen Urban, and Miguel Villas-Boas), Marketing Science Conference, Wilmington, DL, March 1991.

"Information Acceleration and Preproduction Forecasting of New Autos," (with Glen Urban, and Bruce Weinberg), Marketing Science Conference, Wilmington, DL, March 1991.

"Beyond Quality Function Deployment," ORSA/TIMS Joint National Meeting, Philadelphia, PA October 1990. (Conference-wide Tutorial)

"Competitive Marketing Strategies," Operations Research 1990 (Osterreichische Gesellschaft fur Operations Research), Vienna, Austria, August 1990. (Invited Speaker)

"New Product Development: A Quantitative Analysis of Interfunctional Communication" (with Abbie Griffin), Marketing Science Conference, Urbana, IL, March 1990.

"Integrated Product Development: New Methodological Developments" (with Abbie Griffin), Marketing Science Conference, Durham, N.C., March 1989.

"Customer Driven Engineering" (with Gregory Cirmak and Robert Klein), ORSA/TIMS Joint National Meeting, Washington, D.C., April 1988.

"Competitive Advertising and Pricing in Duopolies" (with Birger Wernerfelt), Marketing Science Conference, Seattle, Washington, March 1988.

"Customer Driven Engineering" (with Abbie Griffin), Marketing Science Conference, Seattle, Washington, March 1988.

"Customer Needs," Visions of Design Practices for the Future, Newton, MA, October 1987.

"Effective Strategies in Oligopoly" (with Peter Fader), ORSA/TIMS Joint National Meeting, Miami Beach, Florida, November 1986.

"Competitive Strategy Contest: Result and Analysis" (with Peter Fader), Marketing Science Conference, Dallas, TX, March 1986.

"The PC As a Tool to Teach Complex Marketing Science Concepts," Marketing Science Conference, Dallas, TX, March 1986.

"The Coming Revolution in Marketing Theory," Plenary Speaker, European Marketing Conference, Bielefeld, West Germany. April 1985.

"Defensive Strategy" Confer. on Economics of the Firm, Universite de Paris X, Nanterre, France, April 1985.

"Competitive Marketing Strategies" Marketing Science Conference, Nashville, Tennessee, March 1985.

"Developing New Product Management: Past Progress, Current Efforts, Current Needs" (Panel) Marketing Science Conference, Nashville, Tennessee, March 1985.

"Testing Competitive Marketing Structures: Theory and Applications" (with Glen Urban) ORSA/TIMS Joint National Meeting, Dallas, TX November 1984.

"Competitive Strategy," ORSA/TIMS Joint National Meeting, Dallas, Texas, November 1984.

"Forecasting Automobile Sales: An Application of a Value Priority Algorithm," (with Glen Urban), John Roberts and John Dabels), TIMS XXVI International Meeting, Copenhagen, Denmark, June 1984.

"Consumer Durables: The Actual Consumer Budgets Compared to the Value Priority Model," (with Glen Urban), Marketing Science Conference, Chicago, Illinois, March 1984.

"Defensive Strategy Models: Application and Predictive Text," (with Steven Gaskin, and Karl Irons) ORSA/TIMS Joint National Meeting, Orlando, Florida, November 1983.

"New Product Research: Focus on Defensive strategies," Roundtable Program, ORSA/TIMS Joint National Meeting, Orlando, FL, November 1983.

"Intensity of Preference," (with Steven Shugan) ORSA/TIMS Joint National meeting, San Diego, CA, October 1982.

"Measurement Error Theories for von Neumann-Morgenstern Utility Functions," (with Jehoshua Eliashberg) ORSA/TIMS Joint National Meeting, San Diego, CA, October 1982.

"Consumer Preference Models: Axioms and Statistics," ORSA/TIMS Joint National Meeting, Houston, Texas, October 1981.

"Economic Models of Consumer Behavior," (panel discussion), ORSA/TIMS Joint National Meeting, Houston, Texas, October 1981.

"Defensive Marketing Strategies, Part II," (with Steven Shugan), ORSA/TIMS Joint National Meeting, Houston, Texas, October 1981.

"Agendas and Choice Probabilities," (with Amos Tversky), Association of Consumer Research, St. Louis, Missouri, October 1981, and Special Conference on Choice Theory, Durham, North Carolina , June 1981.

"Strategic Response to Competitive New Products," (with Steven Shugan), ORSA/TIMS Joint National Meeting, Toronto, Ontario, Canada, May 1981.

"Applications of a Dynamic Semi-Markov Model of Consumer Choice," (with Ken Wisniewski), ORSA/TIMS Joint National Meeting, Colorado Springs, Colorado, November 1980.

"Models of Consumer Behavior," (panel discussion), ORSA/TIMS joint National Meetings, Colorado Springs, Colorado, November 1980.

"Dynamic Semi-Markov Models of Consumer Behavior," (with Ken Wisniewski) TIMS International Conference on Marketing, Paris, June 1980.

"Profit Maximizing Perceptual Positioning," (with Patricia Simmie) TIMS International Conference on Marketing, Paris, June 1980.

"An Error Theory for von Neumann-Morgenstern Utility Assessment," (with Jehoshua Eliashberg), ORSA/TIMS Joint National Meeting, Washington, D.C., May 1980.

"Defender: Defensive Strategies Against New Products" (with Steven Shugan), ORSA/TIMS Second Special Interest Conference on Marketing Measurement and Analysis, Austin, Texas, March 1980.

"Adaptive Control of New Product Launches," (with Ken Wisniewski), ORSA/TIMS Joint National Meeting, Milwaukee, Wisconsin, October 1979.

"The Value of Up-front Research in New Products," (with Glen Urban), TIMS International Meeting, Honolulu, Hawaii, June 1979.

"Methods for Computing Probabilities of Choice," (with Steven Shugan), TIMS International Meeting, Honolulu, Hawaii, June 1979.

"Forecasting and Improving the Adoption of New High Technology Products," (with Pat Lyon), ORSA/TIMS Joint National Meeting, New Orleans, Louisiana, May 1979.

"A Methodology for Product Realization: Multi-method Procedures," (with Patricia Simmie), ORSA/TIMS Joint National Meeting, Los Angeles, California, November 1978.

"Searching for Marketing Segments" (with Ken Wisniewski), ORSA/TIMS Joint National Meeting, New York, New York, May 1978.

"P.A.R.I.S.: An Interactive Market Research System," (with Steven Shugan), ORSA/TIMS Joint National Meeting, New York, New York, May 1978.

"Extended Conjoint Analysis," (with Steven Shugan), ORSA/TIMS Joint National Meeting, Atlanta, Georgia, November 1977.

"Consumer Preference Functions: Theory, Measurement, Estimation , and Application," (with Steven Shugan), ORSA/TIMS Joint National Meeting, Atlanta, Georgia, November 1977.

"Measuring Consumer Preferences for Health Care Plans," (with Glen Urban), ORSA/TIMS Joint National Meeting, San Francisco, California, May 1977.

"Improved Transportation Design with Consumer Response Models: An AMTRAK Example" (with Frank Koppelman), ORSA/TIMS Joint National Meeting, Miami, Florida, November 1976.

"A Comparison of Statistical and Direct Multiattribute Utility Assessment Procedures," (with Glen Urban), ORSA/TIMS Joint National Meeting, Las Vegas, Nevada, November 1985.

"Measuring Consumer Preferences: An Axiomization for Describing Choice," ORSA/TIMS Joint National Meeting, Las Vegas, Nevada, November 1975.

"Modeling Consumer Response to Innovations," (1) Milwaukee Chapter of ORSA/TIMS, November 1985; (2) Chicago Chapter of ORSA/TIMS, December 1975.

"Modeling Decisions of Choice Among Finite Alternatives: Applications to Marketing and to Transportation Demand Theory," ORSA/TIMS Joint National Meeting, San Juan, Puerto, Rico, October 1974.

"An Efficient Model for Planning Bus Routes in Medium Sized Communities," ORSA/TIMS Joint National Meeting, San Diego, CA, November 1973.

Professional Affiliations

The Institute for Operations Research and Management Science

American Marketing Association

Product Development and Management Association, Certified New Product Development Professional

Association for Consumer Research

Professional Services

Secretary, INFORMS Society of Marketing (January 2002 – December 2005). Founding Officer.

Advisory Board, *Sloan Management Review* (2000- present)

Advisory Council, INFORMS College of Marketing (1994 - 2002)

Council of The Institute of Management Sciences (1987 - 1989)

Associate Editor for Marketing, *Management Science*, (1980 - 1981)

Department Editor for Marketing, *Management Science*, (1982 - 1988)

Editor-in-Chief, *Marketing Science*, (1989 - 1994)

Editorial Advisory Board, *Sloan Management Review* (2000-present).

Area Editor, *Journal of Marketing Research* (April 2006 – present). First time in journal history that Area Editors have been appointed.

Editorial Boards, *Marketing Science*, (1980 – 1988, Editor 1989-1995, 2003- present, including acting Area Editor), *Journal of Product Innovation Management* (1997 - present), *Journal of Marketing* (2005- present, outstanding reviewer 2006), *European Management Journal* (advisory, 1998 - present).

Reviewer: *Advances in Consumer Research, Applications in Management Science, European Journal of Research in Marketing, Journal of the Academy of Marketing Science,* Journal *of Consumer Research, Journal of Marketing, Journal of Marketing Research, Journal of Mathematical Psychology, Journal of Product Innovation Management, Management Science, Marketing Science, Operations Research, Review of Marketing, Sloan Management Review, Transportation Research Record, Transportation Science,* AMA Dissertation Prize, AMA Educators' Conference, American Institute of Decision Sciences Dissertation Prize, Nicholson Dissertation Prize, Marketing Science Institute Dissertation Award, Product Development Management Association Dissertation Prize, Prentice-Hall Books, National Science Foundation.

Conference Chairman: Conference Chair, Profitable Customer-Driven Organizations: Developing the Blueprint, Management Roundtable, May 1994.

Segment Chairman: Non-traditional Models of Consumer Preference and Choice, Adaptive Preference and Estimation,

Optimizing Product Design and Customer Targeting, Obtaining Information From or About Consumers (Atlanta, GA, 2005, co-chair four sessions)

TIMS International Meeting, Copenhagen, Denmark, June 1984 (two sessions).

TIMS College of Marketing, Houston, Texas, October 1981 (twelve sessions).

TIMS College of Marketing, Milwaukee, Wisconsin, October 1979 (five sessions).

American Marketing Association Educator's Conference, Chicago, Illinois, August 1978, (three sessions).

INFORMS Marketing Science Conference, Atlanta GA, June 2005 (four sessions)

Session Chairman: *INFORMS (Previously named ORSA or TIMS)*

Virtual Customer Initiative (Rotterdam, The Netherlands, 2004)

New Approaches to Mapping (University of Maryland, 2003)

The Virtual Customer (University of Alberta, Canada 2002)

The Virtual Customer (Wiesbaden, Germany 2001)

Building Competitive Advantage Through Product Quality and R&D (Gainesville, FL 1996)

Customer Satisfaction and Its Role in Global Competition (San Francisco, CA 1992)

Competitive R&D (Washington, D.C., April 1988)

Competitive Marketing Strategy, (St. Louis, Michigan, November 1987)

Competition in Multiattributed Spaces (Atlanta, Georgia, November 1985).

Marketing: Consumer Measurement (Copenhagen, Denmark, June 1984)

Marketing: Dynamic Structures (Copenhagen, Denmark, June 1984)

Product Policy (Orlando, Florida, November 1983)

Product Policy (San Diego, California, October 1982)

New Product Introduction and Defense in Competitive Environments, (Detroit, Michigan, April 1982)

New Product and Product Policy Models, (Houston, Texas, October 1981)

New Product Models (Toronto, Ontario, Canada, May 1981)

Models of Consumer Behavior (Colorado Springs, Colorado, November 1980)

New Product Realization and Selection (Los Angeles, California, November 1978).

Session Chairman: *Association of Consumer Research*

Mathematical Theories of Consumer Behavior (St. Louis, Missouri, October 1981)

Committee Memberships

Editor Selection Committee (chair), *Marketing Science*, INFORMS College of Marketing, 2001, 2004.

Editor Selection Committee, *Journal of Marketing Research,* American Marketing Association, 1999.

Conference Steering Committee, Duke Invitational Symposium on Choice Modeling and Behavior, June 1993.

Editor Selection Committee, *Management Science,* TIMS.

Founding Committee for *Marketing Science*, TIMS College of Marketing, (1979 - 1982).

Management Science Roundtable, TIMS, (1982 - 1988)

Marketing Strategy Steering Committee, Marketing Science Institute, (1983 - 1984).

Organizing Committee for Conference on Economics of the Firm, April 1985, Universite de Paris X Nanterre.

Organizing Committee for 1985 Conference in Bielefeld, West Germany, European Marketing Academy.

Publications Committee (1980 - 1982), Operations Society of America.

Scientific Committee for 1986 Conference in Helsinki, Finland.

Student Affairs Committee (1978 - 1979), Operations Society of America.

*Litigation Consulting (on behalf of, *deposition testimony, †court, commission, or arbitration testimony)*

American Multi-Cinema, Inc. v. American Movie Classics Company, Inc., et. al. (Confusion),
Amway v. Procter & Gamble (Damages)*,
Berlex v. Biogen, Inc. (Damages)*,
Blue Mountain Arts, Susan Polis Schutz, and Stephen Schutz v. Hallmark Card, Inc. (Trade Dress),
James And Lisa Camenson, et al.; v. Milgard Manufacturing Inc., et. al. (Class action)
Comm-Tract Corp. v. Northern Telecom, Inc. (Advice only),
Computer Aid, Inc. v. Hewlett Packard (damages)*,
Creative Laboratories, Inc. v. Apple Computer, Inc. (Intellectual Property)
CTC Communications Corporation v. Bell Atlantic Corporation (Damages),
EPD v. Curtis (Product Confusion)†,
Stephen S. Gallagher, et. al. v. State Farm Mutual Automobile Insurance Company, e.t al. (Class Action)
Geico v. Google and Overture Services (Yahoo), Inc. (Trademark Infringement),
Gillette v. S. C. Johnson (Patent Infringement),
Heublein vs. Seagrams and Gallo (Liability),
Hewlett-Packard, Inc. v. Factory Mutual Insurance Company (Insurance Coverage)

Intel v. Advanced Micro Devices (Damages)*,

J. B. D. L. Corp. d/b/a, Beckett Apothecary v. Wyeth-Ayerst Laboratories, Inc. and American Home Products Corporation, (Class Action),

Jerry Jacobs, et. al. v. Osmose Inc., et. al. (Class Action)*,

Jay Kordich, et. al. v. Salton Maxim Housewares, Inc., et. al. (Trademark)†,

LendingTree, Inc. v. The Gator Corporation (Intellectual Property),

Lotus v. Borland (Damages)*,

Marvin Lumber and Cedar Company v. PPG Industries, Inc., et. al. (Survey Design),

MasterCard International, Inc. v. First National Bank of Omaha (Product Confusion)*,

Mayo Foundation v. Mayo Health Facilities (Product Confusion)†,

Mead Johnson Nutritionals v. unnamed party (False Advertising),

Merck & Co. (Lanham Act Advice)

In Re Microsoft Corporation Antitrust Litigation (Multi-district Litigation)*,

Pacific Bell Telephone Company in New Regulatory Framework Review of Customer Satisfaction before the California Public Utility Commission†,

Pfizer Consumer Healthcare (Lanham Act Advice)

Procter & Gamble v. Amway (Liability and Damages)†,

Putnum Fund Trustees, (Investment Fraud, advice on market research)

Ram Broadcasting, Inc. (Cellular Telephone Filings),

RealPlayer, Inc. v. Microsoft Corporation (Anti-trust)

Roberts et. al. v. Enterprise Rent-a-Car Company of Boston, Inc.,

Barbara Schwab, et. al. v. Philip Morris, USA (Class Action)*

SoundExchange, Inc. v. Sirius Satellite Radio and XM Satellite Radio (Rate setting, Copyright Royalty Board)

State of Colorado, et. al. v. Warner Chilcott Holdings Company III, Ltd., et. al. (Anti-trust)*

State of Florida and Plaintiff States Antitrust Litigation for Disposable Contact Lenses (Survey Analysis)†,

Stipic, et. al. v. Behr Process Corporation and Masco International (Class Action)*,

Straumann Company v. Lifecore Biomedical, Inc. (Product Confusion)*,

Sun Microsystems, Inc. v. Microsoft Corporation (Anti-trust),

Tivo, Inc. v. Echostar Communications Corporation, et. al*.

Tropicana Products, Inc. v. Vero Beach Groves, Inc. (Lanham Act)†,

Wal-Mart Stores, Inc (and other retailers) v. Mastercard International, Inc. (Liability and Damages, Anti-trust)*,

We Media, Inc. v. We: Women's Entertainment, LLC. (Product Confusion)*.

Marketing, Marketing Research, and Product Development Consulting

American Home Foods, Inc.; American Airlines; American Hospital Supply Corporation; Analog Devices, Inc; Andersen Consulting, Inc. (Accenture), Applied Marketing Science, Inc.; A.T.&T.; Avon; Barton-Aschmann

Associates; Baxter Cardiovascular Group, Booz Allen Hamilton, Inc., Cambridge Systematics, Inc.; Colgate-Palmolive; Costello Associates, Inc.; Curtis Manufacturing, Inc.; Economic's Laboratories, Inc.; Elrick and Lavidge, Inc.; Evanston Hospital; Evanston, Illinois and Schaumburg, Illinois (Transportation Planning); Fidelity Investments; French's Inc., G.D. Searle, Inc.; General Foods, Inc.; General Motors, Inc., Buick Division, Chevrolet Division, Marketing and Product Planning; Gillette; IBM, Inc.; Information Resources, Inc.; Johnson & Johnson; Kodak; Macromedia, Inc., Management Decision Systems, Inc.; M/A/R/C, Inc.; Merck, Inc., Navistar International, Inc.; Pacific Gas and Electric Company, Pepsi-Cola, Inc.; Polaroid; Procter & Gamble Company; Product Genesis, Inc.; RAM Broadcasting, Inc.; Regional Transportation Authority; Richardson-Vicks, Inc.; Southern Company Services, Inc.; Time-Life Books; Volunteers in Technical Assistance, and Wyeth-Ayerst Laboratories, Inc. Co-founder, principal, and board member, Applied Marketing Science, Inc., Advisory Board, Affinnova, Inc.

M.I.T. Committee Work

Committee on the Undergraduate Program, 2003 – present.

MIT Sloan Committee on Educational Technology, 2004 – present.

Center for Innovation in Product Development

Leader, Virtual Customer Initiative, 2000 - present

Research Director, 1997 – 2000

Center for Transportation Studies, (1981 - 1982).

Master of Science in Transportation Committee.

Committee to Investigate Sloan-Logo Research Notes (chair), 2001-2002.

Associated Faculty Committee to Review the Organizational Learning Center, 1995.

Dean Search Committee (Sloan School of Management), 1993

Building Committee for the E51 Expansion (1992), Ad Hoc

Executive Educational Programs Committee (1983 – 1985, 1998-1999)

Faculty Council (1999 – present)

International Center on Research for the Management of Technology

Co-Director, (1993 - 2000).

Joint Steering Committee (1990 - 1993).

Management Science Area, MIT Sloan School of Management

Area Head, (2005- present)

Chairman of Subcommittee on Peer Group Comparisons, (1981 - 1982)

Committee on Management Science Curriculum Redesign, (1982 - 1983)

Marketing Group Head (1986, 1988 - 2003)

Management of Technology Program Committee (2001- 2003)

Master's Program Committee, MIT Sloan School of Management, (1980 - 1987)

Chairman: Subcommittee On Placement, (1981 - 1982).

Core Curriculum Reassessment Committee (1991-1992)

Core Curriculum Implementation Committee (1992-1994)

Subcommittee on the Management Science Core, (1982 - 1983).

Operations Research Center

Admissions Committee, (1981 - 1982).

Associated Faculty (1980 – present)

Operations Research Committee (2001- present)

President's Committee (1984).

Personnel and Policy Committee, MIT Sloan School of Management (Executive Committee, 2005 – present)

Chair of ad hoc committees for reappointment, promotion, and tenure (1983 - present)

Member of ad hoc committees for reappointment, promotion, and tenure (1981 - present)

Symposium Director, Marketing Center, Sloan School of Management, M.I.T., (1981 - 1982).

Zannetos Dissertation Award Committee, Sloan School of Management, M.I.T., (1981-82, 1996-97, chair 1997-1998).

M.I.T. Subjects Taught (sometimes multiple sections)

15.810, Marketing Management (Core)	Spring 1990, 1991, 1992, 1993, 1994, 1995, 1997, 1998, 1999, 2001, 2004, 2005. 2006. Fall 1999, 2006. (Teaching awards listed on page 2 of vita.)
15.812, Marketing Management	Fall 1981, 1982, 1984, 1985, 1986. Spring 1981, 1984, 2006.
15.813, Marketing Management in Public Sector	Fall 1980.
15.814, Marketing Mgmt (Mgmt of Technology)	Fall 1988, 1993, 1999, 2001.
15.820, Advanced Marketing Management	Spring 1990
15.828, New Product Development	Spring 1981, 1982, 1989; Fall 1982, 1984; 1985.
15.838, Ph.D. Seminar (Various Topics)	Spring 1986, 1997, 2002, 2006.

15.839, Marketing and Statistics Workshop Spring 1982; Fall 1982, 1984.

15.TH4. Thesis Project on Competitive Strategy Spring 1985, 1986.

Summer Session, ILP, and External Executive

A.T.&T Course on New Product Development, 1986.

European Institute for Business Administration (INSEAD) European Marketing Programme, 1985.

Greater Boston Area Executive Program, 1982, 1983.

M.I.T. Civil Engineering, Demand Theory, 1980, 1981, and 1982.

M.I.T. ILP, Marketing Strategy and Models in the Information age, 1983.

M.I.T., Management of R&D, 1989, 1990, 1991, 1992, 1993, 1994. 1995, 1996, 1997, 1998, 1999.

M.I.T. Marketing Science Symposium, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988.

M.I.T./M.I.P. Executive Program, 1992.

M.I.T. New Product Development, 1997.

Pedagogical Developments.

In 1990 and 1991, Prof. John D. C. Little and I redesigned the core curriculum in Marketing Management and taught the course to the entire Master's class. As structured the course builds upon the strengths of M.I.T. (international, strong disciplinary base, functional integration, and information technology) and combines case studies, problem assignments, and lectures in an eighteen-session course.

In the 1991-1992 I was part of a committee of six faculty members that redesigned the core curriculum at the Sloan School. I supervised the voice-of-the-customer analyses of students and recruiters and encouraged the committee to design a program that these customers would find exciting. The new core was implemented in the 1993-1994 academic year. Student satisfaction increased significantly.

Teaching Notes

Note on Defensive Marketing Strategy (2005, for 15.810, Marketing Management)

Note on Product Development (2005, for 15.810, Marketing Management)

Note on the Voice of the Customer (2005, for 15.810, Marketing Management)

Note on Consumer Behavior (2005, for 15.810, Marketing Management)

Note on Life Cycle Diffusion Models (2005, for 15.810, Marketing Management)

Note on Engineering Product Design (2006, for 15.810, Marketing Management)

Note on Conjoint Analysis (2007, for 15.810, Marketing Management)

M.I.T. Thesis Supervision

(a) *Sloan School of Management, Master's Theses*

Hafiz Adamjee (joint with John Scaife), "The Face of the Customer: The Use of Multimedia in Quality Function Deployment," - (1993). This product was subsequently commercialized and was a finalist for the *New Media* Invision 1994 Multimedia award at COMDEX/Spring '94.

Ramay Akras, "Competitive Strategy in the Marketing of Small DDP Computers: an Analysis of Emerging Price and Product Position Patterns," - (1986).

Frederic Amerson, "Strategic Marketing Simulation: Improvements to the Enterprise Integrating Exercise," - (1989).

Andrew Anagnos (joint with Karen Van Kirk), "A Framework for Analyzing Quality in the News Media," - (1991)

Allen Aerni, "Measurement of Customer Satisfaction," - (1994).

Joel Berez, "An Investigation of Decision Hierarchies" - (1981).

Harel Beit-on, "Competitive Strategy for Small Business Jet Aircraft," - (1985).

Willy Biberstein (SDM Program), "Framework for Customer Interaction Throughout the Automotive Product Development Process," (February 2002).

Andre Borschberg (joint with Webb Elkins), "Defensive Marketing Strategy: Its Application to a financial Decision Support System" - Reader (1983).

Philippe Bosquet, "European Airline Deregulation: Defining Air France's Strategy for the 1990's," - Reader (1989)

Jill A. Christians, (joint with Cheryl M. Duckworth), "Expectations and Customer Satisfaction: A Market Research Study for Plimoth Plantation," Reader (1994).

Poh-Kian Chua (MOT Program), "R,D&E Metrics: Shaping the Outcomes of Your R,D&E Investment," – (1998).

Leslie K. Cooper, "The Structure of Recruiter Needs at the Sloan School of Management: A Quantitative Assessment," - (1992).

Teruyuki Daino (Sloan Fellows Program), "How a Leading Company Can Overcome a Competitive Challenge: A Case Study of Anheuser-Busch Company." – (1998).

Laura E. Donohue, "Software Product Development: An Application of the Integration of R&D and Marketing via Quality Function Deployment" - (1990)

Cheryl M. Duckworth (joint with Jill A. Christians), "Expectations and Customer Satisfaction: A Market Research Study for Plimoth Plantation," Reader (1994).

Webb Elkins (joint with Andre Borschberg), "Defensive Marketing Strategy: Its Application to a Financial Decision Support System" - Reader (1983).

Rasheed El-Moslimany (LFM Program), "Getting Value from the Value Chain: ComfortChoice," Co-Advisor. (June 2002)

Julio Faura (MOT Program), "Contribution to Web-based Conjoint Analysis for Market Research," (2000).

Richard Feldman, "Decision Support Systems for Forecasting Communications in the Home," - Reader (1985).

Anders T. Fornander, "The Continuing Operating System Battle in the Personal Computer Industry," - Reader (1994).

Carl Frank (MOT Program), "Metrics Thermostat for Strategic Priorities in Military System Acquisition Projects," (2000).

Mihaela Fulga, "Competitive Pricing and Positioning Strategies in the Dating Service Market," - (1986).

Steven P. Gaskin, "Defender: Test and Application of a Defensive Marketing Model" - (1986). 1st Place, Brooks Award.

Peter N. Goettler, "A Pre-market Forecasting Model of New Consumer Durables: Development and Application," - Reader (1986).

Patti N. Goldberger, "Competitive Strategy in the Market for Running Shoes," - (1985).

Akhil Gupta, "The Personal Computer Industry: Economic and Market Influences on Product Positioning Strategies," - (1986).

Michael Halloran (joint with Marc Silver), "Defensive Marketing Strategy: Empirical Applications" - (1983).

Carla Heaton, "Competitive Strategy in the Facsimile Market," - (1985).

Judith Hee, "Determining Manufacturer's Coupon Strategies" - Reader (1981).

Jonathan E. Higginson, "Understanding Dependencies in Research and Development at the Charles Stark Draper Laboratory." - (1997).

Scott D. Hill, "Correlation of Core Competencies with Market-Driven or Self-Guided Research," - (1995).

Dan Isaacs, "Competitive Pricing and Positioning Strategies in the Imported Beer Marketing," - (1986).

Francois Jacques, "Marketing Strategies in Innovative Industries: The Case of Package/Document Delivery Services," - Co-Advisor (1985).

Lawrence Kahn, "Competitive Positioning: A Study of Recruiter's and Employer's Perceptions of the Sloan School of Management" - (1982). Honorable mention Brooke's Thesis Prize.

D. Darcy Kay, "Competitive Strategy for Anti-arthritic Drugs" - (1985).

Young Joo Kim (MOT Program), "R&D Management Applications of The Dynamic Metrics Framework" – (1998)

Sidney A. Kriger, "The Effect of Quality Function Deployment on Communications of the New Product Development Teams," - (1989)

Yasuke Kume, "New Marketing Strategy of Telecommunications in Japan" - Reader (1981).

Elvind Lange, "Measuring Market Response to Marketing Mix Variables Using Dynamic Modeling and Its Implications for Brand Strategy" - Reader (1981).

Stephen P. Langhans, "Defensive Marketing Strategy: A Consumer Semi-Durable Case Example" - (1983).

In-Kyu Lee, "Evaluating System for the Upstream Center of R&D for being Market-Oriented in a Consumer Electronics Company," - (1995).

Michael Leslie (joint with Joel Wachtler), "A Methodology for Making International Marketing Mix Decisions," - Reader (1985).

Kit Mee Lim, "Competitive Strategy among Companies Offering Credit Cards," - Reader (1985).

James A. Lutz, "Competitive Marketing Strategy in the CAD Marketplace," - (1985).

Larry D. Lyons, "Forecasting the Impact of Competitive Entries on Sales of a New Consumer Durable" - Reader (1984).

Arpita Majundar (SDM Program), "Strategic Metrics for Product Development at Ford Motor Company," - (2000).

Catherine E. Manion, "A Survey of Customer Satisfaction Incentive Systems for Salespersons," - (1993).

Maureen E. Matamoros, "Information Overload," – Reader (1986).

Meghan McArdle (LFM Program), "Internet-based Rapid Customer Feedback for Design Feature Tradeoff Analysis," – co-Advisor (2000)

Fernando Motta, "Competitive Strategy Among Panamanian Banks," - (1985).

Neil Novich, "Price and Promotion Analysis Using Scanner Data" - Reader (1981).

Kenji Nozaki, "Marketing and Technology Strategy for the Japanese Architectural Design Company," - (1989).

Seiji Nozawa, "Voice of the Customer Analysis in the Japanese Beer Market." - (1997).

Minho Park (MOT Program), "R&D Matrix at LG Electronics." - (1997)

Stephen Pearse, "Production and Sales Forecasting: A Case Study and Analysis" - Reader (1982).

Ning P. Peng, "An Exploration of the Impact and Success of Customer Satisfaction Programs," - (1994).

Homer Pien (MOT Program), "Competitive Advantage through Successful Management of R&D." - (1997)

Susan B. Poulin, "Defensive Strategy in the Automatic Test Equipment Industry" (1984).

Jill W. Roberts, "MBA Recruiters' Needs: Voice of the Customer Analysis," - (1992).

Lisa Gayle Ross, "A Voice of the Customer Analysis of M.B.A. Schools: The Student Segment," - (1992). Lisa was a runner-up for the George Hay Brown Marketing Scholar of the Year in 1992.

John Scaife (joint with Hafiz Adamjee), "The Face of the Customer: The Use of Multimedia in Quality Function Deployment," - (1993). See award listed under Adamjee.

Paul E. Schoidtz, "Advertising, Price, and Positioning Equilibria," - (1986).

Hongmei Shang, "A Simulation Analysis of Optimal Task Assignment for Growing Managers from R&D Labs," – (February 2000).

Rosemarie Shield, "Competitive Pricing and Positioning Strategies in the Chromatographic Instruments Market," - , (1986).

Jon Silver (joint with John C. Thompson, Jr.), "Beta-binomial Analysis of Customer Needs -- Channels for Personal Computers," - (1991). 1st Prize, Brooks Award.

Marc Silver (joint with Michael Halloran), "Defensive Marketing Strategy: Empirical Applications" - (1983).

Lisa Silverman, "An Application of New Product Growth Modeling to Automobile Introductions" - (1982).

Sheryl Sligh, "An Assessment of the Analog Modem Market," - (1991).

Jamie Smith, "Industrial Buying Process of Pension Funds for Real Estate," - (1982).

Yoshihito Takahashi (MOT), "Analysis of Strategy in an Ethical Drug Industry," – Reader (2000).

Genevieve Tchang, "A Methodology for Planning and Evaluating External Relations at Business Schools" - Reader (1982).

John C. Thompson, Jr. (joint with Jon Silver), "Beta-binomial Analysis of Customer Needs -- Channels for Personal Computers," - (1991). 1st Place, Brooks Award.

V. Mullin Traynor, "The Dissemination and Adoption of New Technology: Control Data's Computer-Based Training System, Plato, and the Electric Utilities" - (1982).

Karen Van Kirk (joint with Andrew Anagnos), "A Framework for Analyzing Quality in the News Media," - (1991)

Joel Wachtler (joint with Michael Leslie), "A Methodology for Making International Marketing Mix Decisions," - Reader (1985).

Tamao Watanabe, "Customer Analysis of the U.S. Cardiovascular Drug Market: Focusing on Physician's Drug Choice" - (1991)

Stephen L. Weise, "Expert Decision Support Systems for Marketing Management," – Reader (1986).

Nancy Werner, "Competitive Price and Positioning in the Integrated Office Automation Systems Market" - (1986).

Julie Wherry, "Pre-Test Marketing: Its Current State in the Consumer Goods Industry and Its Effect on Determining a Networked Good." - (2006).

Ali Yalcin, "The Potentials and Limitations of Customer Satisfaction Indices in Captive Customer-Supplier Environments," - (1995)

Sandra Yie, "The Core Curriculum at Sloan: Establishing a Hierarchy of Needs," - (1992).

Judy Young, "Responsive Marketing Strategy at AT&T" - (1982).

(b) *Aeronautics S.M. Theses*

Keith Russell (LSI), "Reengineering Metrics Systems for Aircraft Sustainment Teams: A Metrics Thermostat for Use in Strategic Priority Management," (February 2001).

(c) *Electrical Engineering, S.B. and M.Eng. Theses*

Chan, Christine W. Y. (M. Eng), "Measuring Non-Monetary Incentives Using Conjoint Analysis," Co-Advisor (1999).

Emily Hui (M.Eng.), "Application of Polyhedral Conjoint Analysis to the Design of Sloan's Executive Education Programs." June 2003.

Brian T. Miller (S. B.), "A Verification of Price Equilibria Based on Non-Zero Conjectural Variation," (1986).

(d) *Mechanical Engineering, Master's Theses*

Burt D. LaFountain, "An Empirical Exploration of Metrics for Product Development Teams" – (1999)

Tina Savage, "The Virtual Customer: A Distributed Methodology for Linking Product Design and Customer Preferences." Co-Advisor (1998).

(e) *Operations Research Center, Master's Theses*

Jeffrey Moffit (ORC), " Applying the Metrics Thermostat to Naval Acquisitions for Improving the Total Ownership Cost – Effectiveness of New Systems," (2001)

Olivier Toubia (ORC), "Interior-point Methods Applied to Internet Conjoint Analysis," (February 2001), Co-Advisor.

(f) *Urban Studies, Master's Theses*

Marijoan Bull, "Affirmative Fair Housing Marketing" - Committee Member (1982).

Barry Cosgrove, "Marketing Analysis for the Brockton Area Transportation Authority" – Committee Member (1981).

(g) *Sloan School of Management, Ph.D. Theses*

Makoto Abe, "A Marketing Mix Model Developed from Single Source Data: A Semiparametric Approach." Committee member (August 1991). Abe is on the faculty at the University of Tokyo.

Peter Fader, "Effective Strategies in Oligopolies," Chairman (February 1987). Sloan School of Management, Zannetos Prize, 1st Place. Fader is on the faculty at the University of Pennsylvania.

Fred Feinberg, "Pulsing Policies for Aggregate Advertising Models" Committee Member (August 1988). Feinberg is on the faculty of the University of Michigan.

Dave Godes, " Friend or Foe?: The Relationship Between Learning and Incentives and two additional essays in marketing," (June 2000), Committee Member. Primary advisor on listed essay. Zannetos Prize, 1st Place. Godes is on the faculty of the Harvard Business School.

Abbie Griffin, "Functionally Integrated New Product Development: Improving the Product Development Process Through Linking Marketing and Technology Development," Chairman. (June 1989). Griffin is on the faculty at the University of Illinois and was editor of *Journal of Product Innovation Management* from 1997-2003 Frank Bass Dissertation Award (INFORMS).

Gurumurthy Kalyanaram, "Empirical Modeling of the Dynamics of the Order of Entry Effect on Market Share, Trial Penetration and Repeat Purchases for Frequently Purchased Consumer Goods," Committee Member (March 1989). G. K. is on the faculty at the University of Texas, Dallas.

Eriko Kitazawa, "Customer Satisfaction at Japanese Utility Franchises," Committee Member (1996).

John H. Roberts, "A Multiattributed Utility Diffusion Model: Theory and Application to the Prelaunch Forecasting of Autos". Committee Member (February 1984). Roberts is on the faculty at the University of New South Wales, Australia.

Duncan I. Simester, "Analytical Essays on Marketing," Committee Member, (June 1993). Sloan School of Management, Zannetos Prize, Honorable Mention. Simester is on the faculty of M.I.T.

Olivier Toubia, "New Approaches to Idea Generation and Consumer Input in the Product Development Process," (June 2004). Toubia is on the faculty of Columbia University. Frank M. Bass Dissertation Award (INFORMS), 2005, John Howard Dissertation Award (AMS), 2005.

Miguel Villas-Boas, "On Promotions and Advertising Policies: A Strategic Approach." Committee member (February 1991). Villas-Boas is on the faculty at the University of California, Berkeley.

Bruce Weinberg, "An Information-Acceleration-Based Methodology for Developing Preproduction Forecasts for Durable Goods: Design, Development, and Initial Validation." Committee Member. (August 1992). Weinberg was on the faculty at Boston University.

Florian Zettelmeyer, "Three Essays on Strategic and Organizational Uses of Information in Marketing." Committee Member. Zettelmeyer is on the faculty of the University of California at Berkeley.

(h) *Civil Engineering, Ph.D. Thesis*

Karla Karash (Ph.D.), "An Application of the Lens Model in Measuring Retail Attractiveness and the Effects of Transportation Programs" - Committee Member (August 1983). Karash was at the MBTA.

(i) *Mechanical Engineering, Ph.D. Thesis*

Javier Gonzalez-Zugasti (Mechanical Engineering, Ph.D.), "Models for Product Family Design and Selection," (June 2000), Committee Member.

(j) *Operations Research Center, Ph.D. Thesis*

Yee, Michael (Operations Research, Ph.D.), "Inferring Non-Compensatory Choice Heuristics," (June 2006), Co-Advisor. Yee is at MIT's Lincoln Laboratories.

Northwestern University Ph.D. Thesis Supervision (1975 - 1980 Academic Years)

Steven M. Shugan, "A Descriptive Stochastic Preference Theory and Dynamic Optimization: Applications Toward Predicting Consumer Choice' Chairman (September 1977). Shugan is on the faculty at the University of Florida and current editor of *Marketing Science*.

Patricia Simmie, "Product Realization: Theory, Models, and Application" - Chairman (June 1979), American Marketing Association Dissertation Prize, Honorable Mention. Simmie was at York University.

Ken J. Wisniewski, "A Semi-Markov Theory of Consumer Response: New Theoretical Properties, Simulation Testing, and Empirical Application" Chairman (June 1981). American Marketing Association Dissertation Prize, First Place. Wisniewski was at the University of Chicago.

B

Exhibit B

Testimony in the Last Four Years

Hewlett-Packard Company v. Factory Mutual Insurance Company, Case No. 04-CV-02791 (TPG) : (ECFCASE), United States District Court, Southern District Of New York, Deposition testimony, June 28. 2007.

The Procter & Gamble Company, et al. vs. Randy L. Haugen, et al., Case Number 1:95-CV-0094W Judge David K. Winder, United States District Court for the Utah District, Salt Lake City, Utah, trial testimony. March 9 and 12, 2007.

State of Colorado, et al. v. Warner Chilcott Holdings Company III, LTD., et al., Civil Action No: 1:05CV02182 (CKK), United States District Court for the District of Columbia, Deposition testimony, January 19, 2007.

Barbara Schwab v. Philip Morris USA, Inc., Case No. CV-04-1945 (JBW) (SMG), United States District Court for the Eastern District of New York, Deposition testimony, March 23, March 24, May 18, and August 21, 2006.

TiVo Inc. v. EchoStar Communications Corporation, Civil Action No. 2-04cv-01 DF, United States District Court for the Eastern District of Texas, Deposition testimony, August 9, 2005.

MasterCard International, Inc. v. First National Bank of Omaha (FNBO), Civil Action No. 02 Civ 3691 (DLC) and First National Bank of Omaha (FNBO) v. MasterCard International, Inc., Civil Action No. 03 Civ 707 (DLC), United States District Court for the Southern District of New York, Deposition testimony, September 8, 2003.

In Re Microsoft Corporation Antitrust Litigation, MDL Docket No. 1332, United States District Court for the District of Maryland, Deposition testimony, January 29, 2003.

C

Exhibit C

Materials Reviewed

Deposition Of Yoram Wind, Ph.D., Friday, April 27, 2007

Hearing Testimony of Yoram (Jerry) Wind, June 14 and June 18, 2007

Quirk's Marketing Research Review, July/August 2006

SEC 10-K statements by XM and Sirius

Sirius Satellite Radio Study - Wave 2 , June 2006

Testimony of Janusz Ordover (RESTRICTED) ("Ordover Report")

Testimony of Michael Pelcovits, original and amended ("Pelcovits Report")

Testimony of Yoram (Jerry) Wind, original and amended ("Wind Report")

XM Satellite Radio Custom Study Analysis, Fall 2006

XM Satellite Radio (A & B) Harvard Business Review Case 9-504-009

D

Exhibit D. Potential Satellite Radio Features from Exploratory Research

Lots of unexplored options
Know that there are many channels and programs you can still check out and experience
Know that programming you want is available even if you don't listen to it

The music you want, when you want to listen to it
Confidence that you will always be able to hear music that you are in the mood for
At any time of day or night, you have the option to choose among types of programs such as music, sports, talk radio, news
Able to select a song you like and know when it is going to come on to one of the satellite stations

Easy Navigation
Easy to move between stations without having to remember the station number
Much less flipping through channels or hunting around the dial to find what you want to listen to

Programming
Shows with interesting and knowledgeable hosts
Shows dedicated to specific topics of interest to you
Talk radio that has interesting human interest stories

Learn more about the music you like
Makes it possible for you to identify the artist and song name

The categorization of music makes it easy for me to discover new types of music I did not know a lot about
The concentration of music and number of stations within a genre makes it easy to learn about specific types of music quickly
Helps you to identify music to add to your music collection
Able to listen to programs that are no longer played on the AM or FM stations

News
Able to get breaking news exactly when you want it (do not have to stop what you are doing to read an article on the internet)

Reception
Better sound quality than FM or AM radio
CD quality sound
Do not lose reception when traveling out of a local territory
Good clear reception even in the city (urban area)
No static

Traveling
Can have the same stations available to you when you are traveling long distances
Do not have to carry CD's , books on tape, etc. when traveling

Weather and Traffic Reports
Can get a weather report whenever you want to
Able to get weather reports about other cities/locations
Weather reports are continuously updated, no waiting

Traffic

Can get a traffic report whenever you want to
Able to get traffic reports about other cities/locations
Traffic reports are continuously updated, no waiting

Variety

Able to listen to a variety of different genres of music
When listening to a certain type of music, you have options to listen to both new songs or older songs
There is wide variety and very little redundancy in songs played on a station
Able to hear the most up to date music
Can listen to more than just the "hits"
Have access to more stations within a genre of music (deeper cuts)
Programs are nostalgic - can hear songs and shows you remember from the past

Creative Programming

More knowledgeable DJ's, with better line up of songs, who keep talk to a minimum
Able to get the perspective of celebrity hosts and artists
DJ's are informative about the music

Happier family

There are station options for everyone in my family

Programming is always available

Do not have to have programs interrupted by commercials
The DJ's do not chatter and take over the show

On-the-go

Able to listen to the same stations in the car, home, on the internet
Can listen to satellite radio when I am on the go

Uncensored programming - no language censorship

Sports Coverage

Get all, not just some of the games
Able to listen to interviews with players, get a more in-depth view of the sport

Informs me about what music, shows, and events are coming up on other channels

E

Exhibit E- Subscribers CAI Survey

RESP #: _____

QUESTIONNAIRE – Satellite Radio –Subscribers --

INTERVIEWER_____LOCATION_____DATE_____

(READ VERBATIM :)
Thank you for agreeing to participate in our study. We would like to talk to you today about satellite radio. All of your answers will remain strictly confidential. No one will attempt to sell you anything as a result of participating in this study. We are only interested in your opinions. If you don't know an answer or don't have an answer to a particular question, please don't guess. Just tell me you don't know and we will go on to the next question. If, at anytime, you do not understand a question or do not understand what is being asked of you, just say so and I will repeat the question.

INTERVIEWER: HAVE THE RESPONDENT SIT IN FRONT OF COMPUTER AND ANSWER QUESTIONS TO THE REMAINDER OF THE SURVEY HIM/HERSELF. BE SURE TO SIT WITH THE RESPONDENT WHILE HE/SHE IS ANSWERING IN CASE HE/SHE HAS ANY QUESTIONS.

IF THE RESPONDENT PREFERS, HAVE HIM/HER READ THE QUESTIONS ON THE SCREEN, BUT YOU WILL ENTER THE ANSWERS.

RECORD:

Interviewer entering answers	**1**
Respondent entering answers	**2**

Q1. How long have you been a Satellite Radio subscriber? **(Circle one only)**

Less than 1 year	1
1 to 2 years	2
3 to 4 years	3
More than 5 years	4
DK/Unsure	5

Q2. How many satellite radio receivers do you currently own? **(Circle one only)**

One	1
Two	2
Three	3
Four	4
5 or more	5
DK/Unsure	6

Q2a. What type or types of satellite radio receiver(s) do you own? **(Circle all that apply)**
[RANDOMIZE LIST EXCEPT OTHER/DK]

A home-use receiver	1
An in-dash car receiver	2
A plug & play unit that can be used with home audio equipment or in the car	3
A portable unit that can be used anywhere	4
Other (Specify:_____)	5
DK/Unsure	6

Q2b. Where do you listen to satellite radio? **(Circle all that apply)**
[RANDOMIZE LIST EXCEPT OTHER/DK]

At home	1
At work	2
In the car	3
On the Internet	4
Outdoors	5
Other (Specify_____)	6
DK/Unsure	7

[RANDOMIZE ORDER OF WILLINGNESS TO PAY SECTION AND IMPORTANCE SECTION]

WILLINGNESS TO PAY SECTION (Q3 - Q7g)

[SKIP TO Q7B IF S4B=2]
Q3a. Which of the following best describes how you pay for your satellite radio subscription(s)?

[TIME UNITS FOR Q6A, Q7]

I pay monthly	1	**SKIP TO Q4**	monthly
I pay up front for one year's subscription	2		annually
I pay up front, for more than one year's subscription	3	**SKIP TO Q3C**	for the multi-year subscription
I paid for a lifetime subscription	4	**SKIP TO Q4**	for a lifetime subscription
Other	5	**ASK Q3A OTHER**	
DK/Unsure	6	**SKIP TO Q4**	

Q3a other. Please indicate how often you pay for your subscription? _____ [SKIP TO Q4]

[ASK IF S4B=2]
Q3b. How likely are you to continue your subscription to satellite radio when your free trial subscription is over? [SKIP TO Q6b]

	Very Likely	*Somewhat Likely*	*Neither Likely or Unlikely,*	*Somewhat Unlikely*	*Very Unlikely*
Likelihood to continue your subscription to satellite radio when your free trial subscription is over					

Q3c. How many years do you / did you pay for at a time? _____ [OPEN END] [ALLOW FOR DK/UNSURE]

Q4. How much was your most recent payment for all of your satellite radio subscription(s)? [OPEN-END]
[ALLOW FOR DK/UNSURE]

Q5. How much did you pay in total to buy all the different satellite radio receiver(s) you own? If you did not purchase any, enter zero. ? [OPEN-END]
[ALLOW FOR DK/UNSURE]

[ASK IF ANSWERED 1 – 4 ON Q3]

Q6a. What is the most you would be willing to pay for your [INSERT TIME INTERVAL FROM Q7] satellite radio subscription(s)? In other words, what price would be so high that you would cancel your subscription?

[ALLOW FOR DK/UNSURE] [ALLOW FOR 5 DIGITS]

[ASK IF ANSWERED 5 – 7 ON Q3]

Q6b. The single subscription price per month for satellite radio is $12.95. You can save money if you pay up front for a year or multiple years.
What is the most you would be willing to pay per month for a satellite radio subscription? [OPEN-END] [ALLOW FOR DK/UNSURE] [ALLOW FOR 5 DIGITS]

[RANDOMIZE THE ORDER IN WHICH CONDITIONS BUILD, INCLUDING NO MUSIC]
[RECORD ORDER OF CONDITIONS]
[Q7a-Q7g SHOULD BE SHOWN ON SEPARATE SCREENS]
[HAVE MOST RECENTLY ADDED CONDITION APPEAR IN BOLD]

Next, we will ask you a series of questions about how much you would be willing to pay for satellite radio under a number of different conditions. These conditions will build upon each other, with each question including all the conditions of the previous question(s). When giving your answers, please think only of satellite radio that you listen to over the radio. Do not think of or consider any satellite radio programming that you listen to over the Internet.

Q7a: ***How much would you pay*** [INSERT TIME INTERVAL FROM Q3, if 5-7 at Q3, insert "Monthly"] ***for satellite radio if...*** *You couldn't get reception nationally, just locally* [OPEN END: DOLLAR AMOUNT] Please assume that all other aspects of satellite radio would remain the same
Q7b: ***Now, How much would you pay*** [INSERT TIME INTERVAL FROM Q3, if 5-7 at Q3, insert "Monthly"] ***for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to* [OPEN END: DOLLAR AMOUNT] Please assume that all other aspects of satellite radio would remain the same
Q7c: ***Now, How much would you pay*** [INSERT TIME INTERVAL FROM Q3, if 5-7 at Q3, insert "Monthly"] ***for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio* [OPEN END: DOLLAR AMOUNT] Please assume that all other aspects of satellite radio would remain the same

Q7d: ***Now, How much would you pay*** **[INSERT TIME INTERVAL FROM Q3, if 5-7 at Q3, insert "Monthly"]** ***for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio AND* *There was no music available, not even your favorite channels* **[OPEN END: DOLLAR AMOUNT]** Please assume that all other aspects of satellite radio would remain the same
Q7e: ***Now, How much would you pay*** **[INSERT TIME INTERVAL FROM Q3, if 5-7 at Q3, insert "Monthly"]** ***for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio AND* *There was no music available, not even your favorite channels AND* *There were no talk shows available, not even your favorite hosts* **[OPEN END: DOLLAR AMOUNT]** Please assume that all other aspects of satellite radio would remain the same
Q7f: ***Now, How much would you pay*** **[INSERT TIME INTERVAL FROM Q3, if 5-7 at Q3, insert "Monthly"]** ***for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio AND* *There was no music available, not even your favorite channels AND* *There were no talk shows available, not even your favorite hosts AND* *There was no sports coverage available, not even your favorite teams* **[OPEN END: DOLLAR AMOUNT]** Please assume that all other aspects of satellite radio would remain the same
Q7g: ***Now, How much would you pay*** **[INSERT TIME INTERVAL FROM Q3, if 5-7 at Q3, insert "Monthly"]** ***for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio AND* *There was no music available, not even your favorite channels AND* *There were no talk shows available, not even your favorite hosts AND* *There was no sports coverage available, not even your favorite teams AND* *There were no news, weather or traffic reports available* **[OPEN END: DOLLAR AMOUNT]** Please assume that all other aspects of satellite radio would remain the same

IMPORTANCE SECTION (Q8)

[Interviewer read instructions to respondent]

[Intro and instructions should appear on a separate page in order to decrease amount of scrolling involved with the amount of statements. On the page with the statements need to allow respondents the ability to reference the instructions by clicking on an "instructions" button.]

Q8. Importance of Satellite Radio Attributes

Below is a list of things that people like you have said when asked why they continue to subscribe to satellite radio. As you read through this list, we would like you to rate each statement according to how important it is *to you in your decision to continue subscribing to satellite radio*

Here's how we'd like you to rate the statements:

1) First, read through the list and pick the one statement that is *most important* to you – this is the need that you feel is most critical. Give 100 points to this statement by typing the number "100" in the box next to it.

2) Second, pick the statement that is *least important* to you and give it a score between "0" and "100" based on how important it is *relative to your most important need*. For example, if it is half as important, type the number "50" next to the need -- if the need is of absolutely no importance, give it "0" points.

3) Now, rate each of the other statements relative to the ones you chose as most and least important. When you are finished, each statement should have a number between the lowest number you chose and 100.
   - *Please use as wide a range of numbers as you wish between zero (or the lowest score you assign) and 100.*
   - *Ties are okay for any needs, including the lowest and highest.*
   - *If you don't know, are unsure, if you disagree or you are unaware just check the box at the far right of the statement.*

4) When giving your answers, please think only of satellite radio that you listen to over the radio. Do not think of or consider any satellite radio programming that you listen to over the Internet.

	SCORE	**Don't Know /Unsure/ Disagree/ Unaware**
There are still many channels waiting to be explored		
I can always find what I want to listen to, when I want to listen to it		
It is easy to find what I want to listen to without a lot of hunting around		
There are talk and entertainment shows with interesting and knowledgeable hosts		
There are shows dedicated to specific topics that interest me		
The artist and song name are displayed on my screen so I know what is playing		
The organization of channels makes it easy for me to explore a specific genre		
I can listen to a lot of programs and content not available on either AM or FM radio		
The depth of the music programming helps me to find new songs to add to my collection		
Provides the latest breaking news – no need to stop what I'm doing and check the Internet		
Provides excellent sound quality (better than either AM or FM radio)		
Provides consistently clear reception no matter where I go, even in the city		
I can listen to my stations wherever I go, even when traveling long distances		
I can get weather and traffic reports whenever I want to, without waiting		
I can get weather and traffic from all around the country		
I don't hear the same things over and over		
I can hear programs and music that make me feel nostalgic for what I used listen to when I was younger		
There are programs where interesting and knowledgeable DJ's can create and control the content		
The DJ's don't talk too much		
I can listen to music channels without any commercials		

I can listen to music		
There are stations available for everyone in my family		
I can listen to the same stations in the car, at home, or on the Internet		
I can listen to uncensored programs		
I can listen to all, not just some of my favorite sport's games		
Offers more in-depth sports programming than either AM or FM radio, such as ESPN		
Informs me about what music, shows, and events are coming up on other channels		
I can listen to music from the 40's, 50's and 60's		
I can listen to music from the 70's, 80's, 90's, and today		

Error message should read: **"All answers must be whole numbers between 0 and 100 or Don't Know / Unsure / Disagree / Unaware."**

Those are all of the questions we have for you today. Thank you very much for participating in this study and have a great day.

Exhibit E-1.2. Considering Subscribers CAI Survey

RESP #: _____

QUESTIONNAIRE – Satellite Radio – Considering Subscribing --

INTERVIEWER_____LOCATION_____DATE_____

(READ VERBATIM :)
Thank you for agreeing to participate in our study. We would like to talk to you today about satellite radio. All of your answers will remain strictly confidential. No one will attempt to sell you anything as a result of participating in this study. We are only interested in your opinions. If you don't know an answer or don't have an answer to a particular question, please don't guess. Just tell me you don't know and we will go on to the next question. If, at anytime, you do not understand a question or do not understand what is being asked of you, just say so and I will repeat the question.

INTERVIEWER: HAVE THE RESPONDENT SIT IN FRONT OF COMPUTER AND ANSWER QUESTIONS TO THE REMAINDER OF THE SURVEY HIM/HERSELF. BE SURE TO SIT WITH THE RESPONDENT WHILE HE/SHE IS ANSWERING IN CASE HE/SHE HAS ANY QUESTIONS.

IF THE RESPONDENT PREFERS, HAVE HIM/HER READ THE QUESTIONS ON THE SCREEN, BUT YOU WILL ENTER THE ANSWERS.

RECORD:

Interviewer entering answers	**1**
Respondent entering answers	**2**

Q1. We will be asking you some questions today about satellite radio. Now please read this information about satellite radio from the **[FILL 'XM WEB SITE', 'SIRIUS WEB SITE' OR 'XM AND SIRIUS WEB SITES' FROM S6B].**

Satellite radio is more than the latest technology. It's an extraordinary new way to experience your favorite music, sports, news, talk, comedy- and it goes anywhere you go. No longer are your choices limited to where you live or travel. Satellite radio gives you the freedom to hear what you want, when you want it. Imagine dozens & dozens of commercial-free music channels playing new & old favorites. Heart-pounding coverage of your favorite pro & college teams. National news broadcasters you trust. Talk shows you rely on to inform & provoke. Even traffic & weather. That's satellite radio.

You can listen to satellite radio in your car, in your home, on the Internet, or wherever you go.
[IF S6B = 1 THEN SHOW INFORMATION ABOUT XM ONLY]
[IF S6B = 2 THEN SHOW INFORMATION ABOUT SIRIUS ONLY]
[IF S6B = 3 OR 4 THEN RANDOMIZE ORDER OF PRESENTATION OF XM AND SIRIUS. RECORD ORDER.]

XM is…

- The greatest variety of entertainment in music, sports, talk, comedy, news and entertainment
- Superior digital sound quality coast-to-coast
- Incredibly easy to use wherever you are --- at home, at work, in the car or on the go
- The most music on satellite radio
- Exciting sports coverage and detailed play-by-play reporting on your favorite teams
- Affordable at only $12.95 a month, that's less than 50¢ a day

About Sirius:
No one can match SIRIUS programming. We've got legendary DJs playing your favorite songs on 69 channels of 100% commercial-free music, plus exclusive live performances and artist interviews. Love sports? SIRIUS is home to NASCAR, the entire NFL and over 40 NBA and NHL games a week, college sports and more. Talk about star power: SIRIUS proudly presents original programming from Martha Stewart, Bill Bradley, Eminem, Tony Hawk, Jim Breuer, Jimmy Buffet, Tony Stewart and Howard Stern. Plus the biggest names in news and talk, great comedy, traffic and weather you need more and more, on over 130 channels of the best of all radio.

[RANDOMIZE ORDER OF WILLINGNESS TO PAY SECTION AND IMPORTANCE SECTION]

WILLINGNESS TO PAY SECTION (Q2 - Q4g)

Q2. The single subscription price per month for satellite radio is $12.95. You can save money if you pay up front for a year or multiple years.

Q3. Thinking about what we told you and everything else you know, what is the most you would be willing to pay per month for a satellite radio subscription? In other words, what price would be so high that you would no longer consider subscribing? [OPEN-END] [ALLOW FOR DK/UNSURE] [ALLOW FOR 5 DIGITS]

[RANDOMIZE THE ORDER IN WHICH CONDITIONS BUILD, INCLUDING NO MUSIC]
[RECORD ORDER OF CONDITIONS]
[Q4a-Q4g SHOULD BE SHOWN ON SEPARATE SCREENS]
[HAVE MOST RECENTLY ADDED CONDITION APPEAR IN BOLD]

INTRODUCTION: **Next, we will ask you a series of questions about how much you would be willing to pay for satellite radio under a number of different conditions. These conditions will build upon each other, with each question including all the conditions of the previous question(s).**

Q4a: ***How much would you pay for satellite radio if...*** *You couldn't get reception nationally, just locally* [OPEN END: DOLLAR AMOUNT] If you would cancel your subscription please either enter 0 or check here
Q4b: ***Now, How much would you pay for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to* [OPEN END: DOLLAR AMOUNT] If you would cancel your subscription please either enter 0 in the box above or check here
Q4c: ***Now, How much would you pay for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio* [OPEN END: DOLLAR AMOUNT] If you would cancel your subscription please either enter 0 in the box above or check here

Q4d: ***Now, How much would you pay for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio AND* *There was no music available, not even your favorite channels* [OPEN END: DOLLAR AMOUNT] If you would cancel your subscription please either enter 0 in the box above or check here
Q4e: ***Now, How much would you pay for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio AND* *There was no music available, not even your favorite channels AND* *There were no talk shows available, not even your favorite hosts* [OPEN END: DOLLAR AMOUNT] If you would cancel your subscription please either enter 0 in the box above or check here
Q4f: ***Now, How much would you pay for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio AND* *There was no music available, not even your favorite channels AND* *There were no talk shows available, not even your favorite hosts AND* *There was no sports coverage available, not even your favorite teams* [OPEN END: DOLLAR AMOUNT] If you would cancel your subscription please either enter 0 in the box above or check here
Q4g: ***Now, How much would you pay for satellite radio if...*** *You couldn't get reception nationally, just locally AND* *Sound quality was only equal to that of the FM radio you can listen to AND* *There were as many commercials as on AM or FM Radio AND* *There was no music available, not even your favorite channels AND* *There were no talk shows available, not even your favorite hosts AND* *There was no sports coverage available, not even your favorite teams* *There were no news, weather or traffic reports available* [OPEN END: DOLLAR AMOUNT] If you would cancel your subscription please either enter 0 in the box above or check here

IMPORTANCE SECTION (Q5)

Q5. Importance

[Interviewer read instructions to respondent]

[Intro and instructions should appear on a separate page in order to decrease amount of scrolling involved with the amount of statements. On the page with the statements need to allow respondents the ability to reference the instructions by clicking on an "instructions" button.]

Below is a list of things that people like you have said when asked why they would consider subscribing to satellite radio. As you read through this list, we would like you to rate each statement according to how important it is *to you in your decision to subscribe to satellite radio.*
Here's how we'd like you to rate the statements:

1) First, read through the list and pick the one statement that is *most important* to you – this is the need that you feel is most critical. Give 100 points to this statement by typing the number "100" in the box next to it.

2) Second, pick the statement that is *least important* to you and give it a score between "0" and "100" based on how important it is *relative to your most important need*. For example, if it is half as important, type the number "50" next to the need -- if the need is of absolutely no importance, give it "0" points.

3) Now, rate each of the other statements relative to the ones you chose as most and least important. When you are finished, each statement should have a number between the lowest number you chose and 100.
   - *Please use as wide a range of numbers as you wish between zero (or the lowest score you assign) and 100.*
   - *Ties are okay for any needs, including the lowest and highest.*
   - *If you don't know, are unsure, if you disagree or you are unaware just check the box at the far right of the statement.*

	SCORE	**Don't Know / Unsure Disagree/ Unaware**
There are still many channels waiting to be explored		
I can always find what I want to listen to, when I want to listen to it		
It is easy to find what I want to listen to without a lot of hunting around		
There are shows with interesting and knowledgeable hosts		
There are shows dedicated to specific topics that interest me		
The artist and song name are displayed on my screen so I know what is playing		
The organization of channels makes it easy for me to explore a specific genre		
I can listen to a lot of programs and content not available on either AM or FM radio		
The depth of the music programming helps me to find new songs to add to my collection		
Provides the latest breaking news – no need to stop what I'm doing and check the Internet		
Provides excellent sound quality (better than either AM or FM radio)		
Provides consistently clear reception no matter where I go, even in the city		
I can listen to my stations wherever I go, even when traveling long distances		
I can get weather and traffic reports whenever I want to, without waiting		
I can get weather and traffic from all around the country		
I don't hear the same things over and over		
I can hear programs and music that make me feel nostalgic because I haven't heard them for years		
There are programs where celebrity DJ's can create and control the content		
The DJ's don't talk too much		
I can listen to music channels without any commercials		
I can listen to music		
There are stations available for everyone in my family		
I can listen to the same stations in the car, at home, or on the Internet		
I can listen to uncensored programs		
I can listen to all, not just some of my favorite sport's games		
Offers more in-depth sports programming than either AM or FM radio		
Informs me about what music, shows, and events are coming up on other channels		

Error message should read: **"All answers must be whole numbers between 0 and 100 or Don't Know / Unsure / Disagree / Unaware."**

Those are all of the questions we have for you today. Thank you very much for participating in this study and have a great day.

Exhibit E-2.1. Subscribers CAI Screen Shots

0% 25% 50% 75% 100%

Are you or any members of your household employed in any of the following industries?

READ LIST AND SELECT ALL THAT APPLY

- ☐ An insurance company
- ☐ A cable TV provider
- ☐ An internet service provider
- ○ None of These

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

I'm going to ask you a few questions, but please be assured that this is only for classification purposes and that your responses will be kept confidential. Which of these groups includes your age?

READ LIST AND SELECT ONE CODE ONLY

- ○ 18 - 24
- ○ 25 - 34
- ○ 35 - 49
- ○ 50 - 64
- ○ 65 or older

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which, if any of the following decisions do you make or take part in making for your household?

READ LIST AND SELECT ALL THAT APPLY

- ☐ Decision to subscribe to cable TV
- ☐ Decision to subscribe to Internet service
- ☐ Decision to subscribe to satellite radio
- ☐ Decision to subscribe to a wireless (cell) phone service
- ☐ Decision to subscribe to satellite TV

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which of these services, if any, do you currently subscribe to?

READ LIST AND SELECT ALL THAT APPLY

- ☐ Cable TV
- ☐ Satellite TV
- ☐ Broadband Internet
- ☐ Satellite radio
- ☐ Wireless (cell) phone service
- ○ None of These
- ○ Refused

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which of the following type(s) of satellite radio do you or your household currently subscribe to?

READ LIST AND SELECT ALL THAT APPLY

- ☐ A paid subscription directly from XM or Sirius
- ☐ A trial subscription (such as from the purchase of a car) directly from XM or Sirius
- ☐ Part of a package from a third party (such as through DirecTV, DiSH Network or AOL), or directly purchased satellite radio for Internet delivery only from XM or Sirius

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which satellite radio service(s) do you or your household currently subscribe to?

READ LIST SELECT ONE ANSWER

- ○ XM
- ○ Sirius
- ○ Both Sirius and XM

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Do you normally wear eye glasses or contact lenses when you read?

- Yes
- No

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

RECORD GENDER OF RESPONDENT BELOW

- Male
- Female

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

May I please have your full name, address and phone number? You can be assured that your name and phone number will not be used to sell you anything or for any marketing or telemarketing purposes. It will only be used to verify your participation in the survey.

(RECORD ON FRONT PAGE OF SCREENER. YOU MUST VERIFY RESPONDENT'S PHONE NUMBER.)

Respondent's Name:	
Phone Number:	
Address:	
City:	
State:	IL
Zip:	
Interviewer	

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

INTERVIEWER: HAVE THE RESPONDENT SIT IN FRONT OF COMPUTER AND ANSWER QUESTIONS TO THE REMAINDER OF THE SURVEY HIM/HERSELF. BE SURE TO SIT WITH THE RESPONDENT WHILE HE/SHE IS ANSWERING IN CASE HE/SHE HAS ANY QUESTIONS.

IF THE RESPONDENT PREFERS, HAVE HIM/HER READ THE QUESTIONS ON THE SCREEN, BUT YOU WILL ENTER THE ANSWERS.

(Record type of interview)

- ○ Interviewer entering answers
- ○ Respondent entering answers

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Thank you for agreeing to participate in our study. We would like to talk to you today about satellite radio. All of your answers will remain strictly confidential. No one will attempt to sell you anything as a result of participating in this study. We are only interested in your opinions. If you don't know an answer or don't have an answer to a particular question, please don't guess. Just tell me you don't know and we will go on to the next question. If, at anytime, you do not understand a question or do not understand what is being asked of you, just say so and I will repeat the question.

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

How long have you been a Satellite Radio subscriber?

(Select one only)

- ○ Less than 1 year
- ○ 1 to 2 years
- ○ 3 to 4 years
- ○ More than 5 years
- ○ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

How many satellite radio receivers do you currently own?

(Select one only)

- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five or more
- ◯ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

What type or types of satellite radio receiver(s) do you own?

(Select all that apply)

- ☐ A portable unit that can be used anywhere
- ☐ A home-use receiver
- ☐ A plug & play unit that can be used with home audio equipment or in the car
- ☐ An in-dash car receiver
- ☐ Other (Specify) [ ]
- ◯ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Where do you listen to satellite radio?

(Select all that apply)

- ☐ At home
- ☐ On the Internet
- ☐ At work
- ☐ In the car
- ☐ Outdoors
- ☐ Other (Specify) [ ]
- ○ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which of the following best describes how you pay for your satellite radio subscription(s)?

- ○ I pay monthly
- ○ I pay up front for one year's subscription
- ○ I pay up front, for more than one year's subscription
- ○ I paid for a lifetime subscription
- ○ Other
- ○ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

How much was your most recent payment for all of your satellite radio subscription(s)?

$

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

How much did you pay in total to buy all the different satellite radio receiver(s) you own? If you did not purchase any, enter zero.

$

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

You said your most recent payment was **$12.95.**

What is the most you would be willing to pay for your **monthly** satellite radio subscription(s)? In other words, what price would be so high that you would cancel your subscription?

$

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Next, we will ask you a series of questions about how much you would be willing to pay for satellite radio under a number of different conditions. These conditions will build upon each other, with each question including all the conditions of the previous question(s). When giving your answers, please think only of satellite radio that you listen to over the radio. Do not think of or consider any satellite radio programming that you listen to over the Internet.

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

How much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts ***AND***
There was no music programming available, not even your favorite channels

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts ***AND***
There was no music programming available, not even your favorite channels ***AND***
There were no news, weather or traffic reports available

(Please assume that all other aspects of satellite radio would remain the same.)

$

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts ***AND***
There was no music programming available, not even your favorite channels ***AND***
There were no news, weather or traffic reports available ***AND***
There were as many commercials as on AM or FM Radio

(Please assume that all other aspects of satellite radio would remain the same.)

$

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts ***AND***
There was no music programming available, not even your favorite channels ***AND***
There were no news, weather or traffic reports available ***AND***
There were as many commercials as on AM or FM Radio ***AND***
You couldn't get reception nationally, just locally

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

[INTERVIEWER: READ INSTRUCTIONS TO RESPONDENT]

On the next page is a list of things that people like you have said when asked why they continue to subscribe to satellite radio. As you read through this list, we would like you to rate each statement according to how important it is to you in your decision to continue subscribing to satellite radio.

Here's how we'd like you to rate the statements:

1. First, read through the list and pick the one statement that is *most important* to you - this is the need that you feel is most critical. Give 100 points to this statement by typing the number "100" in the box next to it.

2. Second, pick the statement that is *least important* to you and give it a score between "0" and "100" based on how important it is *relative to your most important need*. For example, if it is half as important, type the number "50" next to the need -- if the need is of absolutely no importance, give it "0" points.

3. Now, rate each of the other statements relative to the ones you chose as most and least important. When you are finished, each statement should have a number between the lowest number you chose and 100.
   - *Please use as wide a range of numbers as you wish between zero (or the lowest score you assign) and 100.*
   - *Ties are okay for any needs, including the lowest and highest.*
   - *If you don't know, are unsure, if you disagree or you are unaware just check the box at the far right of the statement.*

4. When giving your answers, please think only of satellite radio that you listen to over the radio. Do not think of or consider any satellite radio programming that you listen to over the Internet.

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Show Directions

	SCORE	Don't Know/Unsure Disagree/Unaware
Provides excellent sound quality (better than either AM or FM radio)		☐
There are still many channels waiting to be explored		☐
I can listen to music		☐
I can get weather and traffic from all around the country		☐
There are stations available for everyone in my family		☐
I can listen to uncensored programs		☐
It is easy to find what I want to listen to without a lot of hunting around		☐
I can always find what I want to listen to, when I want to listen to it		☐
Provides the latest breaking news - no need to stop what I'm doing and check the Internet		☐
I can listen to the same stations in the car, at home, or on the Internet		☐
Informs me about what music, shows, and events are coming up on other channels		☐
I can listen to music channels without any commercials		☐
Provides consistently clear reception no matter where I go, even in the city		☐
I can listen to all, not just some of my favorite sport's games		☐
The artist and song name are displayed on my screen so I know what is playing		☐
There are talk and entertainment shows with interesting and knowledgeable hosts		☐
I can listen to music from the 70's, 80's, 90's, and today		☐
I can listen to music from the 40's, 50's and 60's		☐
The depth of the music programming helps me to find new songs to add to my collection		☐
Offers more in-depth sports programming than either AM or FM radio, such as ESPN		☐
There are shows dedicated to specific topics that interest me		☐
I can listen to my stations wherever I go, even when traveling long distances		☐
The organization of channels makes it easy for me to explore a specific genre		☐
I can listen to a lot of programs and content not available on either AM or FM radio		☐
There are programs where interesting and knowledgeable DJ's can create and control the content		☐
I can get weather and traffic reports whenever I want to, without waiting		☐
I can hear programs and music that make me feel nostalgic for what I used listen to when I was younger		☐
The DJ's don't talk too much		☐
I don't hear the same things over and over		☐

<< >>

Those are all of the questions we have for you today. Thank you very much for participating in this study and have a great day.

Supervisor/Recruiter: Click ">>" to be redirected to main login page OR close your browser.

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

Exhibit E-2.2. Considerers CAI Screen Shots

0% 25% 50% 75% 100%

Are you or any members of your household employed in any of the following industries?

READ LIST AND SELECT ALL THAT APPLY

- ☐ An insurance company
- ☐ A cable TV provider
- ☐ An internet service provider
- ○ None of These

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

I'm going to ask you a few questions, but please be assured that this is only for classification purposes and that your responses will be kept confidential. Which of these groups includes your age?

READ LIST AND SELECT ONE CODE ONLY

- ○ 18 - 24
- ○ 25 - 34
- ○ 35 - 49
- ○ 50 - 64
- ○ 65 or older

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which, if any of the following decisions do you make or take part in making for your household?

READ LIST AND SELECT ALL THAT APPLY

- ☐ Decision to subscribe to cable TV
- ☐ Decision to subscribe to Internet service
- ☐ Decision to subscribe to satellite radio
- ☐ Decision to subscribe to a wireless (cell) phone service
- ☐ Decision to subscribe to satellite TV

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which of these services, if any, do you currently subscribe to?

READ LIST AND SELECT ALL THAT APPLY

- ☐ Cable TV
- ☐ Satellite TV
- ☐ Broadband Internet
- ☐ Satellite radio
- ☐ Wireless (cell) phone service
- ○ None of These
- ○ Refused

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Are you or your household currently considering subscribing to (READ ITEMS) in the next 30 days?

READ LIST SELECT ANSWER FOR EACH LISTED ITEM

	Yes	No	Don't Know / Unsure
Satellite TV	○	○	○
Broadband Internet	○	○	○
Satellite radio	○	○	○
Wireless phone service	○	○	○

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which of the following type(s) of satellite radio are you or your household considering subscribing to?

READ LIST AND SELECT ALL THAT APPLY

- ☐ A paid subscription directly from XM or Sirius
- ☐ A trial subscription (such as from the purchase of a car) directly from XM or Sirius
- ☐ Part of a package from a third party (such as through DirecTV, DiSH Network or AOL), or directly purchased satellite radio for Internet delivery only from XM or Sirius

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Which satellite radio service are you currently considering subscribing to?

READ LIST SELECT ONE MENTION

- ◯ XM
- ◯ Sirius
- ◯ Both Sirius and XM
- ◯ DK/Have not decided

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Do you normally wear eye glasses or contact lenses when you read?

- ◯ Yes
- ◯ No

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

RECORD GENDER OF RESPONDENT BELOW

- ○ Male
- ○ Female

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

May I please have your full name, address and phone number? You can be assured that your name and phone number will not be used to sell you anything or for any marketing or telemarketing purposes. It will only be used to verify your participation in the survey.

(RECORD ON FRONT PAGE OF SCREENER. YOU MUST VERIFY RESPONDENT'S PHONE NUMBER.)

Respondent's Name:	
Phone Number:	
Address:	
City:	
State:	IL
Zip:	
Interviewer	

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

INTERVIEWER: HAVE THE RESPONDENT SIT IN FRONT OF COMPUTER AND ANSWER QUESTIONS TO THE REMAINDER OF THE SURVEY HIM/HERSELF. BE SURE TO SIT WITH THE RESPONDENT WHILE HE/SHE IS ANSWERING IN CASE HE/SHE HAS ANY QUESTIONS.

IF THE RESPONDENT PREFERS, HAVE HIM/HER READ THE QUESTIONS ON THE SCREEN, BUT YOU WILL ENTER THE ANSWERS.

(Record type of interview)

- ○ Interviewer entering answers
- ○ Respondent entering answers

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Thank you for agreeing to participate in our study. We would like to talk to you today about satellite radio. All of your answers will remain strictly confidential. No one will attempt to sell you anything as a result of participating in this study. We are only interested in your opinions. If you don't know an answer or don't have an answer to a particular question, please don't guess. Just tell me you don't know and we will go on to the next question. If, at anytime, you do not understand a question or do not understand what is being asked of you, just say so and I will repeat the question.

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

We will be asking you some questions today about satellite radio. Please read this information about satellite radio from the Sirius and XM web sites.

Satellite radio is more than the latest technology. It's an extraordinary new way to experience your favorite music, sports, news, talk, comedy- and it goes anywhere you go. No longer are your choices limited to where you live or travel. Satellite radio gives you the freedom to hear what you want, when you want it. Imagine dozens & dozens of commercial-free music channels playing new & old favorites. Heart-pounding coverage of your favorite pro & college teams. National news broadcasters you trust. Talk shows you rely on to inform & provoke. Even traffic & weather. That's satellite radio.

You can listen to satellite radio in your car, in your home, on the Internet, or wherever you go.

Sirius:
No one can match SIRIUS programming. We've got legendary DJs playing your favorite songs on 69 channels of 100% commercial-free music, plus exclusive live performances and artist interviews. Love sports? SIRIUS is home to NASCAR, the entire NFL and over 40 NBA and NHL games a week, college sports and more. Talk about star power: SIRIUS proudly presents original programming from Martha Stewart, Bill Bradley, Eminem, Tony Hawk, Jim Breuer, Jimmy Buffet, Tony Stewart and Howard Stern. Plus the biggest names in news and talk, great comedy, traffic and weather you need more and more, on over 130 channels of the best of all radio.

XM Is...
. The greatest variety of entertainment in music, sports, talk, comedy, news and entertainment
. Superior digital sound quality coast-to-coast
. Incredibly easy to use wherever you are — at home, at work, in the car or on the go
. The most music on satellite radio
. Exciting sports coverage and detailed play-by-play reporting on your favorite teams
. Affordable at only $12.95 a month, that's less than 50¢ a day

<< >>

0% 25% 50% 75% 100%

The single subscription price per month for satellite radio is $12.95. You can save money if you pay up front for a year or multiple years. Thinking about what we told you and everything else you know, what is the most you would be willing to pay per month for a satellite radio subscription? In other words, what price would be so high that you would no longer consider subscribing?

$

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Next, we will ask you a series of questions about how much you would be willing to pay for satellite radio under a number of different conditions. These conditions will build upon each other, with each question including all the conditions of the previous question(s). When giving your answers, please think only of satellite radio that you listen to over the radio. Do not think of or consider any satellite radio programming that you listen to over the Internet.

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

How much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams

(Please assume that all other aspects of satellite radio would remain the same.)

$

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts ***AND***
There was no music programming available, not even your favorite channels

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts ***AND***
There was no music programming available, not even your favorite channels ***AND***
There were no news, weather or traffic reports available

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts ***AND***
There was no music programming available, not even your favorite channels ***AND***
There were no news, weather or traffic reports available ***AND***
There were as many commercials as on AM or FM Radio

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

Now, how much would you pay **monthly** for satellite radio if...

There was no sports coverage available, not even your favorite teams ***AND***
Sound quality was only equal to that of the FM radio you can listen to ***AND***
There were no talk shows available, not even your favorite hosts ***AND***
There was no music programming available, not even your favorite channels ***AND***
There were no news, weather or traffic reports available ***AND***
There were as many commercials as on AM or FM Radio ***AND***
You couldn't get reception nationally, just locally

(Please assume that all other aspects of satellite radio would remain the same.)

$ [ ]

☐ Don't Know / Unsure

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

0% 25% 50% 75% 100%

[INTERVIEWER: READ INSTRUCTIONS TO RESPONDENT]

On the next page is a list of things that people like you have said when asked why they would consider subscribing to satellite radio. As you read through this list, we would like you to rate each statement according to how important it is to you in your decision to subscribe to satellite radio.

Here's how we'd like you to rate the statements:

1. First, read through the list and pick the one statement that is *most important* to you - this is the need that you feel is most critical. Give 100 points to this statement by typing the number "100" in the box next to it.
2. Second, pick the statement that is *least important* to you and give it a score between "0" and "100" based on how important it is *relative to your most important need*. For example, if it is half as important, type the number "50" next to the need -- if the need is of absolutely no importance, give it "0" points.
3. Now, rate each of the other statements relative to the ones you chose as most and least important. When you are finished, each statement should have a number between the lowest number you chose and 100.
   - *Please use as wide a range of numbers as you wish between zero (or the lowest score you assign) and 100.*
   - *Ties are okay for any needs, including the lowest and highest.*
   - *If you don't know, are unsure, if you disagree or you are unaware just check the box at the far right of the statement.*

<< >>

If you encounter any technical difficulties, please contact radio_support@orbercept.com.

0% 25% 50% 75% 100%

Show Directions

	SCORE	Don't Know/Unsure Disagree/Unaware
Provides excellent sound quality (better than either AM or FM radio)		☐
There are still many channels waiting to be explored		☐
I can listen to music		☐
I can get weather and traffic from all around the country		☐
There are stations available for everyone in my family		☐
I can listen to uncensored programs		☐
It is easy to find what I want to listen to without a lot of hunting around		☐
I can always find what I want to listen to, when I want to listen to it		☐
Provides the latest breaking news - no need to stop what I'm doing and check the Internet		☐
I can listen to the same stations in the car, at home, or on the Internet		☐
Informs me about what music, shows, and events are coming up on other channels		☐
I can listen to music channels without any commercials		☐
Provides consistently clear reception no matter where I go, even in the city		☐

Provides consistently clear reception no matter where I go, even in the city		☐
I can listen to all, not just some of my favorite sport's games		☐
The artist and song name are displayed on my screen so I know what is playing		☐
There are talk and entertainment shows with interesting and knowledgeable hosts		☐
I can listen to music from the 70's, 80's, 90's, and today		☐
I can listen to music from the 40's, 50's and 60's		☐
The depth of the music programming helps me to find new songs to add to my collection		☐
Offers more in-depth sports programming than either AM or FM radio, such as ESPN		☐
There are shows dedicated to specific topics that interest me		☐
I can listen to my stations wherever I go, even when traveling long distances		☐
The organization of channels makes it easy for me to explore a specific genre		☐
I can listen to a lot of programs and content not available on either AM or FM radio		☐
There are programs where interesting and knowledgeable DJ's can create and control the content		☐
I can get weather and traffic reports whenever I want to, without waiting		☐
I can hear programs and music that make me feel nostalgic for what I used listen to when I was younger		☐
The DJ's don't talk too much		☐
I don't hear the same things over and over		☐

<< >>

Those are all of the questions we have for you today. Thank you very much for participating in this study and have a great day.

Supervisor/Recruiter: Click ">>" to be redirected to main login page OR close your browser.

<< >>

If you encounter any technical difficulties, please contact radio_support@cybercept.com.

F

Exhibit F-1. Mall-intercept Survey Screening Statistics and Sample Disposition

	Number of Respondents	Remaining Number of Respondents
Number of potential respondents approached	8,852	8,852
Initial Refusals	2,646	6,206
Language / hearing problem / in a hurry / refuses / appears intoxicated	282	5,924
Know respondent	39	5,885
S1a. Terminate: employment conflict	117	5,768
S1b. Terminate: past study participation	247	5,521
Terminated during demo screener (ans. DK, under 18 or refused to age question)	329	5,192
Terminated- Don't participate in the decision to subscribe to satellite radio	805	4,387
Terminated- Don't know service	260	4,127
Terminated - Not a subscriber or considerer	2,347	1,780
Terminated- Not wearing eye glasses	55	1,725
Terminated- Over quota subscriber/considerer	402	1,323
Terminated - Over quota age and sex	794	529
Terminated- Refused participation	118	411
Terminated- Refused phone number	47	364
Terminated- Did not finish survey	0	364
Terminated- Validation failed / replaced	27	337
Completed Survey	337	
Incidence Rate	**19.5%**	
Response Rate	**68.2%**	

Exhibit F-2 Satellite Radio Mall Survey Screener

SATELLITE RADIO STUDY

TOP SHEET

(THIS IS A PERSONAL INTERVIEW)

-SCREENER-

RESPONDENT ID #: _____

TERMINATION ID#:_____

S.....1

C.....2

(RECORD AT END OF INTERVIEW. PLEASE PRINT.)

RESPONDENT'S NAME: _____ TEL.# ( )_____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

INTERVIEWER: _____ DATE: _____

SATELLITE RADIO STUDY SCREENER USED BY (CITY AND MALL NAME)_____

INTERVIEWER'S SIGNATURE:_____**DATE:**_____

TIME BEGAN:_____**AM/PM** **TIME ENDED:**_____**AM/PM**

INTRODUCTION: Hello, my name is ___from___, an independent marketing research firm _____. We are a national marketing research firm and are currently conducting a survey and would like to include your opinions. Let me assure you we are doing this for research purposes only and that no one will sell you anything as a result of this study. Your answers will be held in the strictest confidence.

RECORD ALL TERMINATIONS WHICH OCCUR IN ANY QUESTIONS BY CIRCLING THE NEXT AVAILABLE NUMBER IN GRIDS PROVIDED. RECORD ONLY ONE TERMINATION PER CONTACT. RE-USE SCREENER UNTIL YOU REACH A QUALIFIED RESPONDENT.

SPOKE TO BUT INITIAL REFUSAL, CIRCLE BELOW

INITIAL REFUSALS

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

IF RESPONDENT HAS LANGUAGE/HEARING PROBLEM, ETC., IS IN A HURRY, REFUSES INTERVIEW OR APPEARS INTOXICATED, CIRCLE BELOW

LANGUAGE / HEARING PROBLEM / IN A HURRY / REFUSES / APPEARS INTOXICATED

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

IF YOU KNOW THE RESPONDENT AT ALL, CIRCLE BELOW

KNOW RESPONDENT CIRCLE NEXT AVAILABLE NUMBER BELOW.

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

S1a. Are you or any members of your household employed in any of the following industries? **READ LIST AND CIRCLE ALL THAT APPLY**

An insurance company	1	**CONTINUE**
A market research firm	2	**TERMINATE WITH THANKS**
An advertising agency	3	
The entertainment industry	4	
A satellite radio provider	5	
A cable TV provider	6	**CONTINUE**
An internet service provider	7	
None of these	8	

S1a. TERMINATE: EMPLOYMENT CONFLICT

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

S1b. In the past three months, have you taken part in any marketing research survey other than a political poll?

Yes.....1 **(TERMINATE)** No.....2 **(CONTINUE)**

S1b. TERMINATE: PAST STUDY PARTICIPATION

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

S2. I'm going to ask you a few questions, but please be assured that this is only for classification purposes and that your responses will be kept confidential. Which of these groups includes your age? **READ LIST AND CIRCLE ONE CODE ONLY**

Under 18 years of age	1	TERMINATE IN FIRST BOX BELOW WITH
18 - 24	2	CONTINUE – WATCH QUOTAS
25 - 34	3	
35 - 49	4	
50 - 64	5	
65 or older	6	
Refused	7	TERMINATE IN FIRST BOX BELOW WITH

IF "UNDER 18" OR "REFUSED AGE", TERMINATE. CIRCLE NEXT AVAILABLE NUMBER BELOW.

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

MALES

TERMINATE – OVER QUOTA
MALE – 18-24 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE - OVER QUOTA
MALE – 25-34 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE - OVER QUOTA
MALE – 35-49 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE - OVER QUOTA
MALE – 50-64 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE - OVER QUOTA
MALE–65+ --
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

FEMALES

TERMINATE - OVER QUOTA
FEMALE – 18-24 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE - OVER QUOTA
FEMALE – 25-34 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE - OVER QUOTA
FEMALE – 35-49 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE - OVER QUOTA
FEMALE –50-64 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE - OVER QUOTA
FEMALE – 65+ --
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

S.3 Which, if any of the following decisions do you make or take part in making for your household? **READ LIST AND CIRCLE ALL THAT APPLY**

Decision to subscribe to cable TV	1	
Decision to subscribe to Internet service	2	
Decision to subscribe to satellite radio	**3**	**MUST SAY YES TO CONTINUE**
Decision to subscribe to a wireless (cell) phone	4	
Decision to subscribe to satellite TV	5	
None of These	6	**TERMINATE WITH THANKS**
Refused	7	

MALES

TERMINATE -- MALE – 18-24 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- MALE – 25-34 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- MALE – 35-49 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE – MALE – 50-64 –
CIRCLE NEXT AVAILABLE NUMBER 01

	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- MALE– 65+ --
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

FEMALE

TERMINATE -- FEMALE – 18-24 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- FEMALE – 25-34 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- FEMALE – 35-49 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- FEMALE – 50-64 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- FEMALE – 65+ --
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

S4a. Which of these services, if any, do you currently subscribe to? **READ LIST AND CIRCLE ALL THAT APPLY**

Cable TV	1	**SKIP TO S5a**	**NOTE:** ***THIS IS FOR INFO ONLY HERE*** **WILL USE ANSWERS SHOWN HERE TO CATEGORIZE IN Q7: *QUOTA QUALIFICATION GRID***
Satellite TV	2		
Broadband Internet	3		
Satellite radio	**4**	**IF CIRCLED ASK S4b**	
Wireless (cell) phone service	5	**SKIP TO S5a**	
None of These	6		
Refused	7		

S4b. Which of the following types(s) of satellite radio do you or your household currently subscribe to? **READ LIST AND CIRCLE ALL THAT APPLY**

A paid subscription directly from XM or Sirius	**1**	**SKIP TO S6a**	**NOTE:** ***THIS IS FOR INFO ONLY HERE*** **WILL USE ANSWERS SHOWN HERE TO CATEGORIZE IN Q7: *QUOTA QUALIFICATION GRID***
A trial subscription (such as from the purchase of a car) directly from XM or Sirius	**2**		
Part of a package from a third party (such as through DirecTV, DiSH Network or AOL) or directly purchased satellite radio for Internet delivery only from XM or Sirius	3	**SKIP TO S6a**	
Don't Know	4		

S5a.

ASK S5a. FOR EACH ITEM NOT CIRCLED IN S4a.

Are you or your household currently considering subscribing to **(INSERT ITEM(S) FROM Q.4a)** in the next 30 days? **READ LIST RECORD ANSWER FOR EACH LISTED ITEM**

	Yes	No	DK/Unsure		
Cable TV	1	2	3	**SKIP TO S7**	**NOTE:** **THIS IS FOR INFO ONLY HERE** **WILL USE ANSWERS SHOWN HERE TO CATEGORIZE IN Q7: *QUOTA QUALIFICATION GRID***
Satellite TV	1	2	3		
Broadband Internet	1	2	3		
Satellite radio	**1**	2	3	**IF 'Yes' CIRCLED ASK S5B BELOW**	
Wireless (cell) phone service	1	2	3	**SKIP TO S7**	

S5b. Which of the following type(s) of satellite radio are you or your household considering subscribing to? **READ LIST AND CIRCLE ALL THAT APPLY**

A paid subscription directly from XM or Sirius	**1**	**SKIP TO Q6b**	**NOTE:** **THIS IS FOR INFO ONLY HERE** **WILL USE ANSWERS SHOWN HERE TO CATEGORIZE IN Q7: *QUOTA QUALIFICATION GRID***
A trial subscription (such as from the purchase of a car) directly from XM or Sirius	**2**	**SKIP TO Q6b**	
Part of a package from a third party (such as through DirecTV, DiSH Network or AOL) or directly purchased satellite radio for Internet delivery only from XM or Sirius	3		
Don't Know	4		

S6a. Which satellite radio service(s) do you or your household currently subscribe to? **READ LIST RECORD ONE ANSWER**

XM	1	**SKIP TO S7:** **QUOTA QUALIFICATION GRID**	**NOTE:** **THIS IS FOR INFO ONLY HERE** **WILL USE ANSWERS SHOWN HERE TO CATEGORIZE IN Q7: *QUOTA QUALIFICATION GRID***
Sirius	2		
Both Sirius and XM	3		
DK/Unsure	4	**TERMINATE WITH THANKS**	

MALE

TERMINATE –DON'T KNOW SERVICE
MALES – 18-24 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DON'T KNOW SERVICE
MALES – 25-34 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DON'T KNOW SERVICE
MALES – 35-49 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE – DON'T KNOW SERVICE
MALES – 50-64 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DON'T KNOW SERVICE
MALES– 65+ --
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

FEMALE

TERMINATE --DON'T KNOW SERVICE
FEMALES –18-24 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DON'T KNOW SERVICE
FEMALES – 25-34 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DON'T KNOW SERVICE
FEMALES – 35-49 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE --DON'T KNOW SERVICE
FEMALES – 50-64 –
CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DON'T KNOW SERVICE
FEMALES – 65+ --
CIRCLE NEXT AVAILABLE NUMBER.

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

S6b. Which satellite radio service are you currently considering subscribing to? **(RECORD ONE MENTION)**

XM	1	**CONTINUE**
Sirius	2	
Both Sirius and XM	3	
DK/Have not decided	4	

S7. QUOTA QUALIFICATION

	S4a.	S4b.	S6a.
SATELLITE RADIO SUBSCRIBER	**REFER BACK TO S4a** **IS CODE 4 CIRCLED?** **"Satellite radio"** Yes 1 CONTINUE TO 4b No 2 TERMINATE	**REFER BACK TO S4b** **ARE ONE OR MORE CODES CIRCLED IN SHADED AREAS?** Yes 1 Continue to 6a No 2 TERMINATE	**REFER BACK TO S6a** **DID RESPONDENT ANSWER 'XM' 'SIRIUS' OR 'BOTH'** Yes 1 QUALIFIES No 2 TERMINATE

	S5a.	S5b.
SATELLITE RADIO CONSIDERING SUBSCRIBER	**REFER BACK TO S5a** **IS CODE 4 CIRCLED?** **"Satellite radio"** Yes 1 CONTINUE TO 5b No 2 TERMINATE	**REFER BACK TO S5b** **IS CODE 1 CIRCLED?** **"A paid subscription directly from XM or Sirius"** Yes 1 QUALIFIES No 2 TERMINATE

****REFER TO 'QUOTA QUALIFICATION GRID' ON PREVIOUS PAGE***

IF RESPONDENT DOES NOT QUALIFY FOR EITHER QUOTA GROUP TERMINATE, AND CIRCLE NEXT AVAILABLE NUMBER IN APPROPRIATE BOX BELOW.

MALE

TERMINATE –DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING MALES – 18-24 --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING MALES – 25-34 --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING MALES – 35-49 --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE – DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING MALES – 50-64 --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING MALES– 65+ --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

FEMALE

TERMINATE -- DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING FEMALES – 18-24 --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12

TERMINATE -- DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING FEMALES – 25-34 --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING FEMALES – 35-49 --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12

TERMINATE -- DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING FEMALES – 50-64 --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE -- DOES NOT SUBSCRIBE/CONSIDER SUBSCRIBING FEMALES – 65+ --CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

IF QUOTA FOR WHICH RESP. QUALIFIES IS FILLED, TERMINATE AND RECORD IN APPROPRIATE BOX BELOW

OVER QUOTA- SATELLITE RADIO SUBSCRIBER --CIRCLE NEXT AVAILABLE NUMBER BELOW.

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

OVER QUOTA- SATELLITE RADIO CONSIDERING SUBSCRIBER --CIRCLE NEXT AVAILABLE NUMBER BELOW.

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

S8. Do you normally wear eye glasses or contact lenses when you read?

Yes.....1 **(ASK QUESTION S9.)** No.....2 **(SKIP TO INVITATION)**

S9. Do you have your eye glasses with you or are you wearing your contact lenses now?

Yes..... 1 **(CONTINUE)** No..... 2 **(TERMINATE)**

TERMINATE—NO GLASSES / CONTACTS – SATELLITE RADIO SUBSCRIBER –

CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

TERMINATE—NO GLASSES / CONTACTS – SATELLITE RADIO CONSIDERING SUBSCRIBER

CIRCLE NEXT AVAILABLE NUMBER

01	02	03	04
05	06	07	08
09	10	11	12
13	14	15	16

S10. RECORD GENDER OF RESPONDENT BELOW

Male 1

Female..... 2

INVITATION—

ASK EVERYONE

S11 We would like to invite you to participate in a study that we think you will find interesting. The survey will take about 20 minutes. The survey we would like you to participate in requires you to read questions on a computer screen and either use a mouse to point and click your answers or tell me your answers and I will record them. Would you like to participate in this study?

Yes, I will participate .....1 **(CONTINUE WITH S12)**

No, will not participate .....* **(TERMINATE IN APPROPRIATE BOX BELOW)**

TERMINATE – REFUSED TO PARTICIPATE – SATELLITE RADIO SUBSCRIBER – CIRCLE NEXT AVAILABLE NUMBER BELOW.

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

TERMINATE – REFUSED TO PARTICIPATE – SATELLITE RADIO CONSIDERING SUBSCRIBER – CIRCLE NEXT AVAILABLE NUMBER BELOW.

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

S12 May I please have your full name, address and phone number? You can be assured that your name and phone number will not be used to sell you anything or for any marketing or telemarketing purposes. It will only be used to verify your participation in the survey. **(RECORD ON FRONT PAGE OF SCREENER. YOU MUST VERIFY RESPONDENT'S PHONE NUMBER. IF RESPONDENT REFUSES TO GIVE PHONE NUMBER, SAY:)** I'm sorry but I cannot ask you to participate in our survey as my client needs your phone number to be able to verify your participation in this study.

Gave phone number ..... 1 **(RECORD ADDRESS AND PHONE #, THEN CONTINUE)**

Refused phone number ..... * **(TERMINATE IN APPROPRIATE BOX BELOW)**

TERMINATE – REFUSED PHONE NUMBER – SATELLITE RADIO SUBSCRIBER – CIRCLE NEXT AVAILABLE NUMBER BELOW.

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

TERMINATE – REFUSED PHONE NUMBER – SATELLITE RADIO CONSIDERING SUBSCRIBER – CIRCLE NEXT AVAILABLE NUMBER BELOW.

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

BRING RESPONDENT TO INTERVIEWING AREA. DO NOT DISCUSS THE SUBJECT MATTER OF THE STUDY WITH THE RESPONDENT WHILE WALKING TO FACILITY.

NOTE: IF RESPONDENT WEARS GLASSES/CONTACT LENSES, BE SURE HE/SHE IS WEARING THEM WHEN ADMINISTERING MAIN QUESTIONNAIRE

G

Exhibit G. Internet Survey

Electronics Survey

Thank you for participating in our study. The responses you give to our questions are very important to us and will be kept in confidence. The results of this study will not be used to try to sell you anything.

We ask you to answer all questions as honestly as possible. Please do not allow anyone else to fill out this survey. Thank you for your time and opinions!

Please press the NEXT button at the bottom of the page to begin.

S1a. Are you or any members of your household employed in any of the following industries? **CIRCLE ALL THAT APPLY [RANDOMIZE LIST]**

An insurance company	1	**CONTINUE**
A market research firm	2	**TERMINATE**
An advertising agency	3	
The entertainment industry	4	
A satellite radio provider	5	
A cable TV provider	6	**CONTINUE**
An internet service provider	7	
None of these	8	

S2. Which of these groups includes your age? **CIRCLE ONE CODE ONLY**

Under 18 years of age	1	**TERMINATE**
18 - 24	2	**CONTINUE – WATCH QUOTAS**
25 - 34	3	
35 - 49	4	
50 - 64	5	
65 or older	6	
Refused	7	**TERMINATE**

S2a. In what state do you currently reside? **[DROP DOWN?]**

S2b. What is your gender?

Male	1	
Female	2	

S.3 Which, if any of the following decisions do you make or take part in making for your household? **CIRCLE ALL THAT APPLY [RANDOMIZE LIST]**

Decision to subscribe to cable TV	1	
Decision to subscribe to Internet service	2	
Decision to subscribe to satellite radio	**3**	**MUST SAY YES TO CONTINUE**

Decision to subscribe to a wireless (cell)	4	
Decision to subscribe to satellite TV	5	
None of These	6	**TERMINATE WITH THANKS**

S4a. Which of these services, if any, do you currently subscribe to? **CIRCLE ALL THAT APPLY [RANDOMIZE LIST]**

Cable TV	1	**SKIP TO S5a**
Satellite TV	2	
Broadband Internet	3	
Satellite radio	**4**	**IF CIRCLED ASK S4b**
Wireless (cell) phone service	5	**SKIP TO S5a**
None of These	6	
Don't Know / Unsure	7	

S4b. Which of the following types(s) of satellite radio do you or your household currently subscribe to? **CIRCLE ALL THAT APPLY**

A paid subscription directly from XM or Sirius	**1**	**SKIP TO S6a**
A trial subscription (such as from the purchase of a car) directly from XM or Sirius	**2**	
Part of a package from a third party (such as through DirecTV, DiSH Network or AOL) or directly purchased satellite radio for Internet delivery only from XM or Sirius	3	**TERMINATE**
Don't Know	4	

S5a.

ASK S5a. FOR EACH ITEM NOT CIRCLED IN S4a.

Are you or your household currently considering subscribing to **(INSERT ITEM(S) FROM Q.4a)** in the next 30 days? **RECORD ANSWER FOR EACH LISTED ITEM [RANDOMIZE LIST]**

	Yes	**No**	**DK/Unsure**	
Cable TV	1	2	3	**TERMINATE**
Satellite TV	1	2	3	
Broadband Internet	1	2	3	
Satellite radio	**1**	2	3	**IF 'Yes' CIRCLED ASK S5B BELOW**
Wireless (cell) phone service	1	2	3	**TERMINATE**

S5b. Which of the following type(s) of satellite radio are you or your household considering subscribing to? **CIRCLE ALL THAT APPLY**

A paid subscription directly from XM or Sirius	**1**	**SKIP TO Q6b**
A trial subscription (such as from the purchase of a car) directly from XM or Sirius	**2**	**TERMINATE**
Part of a package from a third party (such as through DirecTV, DiSH Network or AOL) or directly purchased satellite radio for Internet delivery only from XM or Sirius	3	
Don't Know	4	

S6a. Which satellite radio service(s) do you or your household currently subscribe to? **RECORD ONE ANSWER**

XM	1	**SKIP TO Q1**
Sirius	2	
Both Sirius and XM	3	
DK/Unsure	4	**TERMINATE**

S6b. Which satellite radio service are you currently considering subscribing to? **RECORD ONE ANSWER**

XM	1	**SKIP TO Q3**
Sirius	2	
Both Sirius and XM	3	
DK/Have not decided	4	

Q1. How long have you been a Satellite Radio subscriber? **(Circle one only)**

Less than 1 year	1
1 to 2 years	2
3 to 4 years	3
More than 5 years	4
DK/Unsure	5

Q2. How many satellite radio receivers do you currently own? **(Circle one only)**

One	1
Two	2

Three	3
Four	4
5 or more	5
DK/Unsure	6

Q2a. What type or types of satellite radio receiver(s) do you own? **(Circle all that apply)**
[RANDOMIZE LIST EXCEPT OTHER/DK]

A home-use receiver	1
An in-dash car receiver	2
A plug & play unit that can be used with home	3
A portable unit that can be used anywhere	4
Other (Specify:_____)	5
DK/Unsure	6

Q2b. Where do you listen to satellite radio? **(Circle all that apply)**

[RANDOMIZE LIST EXCEPT OTHER/DK]

At home	1	**SKIP TO Q4a INTRO**
At work	2	
In the car	3	
On the Internet	4	
Outdoors	5	
Other (Specify_____)	6	
DK/Unsure	7	

Q3. We will be asking you some questions today about satellite radio. Now please read this information about satellite radio from the **[FILL 'XM WEB SITE', 'SIRIUS WEB SITE' OR 'XM AND SIRIUS WEB SITES' FROM S6B].**

Satellite radio is more than the latest technology. It's an extraordinary new way to experience your favorite music, sports, news, talk, comedy- and it goes anywhere you go. No longer are your choices limited to where you live or travel. Satellite radio gives you the freedom to hear what you want, when you want it. Imagine dozens & dozens of commercial-free music channels playing new & old favorites. Heart-pounding coverage of your favorite pro & college teams. National news broadcasters you trust. Talk shows you rely on to inform & provoke. Even traffic & weather. That's satellite radio.

You can listen to satellite radio in your car, in your home, on the Internet, or wherever you go.
[IF S6B = 1 THEN SHOW INFORMATION ABOUT XM ONLY]
[IF S6B = 2 THEN SHOW INFORMATION ABOUT SIRIUS ONLY]
[IF S6B = 3 OR 4 THEN RANDOMIZE ORDER OF PRESENTATION OF XM AND SIRIUS. RECORD ORDER.]

XM is...

- The greatest variety of entertainment in music, sports, talk, comedy, news and entertainment

- Superior digital sound quality coast-to-coast
- Incredibly easy to use wherever you are --- at home, at work, in the car or on the go
- The most music on satellite radio
- Exciting sports coverage and detailed play-by-play reporting on your favorite teams
- Affordable at only $12.95 a month, that's less than 50¢ a day

About Sirius:
No one can match SIRIUS programming. We've got legendary DJs playing your favorite songs on 69 channels of 100% commercial-free music, plus exclusive live performances and artist interviews. Love sports? SIRIUS is home to NASCAR, the entire NFL and over 40 NBA and NHL games a week, college sports and more. Talk about star power: SIRIUS proudly presents original programming from Martha Stewart, Bill Bradley, Eminem, Tony Hawk, Jim Breuer, Jimmy Buffet, Tony Stewart and Howard Stern. Plus the biggest names in news and talk, great comedy, traffic and weather you need more and more, on over 130 channels of the best of all radio.
[SKIP TO Q4B INTRO]

Q4a. INTRO

Reflecting on your use of satellite radio in a typical week, how much do you value the different aspects of satellite radio **music programming**? By value, we mean: what is the relative importance of each of these features in motivating you to listen to music programming on satellite radio?

Please do so by allocating 100 points among the percent value of features below. If you do not place any value on a particular feature, give it a zero. The feature you value the most should get the highest number of points, the second most should get fewer points, etc. Make sure the total adds up to 100%.

Q4b. INTRO

Thinking about your future use of satellite radio during a typical week, how much would you value the different aspects of satellite radio **music programming**? By value, we mean: what is the relative importance of each of these features that would motivate you to listen to music programming on satellite radio?

Please do so by allocating 100 points among the percent value of features below. If you do not place any value on a particular feature, give it a zero. The feature you value the most should get the highest number of points, the second most should get fewer points, etc. Make sure the total adds up to 100%.

[RANDOMIZE ORDER OF FEATURES]

Music Programming Feature	% of Value to
The artist and song title are displayed on my screen	
I can hear music from the 70's, 80's, 90's and today	
I can hear music from the 40's, 50's, 60's and earlier	
DJ's and celebrity hosts provide commentary and personality	
The selection and sequencing of the songs on the channels I listen to	
Most channels are commercial free	
The music is uncensored	
I can hear live studio performances and live concerts	
	Total must

Thank you. Those are all the questions we have for you today.

Exhibit G-2.1. Subscribers Internet Survey Screen Shots

Electronics Media Survey

Thank you for participating in our study. The responses you give to our questions are very important to us and will be kept in confidence. The results of this study will not be used to try to sell you anything.

We ask you to answer all questions as honestly as possible. Please do not allow anyone else to fill out this survey. Thank you for your time and opinions!

When you are ready to get started, please click the "NEXT" button.

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Are you or any members of your household employed in any of the following industries?
[CHECK ALL THAT APPLY]

- ☐ A satellite radio provider
- ☐ The entertainment industry
- ☐ An internet service provider
- ☐ An advertising agency
- ☐ A market research firm
- ☐ A cable TV provider
- ☐ An insurance company
- ☐ None of the Above

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which of these groups includes your age?
[CHOOSE ONE ONLY]

- ○ *Under 18 years of age*
- ○ 18 - 24
- ○ 25 - 34
- ○ 35 - 49
- ◉ 50 - 64
- ○ 65 or older
- ○ I prefer not to answer this question

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

In what state do you currently reside?
[SELECT ONE FROM THE LIST]

<--select one-->

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Please indicate your gender.
[CHOOSE ONE ONLY]

- ○ Male
- ○ Female

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which, if any of the following decisions do you make or take part in making for your household?
[CHECK ALL THAT APPLY]

- ☐ Decision to subscribe to cable TV
- ☐ Decision to subscribe to a wireless (cell) phone service
- ☐ Decision to subscribe to satellite radio
- ☐ Decision to subscribe to Internet service
- ☐ Decision to subscribe to satellite TV
- ☐ None of the Above

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which of these services, if any, do you <u>currently</u> subscribe to?
[CHECK ALL THAT APPLY]

- ☐ Satellite TV
- ☐ Cable TV
- ☐ Broadband Internet
- ☐ Wireless (cell) phone service
- ☐ Satellite radio
- ☐ None of the Above
- ☐ Don't Know / Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which of the following types(s) of satellite radio do you or your household currently subscribe to?
[CHECK ALL THAT APPLY]

- ☐ A paid subscription directly from XM or Sirius
- ☐ A trial subscription (such as from the purchase of a car) directly from XM or Sirius
- ☐ Part of a package from a third party (such as through DirecTV, DiSH Network or AOL) or directly purchased satellite radio for Internet delivery only from XM or Sirius
- ☐ Don't Know

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which satellite radio service(s) do you or your household currently subscribe to?
[CHOOSE ONE ONLY]

- ○ XM
- ○ Sirius
- ○ Both Sirius and XM
- ○ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

How long have you been a Satellite Radio subscriber?
[CHOOSE ONE ONLY]

- ○ Less than 1 year
- ○ 1 to 2 years
- ○ 3 to 4 years
- ○ More than 5 years
- ○ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

How many satellite radio receivers do you currently own?
[CHOOSE ONE ONLY]

- ○ One
- ○ Two
- ○ Three
- ○ Four
- ○ Five or more
- ○ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Where do you listen to satellite radio?
[CHECK ALL THAT APPLY]

- ☐ Outdoors
- ☐ In the car
- ☐ At home
- ☐ On the Internet
- ☐ At work
- ☐ Other (Please specify:) ( )
- ☐ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

What type or types of satellite radio receiver(s) do you own?
[CHECK ALL THAT APPLY]

- ☐ A plug & play unit that can be used with home audio equipment or in the car
- ☐ A home-use receiver
- ☐ An in-dash car receiver
- ☐ A portable unit that can be used anywhere
- ☐ Other (Please specify:) ( )
- ☐ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which of the following types(s) of satellite radio do you or your household currently subscribe to?
[CHECK ALL THAT APPLY]

- ☐ A paid subscription directly from XM or Sirius
- ☐ A trial subscription (such as from the purchase of a car) directly from XM or Sirius
- ☐ Part of a package from a third party (such as through DirecTV, DiSH Network or AOL) or directly purchased satellite radio for Internet delivery only from XM or Sirius
- ☐ Don't Know

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which satellite radio service(s) do you or your household currently subscribe to?
[CHOOSE ONE ONLY]

- ○ XM
- ○ Sirius
- ○ Both Sirius and XM
- ○ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

How long have you been a Satellite Radio subscriber?
[CHOOSE ONE ONLY]

- ○ Less than 1 year
- ○ 1 to 2 years
- ○ 3 to 4 years
- ○ More than 5 years
- ○ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

How many satellite radio receivers do you currently own?
[CHOOSE ONE ONLY]

- ○ One
- ○ Two
- ○ Three
- ○ Four
- ○ Five or more
- ○ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Where do you listen to satellite radio?
[CHECK ALL THAT APPLY]

- ☐ Outdoors
- ☐ In the car
- ☐ At home
- ☐ On the Internet
- ☐ At work
- ☐ Other (Please specify:) ( )
- ☐ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

What type or types of satellite radio receiver(s) do you own?
[CHECK ALL THAT APPLY]

- ☐ A plug & play unit that can be used with home audio equipment or in the car
- ☐ A home-use receiver
- ☐ An in-dash car receiver
- ☐ A portable unit that can be used anywhere
- ☐ Other (Please specify:) ( )
- ☐ Don't know/Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Reflecting on your use of satellite radio in a typical week, how much do you value the different aspects of satellite radio **music programming**? By value, we mean: what is the relative importance of each of these features in motivating you to listen to music programming on satellite radio?

Please do so by allocating 100 points among the percent value of features below. If you do not place any value on a particular feature, *give it a zero*. The feature you value the most should get the highest number of points, the second most should get fewer points, etc. Make sure *the total adds up* to 100%.

[TOTAL MUST ADD UP TO 100%]

Music Programming Feature	% of Value
I can hear live studio performances and live concerts	%
The selection and sequencing of the songs on the channels I listen to	%
I can hear music from the 70's, 80's, 90's and today	%
DJ's and celebrity hosts provide commentary and personality	%
I can hear music from the 40's, 50's, 60's and earlier	%
The artist and song title are displayed on my screen	%
The music is uncensored	%
Most channels are commercial free	%
Total:	0 %

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

Electronics Media Survey

Please indicate your gender.
[CHOOSE ONE ONLY]

- ○ Male
- ○ Female

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which, if any of the following decisions do you make or take part in making for your household?
[CHECK ALL THAT APPLY]

- ☐ Decision to subscribe to cable TV
- ☐ Decision to subscribe to a wireless (cell) phone service
- ☐ Decision to subscribe to satellite radio
- ☐ Decision to subscribe to Internet service
- ☐ Decision to subscribe to satellite TV
- ☐ None of the Above

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which of these services, if any, do you <u>currently</u> subscribe to?
[CHECK ALL THAT APPLY]

- ☐ Satellite TV
- ☐ Cable TV
- ☐ Broadband Internet
- ☐ Wireless (cell) phone service
- ☐ Satellite radio
- ☐ None of the Above
- ☐ Don't Know / Unsure

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Exhibit G-2.2. Considerers CAI Screen Shots

Electronics Media Survey

Thank you for participating in our study. The responses you give to our questions are very important to us and will be kept in confidence. The results of this study will not be used to try to sell you anything.

We ask you to answer all questions as honestly as possible. Please do not allow anyone else to fill out this survey. Thank you for your time and opinions!

When you are ready to get started, please click the "NEXT" button.

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Are you or any members of your household employed in any of the following industries?
[CHECK ALL THAT APPLY]

- ☐ A satellite radio provider
- ☐ The entertainment industry
- ☐ An internet service provider
- ☐ An advertising agency
- ☐ A market research firm
- ☐ A cable TV provider
- ☐ An insurance company
- ☐ None of the Above

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which of these groups includes your age?
[CHOOSE ONE ONLY]

- ○ Under 18 years of age
- ○ 18 - 24
- ○ 25 - 34
- ○ 35 - 49
- ◉ 50 - 64
- ○ 65 or older
- ○ I prefer not to answer this question

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

In what state do you currently reside?
[SELECT ONE FROM THE LIST]

<--select one-->

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Are you or your household currently considering subscribing to Broadband Internet, Cable TV, Satellite TV, Satellite radio, in the next 30 days?
[CHOOSE ONE ONLY FOR EACH ITEM]

	Yes	No	Don't know/ Unsure
Broadband Internet	○	○	○
Cable TV	○	○	○
Satellite TV	○	○	○
Satellite radio	○	○	○

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which of the following types(s) of satellite radio are you or your household considering subscribing to?
[CHECK ALL THAT APPLY]

- ☐ A paid subscription directly from XM or Sirius
- ☐ A trial subscription (such as from the purchase of a car) directly from XM or Sirius
- ☐ Part of a package from a third party (such as through DirecTV, DiSH Network or AOL) or directly purchased satellite radio for Internet delivery only from XM or Sirius
- ☐ Don't Know

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

Which satellite radio service are you currently <u>considering</u> subscribing to?
[CHOOSE ONE ONLY]

- ○ XM
- ○ Sirius
- ○ Both Sirius and XM
- ○ Don't know/Have not decided

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%
% complete

Electronics Media Survey

We will be asking you some questions today about satellite radio. Now please read this information about satellite radio from the **XM and Sirius Web Sites**.

Satellite radio is more than the latest technology. It's an extraordinary new way to experience your favorite music, sports, news, talk, comedy- and it goes anywhere you go. No longer are your choices limited to where you live or travel. Satellite radio gives you the freedom to hear what you want, when you want it. Imagine dozens & dozens of commercial-free music channels playing new & old favorites. Heart-pounding coverage of your favorite pro & college teams. National news broadcasters you trust. Talk shows you rely on to inform & provoke. Even traffic & weather. That's satellite radio.

You can listen to satellite radio in your car, in your home, on the Internet, or wherever you go.

XM is...

- The greatest variety of entertainment in music, sports, talk, comedy, news and entertainment
- Superior digital sound quality coast-to-coast
- Incredibly easy to use wherever you are --- at home, at work, in the car or on the go
- The most music on satellite radio
- Exciting sports coverage and detailed play-by-play reporting on your favorite teams
- Affordable at only $12.95 a month, that's less than 50¢ a day

About Sirius:

No one can match SIRIUS programming. We've got legendary DJs playing your favorite songs on 69 channels of 100% commercial-free music, plus exclusive live performances and artist interviews. Love sports? SIRIUS is home to NASCAR, the entire NFL and over 40 NBA and NHL games a week, college sports and more. Talk about star power: SIRIUS proudly presents original programming from Martha Stewart, Bill Bradley, Eminem, Tony Hawk, Jim Breuer, Jimmy Buffet, Tony Stewart and Howard Stern. Plus the biggest names in news and talk, great comedy, traffic and weather you need more and more, on over 130 channels of the best of all radio.

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

0% 100%

Electronics Media Survey

Thinking about your future use of satellite radio during a typical week, how much would you value the different aspects of satellite radio **music programming**? By value, we mean: what is the relative importance of each of these features that would motivate you to listen to music programming on satellite radio?

Please do so by allocating 100 points among the percent value of features below. If you do not place any value on a particular feature, give it a zero. The feature you value the most should get the highest number of points, the second most should get fewer points, etc. Make sure the total adds up to 100%.

[TOTAL MUST ADD UP TO 100%]

Music Programming Feature	% of Value
DJ's and celebrity hosts provide commentary and personality	%
The artist and song title are displayed on my screen	%
The selection and sequencing of the songs on the channels I listen to	%
I can hear music from the 40's, 50's, 60's and earlier	%
Most channels are commercial free	%
The music is uncensored	%
I can hear music from the 70's, 80's, 90's and today	%
I can hear live studio performances and live concerts	%
Total:	0 %

NEXT

Copyright © 2007, Applied Marketing Science, Inc.

H

Exhibit H. Internet Survey Invitation to Respondents

Details of today's survey:

Topic: Electronics

Reward: An Instant Win game play and an entry in the $25,000 sweepstakes.

Survey length: 5 minutes.

Click this link to start: <field>LINK</field>

Your opinion makes a difference. Thank you for taking part.
Questions? Please reference survey number 669583

Dana Jevarjian
Project Manager
Survey Sampling International, LLC
T: +1.203.455.0435
Dana_Jevarjian@surveysampling.com
surveysampling.com

1977-2007: Your trusted partner in sampling for 30 years

Exhibit I. Internet Survey Screening Statistics and Sample Disposition

	Number of Respondents	Remaining Number of Respondents
Invitations sent out by Survey Sampling	100,454	100,454
Did not respond to invitation	81,153	19,301
Exited before demo screener (Logon, Age, Sex, HH Income, State)	145	19,156
Exited when asked decision making	2	19,154
Exited when asked 'where do you listen to satellite radio'	3	19,151
Terminated - employment conflict	358	18,793
Terminated during demo screener (ans. DK or refused to age question)	62	18,731
Terminated - Over quota age, sex and region	15,902	2,829
Terminated- Don't participate in the decision to subscribe to satellite radio	1,670	1,159
Terminated- Wrong subscription type	51	1,108
Terminated - Not a considerer	789	319
Failed to Validate	40	279
Completed Survey	279	
Incidence Rate	**11.3%**	
Response Rate	**18.7%**	

J

Exhibit J-1. Willingness to Pay for Satellite Radio - Not Reweighted

Willingness to Pay for Satellite Radio in the Absence of Features							
Overall							
Order	Local Reception Only[1]	Sound Quality Equal to FM	As Many Commercials as on AM or FM	No Music	No Talk	No Sports	No News Weather or Traffic
First	$7.95	$8.34	$5.10	$3.33	$10.18	$9.52	$9.48
Last	$12.67	$12.24	$11.64	$11.61	$12.71	$12.37	$12.52
Overall	$10.95	$11.10	$10.14	$9.27	$11.57	$11.57	$11.41
Base:	295						
Willingness to Pay for Satellite Radio in the Absence of Features							
Subscribers							
Order	Local Reception Only	Sound Quality Equal to FM	As Many Commercials as on AM or FM	No Music	No Talk	No Sports	No News Weather or Traffic
First	$7.57	$7.73	$4.27	$3.17	$10.04	$9.17	$8.65
Last	$12.58	$12.03	$11.21	$11.45	$12.63	$12.17	$12.38
Overall	$10.80	$11.02	$10.16	$9.15	$11.46	$11.51	$11.22
Base:	214						
Willingness to Pay for Satellite Radio in the Absence of Features							
Considerers							
Order	Local Reception Only	Sound Quality Equal to FM	As Many Commercials as on AM or FM	No Music	No Talk	No Sports	No News Weather or Traffic
First	$9.09	$10.18	$7.60	$3.80	$10.61	$10.56	$11.97
Last	$12.95	$12.87	$12.93	$12.09	$12.95	$12.95	$12.95
Overall	$11.38	$11.34	$10.06	$9.61	$11.91	$11.75	$11.96
Base:	81						

1) The headings in this table represent satellite radio in the absence of features which were removed during the willingness to pay question in the mall survey.

1. You couldn't get reception nationally, just locally

2. Sound quality was only equal to that of the FM radio you can listen to

3. There were as many commercials as on AM or FM Radio

4. There was no music available, not even your favorite channels

5. There were no talk shows available, not even your favorite hosts

6. There was no sports coverage available, not even your favorite teams

7. There were no news, weather or traffic reports available

Exhibit J-2. Willingness to Pay for Satellite Radio - Reweighted

Willingness to pay for Music	
	Overall
Order	No Music[1]
First	$6.19
Last	$11.61
Overall	$9.73
Base:	295
Willingness to pay for Music	
	Subscribers
Order	No Music
First	$6.38
Last	$11.45
Overall	$9.69
Base:	214
Willingness to pay for Music	
	Considerers
Order	No Music
First	$5.63
Last	$12.09
Overall	$9.83
Base:	81

1) The heading in this table representa satellite radio in the absence of music: "There was no music available, not even your favorite channels"

K

Exhibit K-1. Value of Satellite Radio Features - Not Reweighted

Value of Satellite Radio Features							
Overall							
Order	National Reception[1]	Sound Quality Better than FM	Current Levels of Commercials	Current Levels of Music	Current Levels of Talk	Current Levels of Sports	Current Levels of News Weather and Traffic
First	$4.65	$4.38	$7.60	$9.21	$2.58	$3.18	$2.98
Last	$0.11	$0.43	$0.59	$0.92	$0.00	$0.34	$0.30
Overall	$1.68	$1.54	$2.50	$3.37	$1.05	$1.07	$1.22
Base:	295						
Value for Satellite Radio Features							
Subscribers							
Order	National Reception	Sound Quality Better than FM	Current Levels of Commercials	Current Levels of Music	Current Levels of Talk	Current Levels of Sports	Current Levels of News Weather and Traffic
First	$4.91	$4.92	$8.35	$9.23	$2.66	$3.30	$3.65
Last	$0.15	$0.55	$0.79	$0.94	$0.00	$0.46	$0.40
Overall	$1.72	$1.51	$2.37	$3.38	$1.06	$1.02	$1.30
Base:	214						
Value for Satellite Radio Features							
Considerers							
Order	National Reception	Sound Quality Better than FM	Current Levels of Commercials	Current Levels of Music	Current Levels of Talk	Current Levels of Sports	Current Levels of News Weather and Traffic
First	$3.86	$2.77	$5.35	$9.16	$2.34	$2.84	$0.98
Last	$0.00	$0.08	$0.02	$0.86	$0.00	$0.00	$0.00
Overall	$1.57	$1.61	$2.89	$3.34	$1.04	$1.20	$0.99
Base:	81						

1) The headings in this table represent the values of features as measured by the willingness to pay question in the mall survey. They are listed in full below.

1. You couldn't get reception nationally, just locally

2. Sound quality was only equal to that of the FM radio you can listen to

3. There were as many commercials as on AM or FM Radio

4. There was no music available, not even your favorite channels

5. There were no talk shows available, not even your favorite hosts

6. There was no sports coverage available, not even your favorite teams

7. There were no news, weather or traffic reports available

Exhibit K-2. Value of Satellite Radio Features - Reweighted

Value for Satellite Radio Features	
	Overall
Order	Current Levels of Music[1]
First	$6.48
Last	$0.92
Overall	$2.93
Base:	295
Value for Satellite Radio Features	
	Subscribers
Order	Current Levels of Music
First	$6.20
Last	$0.94
Overall	$2.87
Base:	214
Value for Satellite Radio Features	
	Considerers
Order	Current Levels of Music
First	$7.32
Last	$0.86
Overall	$3.12
Base:	81

1) The heading in this table represents the value of music measured by the willingness to pay question in the mall survey: "There was no music available, not even your favorite channels"

L

Exhibit L. Anchored Importances as Measured in the Mall-Intercept Survey

Feature (not necessarily independent features)	Average Anchored Score Overall*	% Given Most Points Overall*	Anchored Importance Subscribers	% Given Most Points Subscribers	Anchored Importance Considerers	% Given Most Points Considerers
I can listen to music	89.0	10.7%	88.7	10.2%	90.1	12.2%
I can listen to music channels without any commercials	87.2	9.7%	86.7	10.3%	88.5	7.9%
I can always find what I want to listen to, when I want to listen to it	84.1	7.7%	84.1	8.3%	84.2	5.7%
Provides excellent sound quality (better than either AM or FM radio)	82.3	4.2%	81.5	4.2%	84.8	4.3%
I can listen to music from the 70's, 80's, 90's, and today	81.8	5.4%	81.7	5.3%	82.0	5.5%
I can listen to my stations wherever I go, even when traveling long distances	81.0	4.3%	80.2	4.6%	83.4	3.4%
Provides consistently clear reception no matter where I go, even in the city	80.9	4.2%	80.4	4.2%	82.1	4.4%
The artist and song name are displayed on my screen	80.6	3.5%	80.0	3.2%	82.2	4.5%
I can listen to a lot of programs and content not available on either AM or FM radio	79.1	5.7%	79.3	6.3%	78.7	3.9%
It is easy to find what I want to listen to without a lot of hunting around	77.1	2.4%	75.8	2.7%	81.2	1.6%
I don't hear the same things over and over	77.0	3.0%	75.1	2.6%	82.9	4.1%
The organization of channels makes it easy for me to explore a specific genre	74.4	1.6%	74.1	1.5%	75.3	1.7%
The depth of the music programming helps me to find new songs to add to my collection	72.2	2.9%	70.7	2.6%	76.9	3.7%
The DJ's don't talk too much	71.1	2.9%	69.2	2.7%	76.8	3.3%
I can listen to the same stations in the car, at home, or on the Internet	71.0	3.5%	67.9	2.8%	80.3	5.4%
I can listen to uncensored programs	69.7	3.6%	69.7	4.2%	69.5	1.8%
There are shows dedicated to specific topics that interest me	68.8	2.9%	68.0	3.0%	71.3	2.6%
There are stations available for everyone in my family	68.2	3.2%	68.1	3.3%	68.7	3.0%
I can hear programs and music that make me feel nostalgic for what I used listen to when I was younger	66.8	2.1%	66.2	2.1%	68.5	2.3%
Provides the latest breaking news – no need to stop what I'm doing and check the Internet	65.7	1.4%	64.9	1.3%	67.9	1.6%
There are still many channels waiting to be explored	64.3	1.3%	63.1	1.3%	68.0	1.4%
I can get weather and traffic reports whenever I want to, without waiting	64.0	1.8%	61.9	1.8%	70.1	1.8%
There are programs where interesting and knowledgeable DJ's can create and control the content	63.6	2.0%	63.1	1.9%	64.8	2.6%
Informs me about what music, shows, and events are coming up on other channels	61.2	1.2%	58.9	1.2%	68.3	1.4%
There are talk and entertainment shows with interesting and knowledgeable hosts	58.3	1.0%	57.0	0.8%	62.2	1.7%
Offers more in-depth sports programming than either AM or FM radio, such as ESPN	57.1	2.5%	58.3	2.6%	53.5	2.2%
I can listen to all, not just some of my favorite sport's games	55.0	2.5%	54.9	2.5%	55.5	2.6%
I can listen to music from the 40's, 50's and 60's	53.4	1.8%	52.7	1.9%	55.4	1.7%
I can get weather and traffic from all around the country	52.4	0.9%	50.7	0.9%	57.3	1.1%

M

Exhibit M. Importance of Music Programming Features (From Internet Survey)

				Percent Most Important	Percent Most Important	Percent Most Important
Attribute	Overall Average N=279	Subscribers N=219	Considerers N=60	Overall N = 279	Subscribers N=219	Considerers N=60
Most channels are commercial free	24.1%	23.5%	25.8%	34.9%	32.7%	41.5%
I can hear music from the 70's, 80's, 90's and today	15.8%	16.2%	14.9%	16.0%	16.1%	15.9%
The artist and song title are displayed on my screen	13.7%	14.3%	11.7%	11.0%	11.1%	10.8%
The selection and sequencing of the songs on the channels I listen to	12.5%	12.5%	12.5%	9.5%	9.5%	9.7%
The music is uncensored	10.5%	10.4%	10.6%	10.9%	11.7%	8.5%
I can hear music from the 40's, 50's, 60's and earlier	10.2%	11.1%	7.6%	8.2%	9.7%	3.8%
DJ's and celebrity hosts provide commentary and personality	6.7%	6.3%	7.8%	5.9%	6.0%	5.8%
I can hear live studio performances and live concerts	6.6%	5.7%	9.4%	3.4%	3.3%	4.0%

N

Exhibit N-1. Willingness to Pay Using Pelcovits Cut-off - Not Reweighted

Comparison of willingness to pay using cut-off from Pelcovits			
Across all orders:	**Overall**	**Subscribers**	**Considerers**
Would cancel*	14.6%	14.5%	14.8%
Would pay less than $7.27	25.8%	26.6%	23.5%
Base:	295	214	81
If music shown first:	**Overall**	**Subscribers**	**Considerers**
Would cancel*	56.0%	56.5%	54.5%
Would pay less than $7.27	74.6%	78.3%	63.6%
Base:	34	23	11
If music shown last:	**Overall**	**Subscribers**	**Considerers**
Would cancel*	4.4%	5.9%	0.0%
Would pay less than $7.27	6.7%	5.9%	9.1%
Base:	45	34	11

** A respondent will cancel if their willingness to pay is $0.00.*

Exhibit N-2. Willingness to Pay Using Pelcovits Cut-off - Reweighted

Comparison of willingness to pay using cut-off from Pelcovits			
Across all orders:	Overall	Subscribers	Considerers
Would cancel*	12.2%	11.8%	13.3%
Would pay less than $7.27	21.8%	22.3%	20.3%
N	295	214	81
If music shown first:	Overall	Subscribers	Considerers
Would cancel*	39.9%	38.0%	45.6%
Would pay less than $7.27	53.1%	52.6%	54.5%
N	34	23	11
If music shown last:	Overall	Subscribers	Considerers
Would cancel*	4.4%	5.9%	0.0%
Would pay less than $7.27	6.7%	5.9%	9.1%
N	45	34	11

** A respondent will cancel if their willingness to pay is $0.00.*

O

Exhibit O. Value of Sound Recording Rights Disaggregated by Time Period

Value of Sound Recording Rights		
A. Unweighted		
Overall[1]	**Music From the 40's 50's and 60's**	**Music From the 70's, 80's, 90's and Today**
	$1.32	$2.05
B. Reweighted		
Overall[1]	**Music From the 40's 50's and 60's**	**Music From the 70's, 80's, 90's and Today**
	$1.15	$1.78

1) Base is 288

Appendix 1

Appendix 1-J-1. Willingness to Pay for Satellite Radio (demographic reweighting)

Willingness to Pay for Satellite Radio in the Absence of Features							
Subscribers	Unweighted		Matched to Demographics*		Testing for Differences		
Order	No Music	No Music	No Music	No Music	No Music	No Music	No Music
	Mean	S.E. Mean	Mean	S.E. Mean	Diff in Means	Pooled S.E.	t-statistic
First	$3.17	$1.05	$3.09	$1.00	$0.08	$1.45	0.06
Last	$11.45	$0.55	$11.82	$0.46	($0.37)	$0.72	(0.51)
Overall	$9.15	$0.33	$9.14	$0.34	$0.01	$0.47	0.03

1) The headings in this table represent satellite radio in the absence of features which were removed during the willingness to pay question in the mall survey.
4. There was no music available, not even your favorite channels
** Matched to age and gender.*

Appendix 1-K-1. Value of Satellite Radio Features

Value of Satellite Radio Features							
Subscribers	Unweighted		Matched to Demographics*		Testing for Differences		
Order	Music	Music	Music	Music	Music	Music	Music
	Mean	S.E. Mean	Mean	S.E. Mean	Diff in Means	Pooled S.E.	t-statistic
First	$9.23	$1.05	$9.03	$1.07	$0.20	$1.50	0.13
Last	$0.94	$0.53	$0.74	$0.47	$0.20	$0.71	0.28
Overall	$3.38	$0.33	$3.33	$0.33	$0.05	$0.46	0.12

1) The headings in this table represent satellite radio in the absence of features which were removed during the willingness to pay question in the mall survey.
4. There was no music available, not even your favorite channels
** Matched to age and gender.*

Appendix 1-L-1. Anchored Importances as Measured in the Mall-Intercept Survey (demographic reweighting)

Feature (not necessarily independent features)	Anchored Importance: Subscribers							Percent Given Most Points: Subscribers						
	Unweighted		Matched to Demographics*		Testing for Differences			Unweighted		Matched to Demographics*		Testing for Differences		
	Mean	S.E. Mean	Mean	S.E. Mean	Diff in Means	Pooled S.E.	t-statistic	Mean	S.E. Mean	Mean	S.E. Mean	Diff in Means	Pooled S.E.	t-statistic
I can listen to music channels without any commercials	86.7	2.4	82.4	2.6	4.36	3.56	1.22	10.3%	1.6%	9.3%	1.3%	1.0%	2.1%	0.46
I can listen to music	88.7	2.2	84.6	2.4	4.12	3.26	1.26	10.2%	1.4%	9.8%	1.4%	0.4%	2.0%	0.22
I can listen to music from the 40's, 50's and 60's	52.7	1.8	52.0	3.2	0.74	3.67	0.20	1.9%	0.6%	2.9%	0.9%	-1.0%	1.0%	-0.97
I can listen to music from the 70's, 80's, 90's, and today	81.7	2.0	78.1	2.5	3.60	3.21	1.12	5.3%	1.1%	4.4%	0.9%	0.9%	1.4%	0.65

** Matched to age and gender.*

Appendix 1-M-1. Importance of Music Programming Features (from Internet Survey), (demographic reweighting)

Subscribers Only	Mean Anchored Importance							Percent Most Important						
Attribute	Unweighted		Matched to Demographics*		Testing for Differences			Subscribers N=219	Subscribers N=219	Matched to Demographics*		Testing for Differences		
	Mean	S.E. Mean	Mean	S.E. Mean	Diff in Means	Pooled S.E.	t-statistic	Mean	S.E. Mean	Mean	S.E. Mean	Diff in Means	Pooled S.E.	t-statistic
I can hear music from the 70's, 80's, 90's and today	16.2%	1.2%	18.3%	1.5%	-2.1%	1.9%	-1.11	16.1%	2.3%	20.7%	2.7%	-4.6%	3.5%	-1.31
I can hear music from the 40's, 50's, 60's and earlier	11.1%	1.3%	13.1%	1.5%	-2.0%	2.0%	-1.03	9.7%	1.8%	12.2%	2.1%	-2.5%	2.8%	-0.92
Most channels are commercial free	23.5%	1.3%	24.3%	1.4%	-0.8%	1.9%	-0.43	32.7%	2.9%	32.9%	3.1%	-0.2%	4.2%	-0.05
I can hear live studio performances and live concerts	5.7%	0.7%	3.9%	0.6%	1.8%	0.9%	2.00	3.3%	1.0%	1.4%	0.7%	1.9%	1.3%	1.51

** Matched to age and gender.*

Appendix 2

Appendix 2- Validation Protocol

VALIDATION PROTOCOL - Satellite Radio Study

- Validation forms for each location include:
  - Date of Interview
  - Respondent ID
  - Quota Group
  - Respondent's first name and last initial
  - Age Group of Respondent
  - Telephone Number
  - Name of interviewer.

VALIDATION INSTRUCTIONS

We attempted to validate 100% of the names provided.

Once a call was initiated for any telephone number, at least 16 attempts were made to reach that respondent. These attempts were made at varying times (in other words, the attempts were dialed during day, evening, and weekend hours.)

IF, DURING THE COURSE OF DIALING, A SITE REACHED AN UNUSUALLY HIGH NUMBER OF RESPONDENTS WHO REFUSED VALIDATION (OR THERE WAS NO SUCH PERSON) OR THE PERSON REACHED STATED OUTRIGHT THAT THEY DID NOT PARTICIPATE, A CALL WAS MADE TO APPLIED MARKETING SCIENCE.

ANY "FAILURES TO VALIDATE" WERE REPORTED (BY SITE AND RESPONDENT NUMBER) TO APPLIED MARKETING SCIENCE.

FURTHERMORE, IF THERE WERE AN INORDINATE NUMBER OF DISCONNECTS, A CALL WAS MADE TO APPLIED MARKETING SCIENCE. (Each telephone number was "dialed" by a mall supervisor for "legitimacy as a working number" before the actual interview took place. Nevertheless, we asked that sites alert us to patterns, etc.)

SITES WERE INSTRUCTED TO NOT WAIT UNTIL THE END OF THE VALIDATION PROCEDURE TO ALERT APPLIED MARKETING SCIENCE TO CONCERNS, PROBLEMS, OR ISSUES.

Once at least 16 attempts were made to reach that respondent, the validation process for this study was completed.

IMPORTANT DEFINITIONS:

Refused to Validate:
Respondent hung up on telephone call; refused to speak to person calling.

Failed to Validate:
Respondent states they did not participate in the study; are not the age stated on the screener or validation document; or did not receive their cash incentive.

SEE NEXT PAGE FOR VALIDATION PROTOCOL

Appendix 2- Validation Protocol

VALIDATION SCRIPT

Once a respondent was reached, the following was read:

Hello, I am _____ from Applied Marketing Science, a national market research company. Recently we conducted a study in your area and I'm calling to confirm a few points in the survey.

1. Were you recently approached at the _____ and asked questions, and then asked to go to a facility to do a survey? **(ANSWER MUST BE YES.)**

2. **Subscribers Only: Did you tell the interviewer that you currently have satellite radio in your household?**
   Considerers Only: Did you tell the interviewer that you are currently considering subscribing to satellite radio?

   (ANSWERS MUST BE YES)

3. When you went to the facility were you seated at a computer to answer questions about Satellite Radio? **(ANSWER MUST BE YES)**

4. And to confirm your age, are you between the ages of _____?. **(MUST MATCH INFORMATION PROVIDED.)**

5. And, at the completion of the survey were you paid $5.00 in cash for your opinions? **(ANSWER MUST BE YES)**

THANK YOU!

Appendix 3

Appendix 3. 95% Confidence Intervals for Numbers in the Exhibits to the Hauser Report

In this Appendix, the Exhibits which present numbers used in the Hauser Report have been expanded to include standard errors of the mean, as well as 95% confidence intervals. The latter are calculated using a two-tailed test, calculated as the mean plus or minus 1.96 times the standard error of the mean.

Appendix 3. Exhibit J-1. Willingness to Pay for Satellite Radio - Not Reweighted

Willingness to Pay for Satellite Radio in the Absence of Features

Overall

Order	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	Sound Quality Equal to FM	Sound Quality Equal to FM	Sound Quality Equal to FM	Sound Quality Equal to FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	No Music	No Music	No Music	No Music	No Talk	No Talk	No Talk	No Talk	No Sports	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	No News Weather or Traffic	No News Weather or Traffic	No News Weather or Traffic	No News Weather or Traffic
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$7.95	$0.74	$6.50	$9.40	$8.34	$0.70	$6.97	$9.72	$5.10	$0.79	$3.56	$6.64	$3.33	$0.89	$1.59	$5.07	$10.18	$0.52	$9.17	$11.20	$9.52	$0.53	$8.47	$10.56	$9.48	$0.56	$8.37	$10.59
Last	$12.67	$0.09	$12.49	$12.86	$12.24	$0.32	$11.62	$12.86	$11.64	$0.36	$10.93	$12.35	$11.61	$0.47	$10.70	$12.52	$12.71	$0.13	$12.45	$12.97	$12.37	$0.36	$11.66	$13.07	$12.52	$0.30	$11.93	$13.12
Overall	$10.95	$0.20	$10.55	$11.34	$11.10	$0.20	$10.72	$11.48	$10.14	$0.25	$9.64	$10.63	$9.27	$0.28	$8.71	$9.82	$11.57	$0.16	$11.26	$11.89	$11.57	$0.16	$11.25	$11.89	$11.41	$0.18	$11.05	$11.76
Base:	295																											

Willingness to Pay for Satellite Radio in the Absence of Features

Subscribers

Order	Local Reception Only	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	Sound Quality Equal to FM	Sound Quality Equal to FM	Sound Quality Equal to FM	Sound Quality Equal to FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	No Music	No Music	No Music	No Music	No Talk	No Talk	No Talk	No Talk	No Sports	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	No News Weather or Traffic	No News Weather or Traffic	No News Weather or Traffic	No News Weather or Traffic
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$7.57	$0.86	$5.88	$9.26	$7.73	$0.84	$6.08	$9.38	$4.27	$0.92	$2.46	$6.08	$3.17	$1.05	$1.12	$5.22	$10.04	$0.62	$8.83	$11.25	$9.17	$0.62	$7.95	$10.39	$8.65	$0.74	$7.21	$10.09
Last	$12.56	$0.12	$12.34	$12.82	$12.03	$0.42	$11.20	$12.86	$11.21	$0.48	$10.26	$12.16	$11.45	$0.55	$10.37	$12.53	$12.63	$0.18	$12.29	$12.97	$12.17	$0.48	$11.24	$13.10	$12.38	$0.41	$11.59	$13.17
Overall	$10.80	$0.24	$10.33	$11.27	$11.02	$0.23	$10.57	$11.47	$10.16	$0.29	$9.60	$10.72	$9.15	$0.33	$8.51	$9.79	$11.46	$0.18	$11.10	$11.82	$11.51	$0.19	$11.15	$11.87	$11.22	$0.22	$10.79	$11.65
Base:	214																											

Willingness to Pay for Satellite Radio in the Absence of Features

Considerers

Order	Local Reception Only	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	Sound Quality Equal to FM	Sound Quality Equal to FM	Sound Quality Equal to FM	Sound Quality Equal to FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	As Many Commercials as on AM or FM	No Music	No Music	No Music	No Music	No Talk	No Talk	No Talk	No Talk	No Sports	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	No News Weather or Traffic	No News Weather or Traffic	No News Weather or Traffic	No News Weather or Traffic
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$9.09	$1.43	$6.29	$11.89	$10.18	$1.23	$7.77	$12.59	$7.60	$1.51	$4.65	$10.55	$3.80	$1.66	$0.54	$7.06	$10.61	$0.92	$8.80	$12.42	$10.56	$1.02	$8.56	$12.56	$11.97	$0.47	$11.05	$12.89
Last	$12.95	$0.00	$12.95	$12.95	$12.87	$0.08	$12.71	$13.03	$12.93	$0.02	$12.90	$12.96	$12.09	$0.86	$10.40	$13.78	$12.95	$0.00	$12.95	$12.95	$12.95	$0.00	$12.95	$12.95	$12.95	$0.00	$12.95	$12.95
Overall	$11.38	$0.34	$10.71	$12.05	$11.34	$0.37	$10.61	$12.07	$10.06	$0.52	$9.04	$11.08	$9.61	$0.54	$8.55	$10.67	$11.51	$0.33	$11.27	$12.55	$11.75	$0.34	$11.08	$12.42	$11.96	$0.29	$11.38	$12.54
Base:	81																											

1) The headings in this table represent satellite radio in the absence of features which were removed during the willingness to pay question in the mall survey.
1. You couldn't get reception nationally, just locally
2. Sound quality was only equal to that of the FM radio you can listen to
3. There were as many commercials as on AM or FM Radio
4. There was no music available, not even your favorite channels
5. There were no talk shows available, not even your favorite hosts
6. There was no sports coverage available, not even your favorite teams
7. There were no news, weather or traffic reports available

t-value for 95% confidence intervals, 2-tailed test: 1.96

Appendix 3. Exhibit J-2. Willingness to Pay for Satellite Radio - Reweighted

Willingness to pay for Music				
	Overall			
Order	**No Music[1]**	**No Music**	**No Music**	**No Music**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
First	$6.19	$1.08	$4.07	$8.31
Last	$11.61	$0.47	$10.69	$12.53
Overall	$9.73	$0.27	$9.20	$10.25
Base:	295			
Willingness to pay for Music				
	Subscribers			
Order	**No Music**	**No Music**	**No Music**	**No Music**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
First	$6.38	$1.30	$3.83	$8.93
Last	$11.45	$0.55	$10.37	$12.53
Overall	$9.69	$0.31	$9.08	$10.30
Base:	214			
Willingness to pay for Music				
	Considerers			
Order	**No Music**	**No Music**	**No Music**	**No Music**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
First	$5.63	$1.87	$1.97	$9.29
Last	$12.09	$0.86	$10.40	$13.78
Overall	$9.83	$0.52	$8.80	$10.86
Base:	81			

1) The heading in this table representa satellite radio in the absence of music:
"There was no music available, not even your favorite channels"

t-value for 95% confidence intervals, 2-tailed test: 1.96

Appendix 3. Exhibit K-1. Value of Satellite Radio Features - Not Reweighted

Value of Satellite Radio Features

Overall

Order	National Reception[1]	National Reception[1]	National Reception[1]	National Reception[1]	Sound Quality Better than FM	Sound Quality Better than FM	Sound Quality Better than FM	Sound Quality Better than FM	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Music	Current Levels of Music	Current Levels of Music	Current Levels of Music	Current Levels of Talk	Current Levels of Talk	Current Levels of Talk	Current Levels of Talk	Current Levels of Sports	Current Levels of Sports	Current Levels of Sports	Current Levels of Sports	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$4.65	$0.74	$3.20	$6.10	$4.38	$0.69	$3.04	$5.73	$7.60	$0.79	$6.05	$9.15	$9.21	$0.89	$7.47	$10.96	$2.58	$0.52	$1.56	$3.60	$3.07	$0.62	$1.85	$4.29	$2.98	$0.57	$1.86	$4.11
Last	$0.11	$0.08	($0.04)	$0.27	$0.43	$0.31	($0.17)	$1.04	$0.59	$0.33	($0.06)	$1.25	$0.92	$0.45	$0.03	$1.81	$0.00	$0.00	$0.00	$0.00	$0.34	$0.33	($0.30)	$0.99	$0.30	$0.30	($0.29)	$0.89
Overall	$1.68	$0.20	$1.30	$2.07	$1.54	$0.19	$1.16	$1.91	$2.50	$0.25	$2.01	$2.99	$3.37	$0.28	$2.82	$3.92	$1.05	$0.16	$0.75	$1.36	$1.07	$0.15	$0.76	$1.37	$1.22	$0.18	$0.88	$1.57
Base:	295																											

Value for Satellite Radio Features

Subscribers

Order	National Reception	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	Sound Quality Better than FM	Sound Quality Better than FM	Sound Quality Better than FM	Sound Quality Better than FM	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Music	Current Levels of Music	Current Levels of Music	Current Levels of Music	Current Levels of Talk	Current Levels of Talk	Current Levels of Talk	Current Levels of Talk	Current Levels of Sports	Current Levels of Sports	Current Levels of Sports	Current Levels of Sports	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$4.91	$0.86	$3.22	$6.60	$4.92	$0.82	$3.31	$6.53	$8.35	$0.93	$6.53	$10.17	$9.23	$1.05	$7.17	$11.29	$2.66	$0.62	$1.44	$3.88	$3.30	$0.76	$1.81	$4.79	$3.65	$0.75	$2.18	$5.12
Last	$0.15	$0.11	($0.06)	$0.36	$0.55	$0.41	($0.25)	$1.35	$0.79	$0.44	($0.08)	$1.65	$0.94	$0.53	($0.11)	$1.99	$0.00	$0.00	$0.00	$0.00	$0.46	$0.44	($0.40)	$1.32	$0.40	$0.40	($0.39)	$1.19
Overall	$1.72	$0.23	$1.26	$2.18	$1.51	$0.22	$1.07	$1.95	$2.37	$0.28	$1.82	$2.92	$3.38	$0.33	$2.74	$4.02	$1.06	$0.18	$0.72	$1.40	$1.02	$0.17	$0.69	$1.35	$1.30	$0.21	$0.88	$1.72
Base:	214																											

Value for Satellite Radio Features

Considerers

Order	National Reception	Local Reception Only[1]	Local Reception Only[1]	Local Reception Only[1]	Sound Quality Better than FM	Sound Quality Better than FM	Sound Quality Better than FM	Sound Quality Better than FM	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Commercials	Current Levels of Music	Current Levels of Music	Current Levels of Music	Current Levels of Music	Current Levels of Talk	Current Levels of Talk	Current Levels of Talk	Current Levels of Talk	Current Levels of Sports	Current Levels of Sports	Current Levels of Sports	Current Levels of Sports	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic	Current Levels of News Weather and Traffic
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$3.86	$1.43	$1.05	$6.67	$2.77	$1.23	$0.36	$5.18	$5.35	$1.51	$2.40	$8.30	$9.16	$1.66	$5.90	$12.41	$2.34	$0.92	$0.53	$4.15	$2.39	$1.02	$0.39	$4.39	$0.98	$0.47	$0.06	$1.91
Last	$0.00	$0.00	$0.00	$0.00	$0.08	$0.08	($0.08)	$0.25	$0.02	$0.02	($0.02)	$0.05	$0.86	$0.86	($0.83)	$2.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Overall	$1.57	$0.34	$0.90	$2.24	$1.61	$0.37	$0.88	$2.34	$2.89	$0.52	$1.87	$3.91	$3.34	$0.54	$2.29	$4.40	$1.04	$0.33	$0.39	$1.68	$1.20	$0.34	$0.53	$1.87	$0.99	$0.29	$0.42	$1.57
Base:	81																											

1) The headings in this table represent the values of features as measured by the willingness to pay question in the mail survey. They are listed in full below.

1. You couldn't get reception nationally, just locally

2. Sound quality was only equal to that of the FM radio you can listen to

3. There were as many commercials as on AM or FM Radio

4. There was no music available, not even your favorite channels

5. There were no talk shows available, not even your favorite hosts

6. There was no sports coverage available, not even your favorite teams

7. There were no news, weather or traffic reports available

t-value for 95% confidence intervals, 2-tailed test: 1.96

Appendix 3. Exhibit K-2. Value of Satellite Radio Features - Reweighted

Value for Satellite Radio Features				
	Overall			
Order	Current Levels of Music[1]	No Music	No Music	No Music
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$6.48	$1.06	$4.41	$8.55
Last	$0.92	$0.45	$0.03	$1.81
Overall	$2.93	$0.27	$2.41	$3.45
Base:	295			
Value for Satellite Radio Features				
	Subscribers			
Order	Current Levels of Music	No Music	No Music	No Music
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$6.20	$1.26	$3.72	$8.68
Last	$0.94	$0.53	($0.11)	$1.98
Overall	$2.87	$0.31	$2.27	$3.47
Base:	214			
Value for Satellite Radio Features				
	Considerers			
Order	Current Levels of Music	No Music	No Music	No Music
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
First	$7.32	$1.87	$3.66	$10.98
Last	$0.86	$0.86	($0.83)	$2.56
Overall	$3.12	$0.52	$2.09	$4.14
Base:	81			

1) The heading in this table represents the value of music measured by the willingness to pay question in the mall survey:
"There was no music available, not even your favorite channels"

t-value for 95% confidence intervals, 2-tailed test: 1.96

Appendix 3. Exhibit L. Anchored Importances as Measured in the Mall-Intercept Survey

Feature (not necessarily independent features)	Average Anchored Score Overall*	Average Anchored Score Overall*	Average Anchored Score Overall*	Average Anchored Score Overall*	% Given Most Points Overall*	% Given Most Points Overall*	% Given Most Points Overall*	% Given Most Points Overall*	Anchored Importance Subscribers	Anchored Importance Subscribers	Anchored Importance Subscribers	Anchored Importance Subscribers	% Given Most Points Subscribers	% Given Most Points Subscribers	% Given Most Points Subscribers	% Given Most Points Subscribers	Anchored Importance Considerers	Anchored Importance Considerers	Anchored Importance Considerers	Anchored Importance Considerers	% Given Most Points Considerers	% Given Most Points Considerers	% Given Most Points Considerers	% Given Most Points Considerers
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
I can listen to music	89.0	1.8	85.5	92.5	10.7%	1.2%	8.3%	13.2%	88.7	2.2	84.4	92.9	10.2%	1.4%	7.4%	13.0%	90.1	2.9	84.4	95.7	12.2%	2.5%	7.3%	17.1%
I can listen to music channels without any commercials	87.2	2.0	83.3	91.0	9.7%	1.3%	7.1%	12.2%	86.7	2.4	82.0	91.4	10.3%	1.6%	7.1%	13.4%	88.5	3.1	82.5	94.5	7.9%	1.8%	4.4%	11.4%
I can always find what I want to listen to, when I want to listen to it	84.1	1.4	81.3	86.9	7.7%	1.2%	5.4%	10.0%	84.1	1.7	80.8	87.4	8.3%	1.5%	5.4%	11.3%	84.2	2.5	79.3	89.0	5.7%	1.5%	2.8%	8.7%
Provides excellent sound quality (better than either AM or FM radio)	82.3	1.5	79.4	85.2	4.2%	0.6%	3.1%	5.4%	81.5	1.8	78.0	84.9	4.2%	0.7%	2.8%	5.6%	84.8	2.4	80.0	89.5	4.3%	1.1%	2.2%	6.4%
I can listen to music from the 70's, 80's, 90's, and today	81.8	1.6	78.6	84.9	5.4%	0.9%	3.6%	7.1%	81.7	2.0	77.8	85.6	5.3%	1.1%	3.2%	7.4%	82.0	2.6	76.9	87.0	5.5%	1.7%	2.2%	8.8%
I can listen to my stations wherever I go, even when traveling long distances	81.0	1.6	77.8	84.2	4.3%	0.7%	2.8%	5.7%	80.2	2.0	76.3	84.1	4.6%	1.0%	2.7%	6.5%	83.4	2.6	78.3	88.5	3.4%	0.5%	2.5%	4.4%
Provides consistently clear reception no matter where I go, even in the city	80.9	1.5	77.9	83.8	4.2%	0.6%	3.0%	5.5%	80.4	1.8	76.9	84.0	4.2%	0.7%	2.8%	5.6%	82.1	2.5	77.2	87.0	4.4%	1.4%	1.6%	7.1%
The artist and song name are displayed on my screen	80.6	1.5	77.6	83.5	3.5%	0.6%	2.3%	4.7%	80.0	1.8	76.5	83.6	3.2%	0.6%	1.9%	4.4%	82.2	2.6	77.1	87.3	4.5%	1.4%	1.7%	7.2%
I can listen to a lot of programs and content not available on either AM or FM radio	79.1	1.6	76.0	82.3	5.7%	1.1%	3.6%	7.8%	79.3	1.9	75.5	83.0	6.3%	1.3%	3.7%	8.9%	78.7	2.8	73.2	84.1	3.9%	1.4%	1.1%	6.6%
It is easy to find what I want to listen to without a lot of hunting around	77.1	1.6	74.0	80.3	2.4%	0.6%	1.3%	3.5%	75.8	2.0	71.9	79.6	2.7%	0.7%	1.2%	4.1%	81.2	2.5	76.3	86.2	1.6%	0.3%	1.0%	2.1%
I don't hear the same things over and over	77.0	1.6	73.8	80.2	3.0%	0.4%	2.2%	3.7%	75.1	2.0	71.1	79.0	2.6%	0.4%	1.8%	3.3%	82.9	2.4	78.1	87.6	4.1%	1.1%	1.9%	6.2%
The organization of channels makes it easy for me to explore a specific genre	74.4	1.6	71.2	77.7	1.6%	0.3%	1.1%	2.1%	74.1	2.0	70.2	78.1	1.5%	0.3%	0.9%	2.1%	75.3	2.6	70.2	80.4	1.7%	0.5%	0.6%	2.8%
The depth of the music programming helps me to find new songs to add to my collection	72.2	1.8	68.7	75.8	2.9%	0.7%	1.6%	4.2%	70.7	2.2	66.3	75.1	2.6%	0.8%	1.2%	4.1%	76.9	2.8	71.4	82.3	3.7%	1.4%	0.9%	6.4%
The DJ's don't talk too much	71.1	1.6	68.0	74.3	2.9%	0.5%	1.8%	3.9%	69.2	2.0	65.3	73.1	2.7%	0.6%	1.5%	3.9%	76.8	2.5	71.9	81.8	3.3%	1.1%	1.2%	5.4%
I can listen to the same stations in the car, at home, or on the Internet	71.0	1.6	67.8	74.2	3.5%	0.6%	2.2%	4.7%	67.9	2.0	63.9	71.8	2.8%	0.7%	1.5%	4.1%	80.3	2.6	75.2	85.5	5.4%	1.5%	2.4%	8.4%
I can listen to uncensored programs	69.7	1.6	66.5	72.8	3.6%	0.8%	2.0%	5.1%	69.7	1.9	66.0	73.5	4.2%	1.0%	2.1%	6.2%	69.5	2.8	64.0	74.9	1.8%	0.4%	1.1%	2.5%
There are shows dedicated to specific topics that interest me	68.8	1.8	65.3	72.3	2.9%	0.8%	1.3%	4.5%	68.0	2.2	63.7	72.2	3.0%	1.0%	1.0%	5.0%	71.3	2.9	65.6	77.0	2.6%	1.0%	0.6%	4.6%
There are stations available for everyone in my family	68.2	1.5	65.3	71.2	3.2%	0.7%	1.9%	4.5%	68.1	1.8	64.5	71.6	3.3%	0.8%	1.7%	4.9%	68.7	2.6	63.6	73.8	3.0%	1.1%	0.9%	5.1%
I can hear programs and music that make me feel nostalgic..	66.8	1.9	63.1	70.5	2.1%	0.5%	1.1%	3.2%	66.2	2.3	61.7	70.7	2.1%	0.6%	0.8%	3.3%	68.5	2.9	62.8	74.2	2.3%	1.0%	0.3%	4.3%
Provides the latest breaking news..	65.7	1.9	62.0	69.3	1.4%	0.2%	1.0%	1.8%	64.9	2.3	60.5	69.4	1.3%	0.3%	0.8%	1.8%	67.9	3.0	61.9	73.8	1.6%	0.4%	0.9%	2.3%
There are still many channels waiting to be explored	64.3	1.9	60.7	68.0	1.3%	0.3%	0.8%	1.8%	63.1	2.3	58.6	67.7	1.3%	0.3%	0.7%	1.9%	68.0	2.9	62.3	73.7	1.4%	0.5%	0.3%	2.4%
I can get weather and traffic reports whenever I want to, without waiting	64.0	2.0	60.1	67.9	1.8%	0.4%	1.0%	2.6%	61.9	2.5	57.1	66.7	1.8%	0.5%	0.7%	2.8%	70.1	3.1	64.0	76.2	1.8%	0.3%	1.1%	2.4%
There are programs where interesting and knowledgeable DJ's..	63.6	1.4	60.8	66.3	2.0%	0.6%	0.8%	3.3%	63.1	1.7	59.8	66.5	1.9%	0.7%	0.4%	3.3%	64.8	2.5	60.0	69.7	2.6%	1.4%	0.0%	5.4%
Informs me about what music, shows, and events are coming up..	61.2	1.5	58.3	64.1	1.2%	0.3%	0.7%	1.7%	58.9	1.8	55.4	62.3	1.2%	0.3%	0.6%	1.8%	68.3	2.4	63.5	73.0	1.4%	0.5%	0.3%	2.4%
There are talk and entertainment shows with interesting and knowledgeable hosts	58.3	2.0	54.4	62.1	1.0%	0.3%	0.4%	1.6%	57.0	2.4	52.3	61.7	0.8%	0.2%	0.3%	1.2%	62.2	3.1	56.2	68.3	1.7%	1.0%	0.0%	3.6%
Offers more in-depth sports programming than either AM or FM radio..	57.1	1.9	53.5	60.8	2.5%	0.6%	1.2%	3.8%	58.3	2.3	53.9	62.8	2.6%	0.8%	1.0%	4.2%	53.5	3.0	47.6	59.5	2.2%	1.0%	0.3%	4.2%
I can listen to all, not just some of my favorite sport's games	55.0	1.8	51.5	58.6	2.5%	0.6%	1.4%	3.6%	54.9	2.2	50.5	59.3	2.5%	0.7%	1.2%	3.8%	55.5	2.8	50.1	61.0	2.6%	1.0%	0.5%	4.6%
I can listen to music from the 40's, 50's and 60's	53.4	1.5	50.5	56.3	1.8%	0.4%	1.0%	2.7%	52.7	1.8	49.2	56.2	1.9%	0.6%	0.8%	3.0%	55.4	2.5	50.5	60.3	1.7%	0.4%	0.9%	2.5%
I can get weather and traffic from all around the country	52.4	2.2	48.1	56.7	0.9%	0.1%	0.6%	1.2%	50.7	2.7	45.5	55.9	0.9%	0.2%	0.5%	1.2%	57.3	3.7	50.0	64.5	1.1%	0.2%	0.6%	1.5%

t-value for 95% confidence intervals, 2-tailed test: 1.96

Appendix 3. Exhibit M. Importance of Music Programming Features (From Internet Survey)

Attribute	Overall Average N=279	Overall Average N=279	Overall Average N=279	Overall Average N=279	Subscribers N=219	Subscribers N=219	Subscribers N=219	Subscribers N=219	Considerers N=60	Considerers N=60	Considerers N=60	Considerers N=60	Percent Most Important Overall N = 279	Percent Most Important Overall N = 279	Percent Most Important Overall N = 279	Percent Most Important Overall N = 279	Percent Most Important Subscribers N=219	Percent Most Important Subscribers N=219	Percent Most Important Subscribers N=219	Percent Most Important Subscribers N=219	Percent Most Important Considerers N=60	Percent Most Important Considerers N=60	Percent Most Important Considerers N=60	Percent Most Important Considerers N=60
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
Most channels are commercial free	24.1%	1.2%	21.8%	26.3%	23.5%	1.279%	21.0%	26.0%	25.8%	2.6%	20.7%	30.8%	34.9%	2.7%	29.7%	40.1%	32.7%	2.9%	27.0%	38.5%	41.5%	6.0%	29.8%	53.2%
I can hear music from the 70's, 80's, 90's and today	15.8%	1.0%	13.9%	17.8%	16.2%	1.223%	13.8%	18.6%	14.9%	1.7%	11.6%	18.1%	16.0%	2.0%	12.1%	20.0%	16.1%	2.3%	11.7%	20.5%	15.9%	4.3%	7.5%	24.3%
The artist and song title are displayed on my screen	13.7%	0.8%	12.1%	15.2%	14.3%	0.954%	12.5%	16.2%	11.7%	1.4%	8.9%	14.4%	11.0%	1.7%	7.8%	14.3%	11.1%	1.8%	7.5%	14.7%	10.8%	3.8%	3.4%	18.2%
The selection and sequencing of the songs on the channels I listen to	12.5%	0.8%	10.9%	14.2%	12.5%	0.991%	10.6%	14.5%	12.5%	1.6%	9.3%	15.6%	9.5%	1.6%	6.4%	12.7%	9.5%	1.8%	6.0%	13.0%	9.7%	3.3%	3.2%	16.2%
The music is uncensored	10.5%	0.8%	9.0%	12.0%	10.4%	0.896%	8.7%	12.2%	10.6%	1.5%	7.6%	13.5%	10.9%	1.7%	7.6%	14.2%	11.7%	2.0%	7.7%	15.6%	8.5%	3.1%	2.5%	14.6%
I can hear music from the 40's, 50's, 60's and earlier	10.2%	1.0%	8.1%	12.2%	11.1%	1.254%	8.6%	13.5%	7.6%	1.8%	3.9%	11.2%	8.2%	1.4%	5.4%	11.0%	9.7%	1.8%	6.2%	13.2%	3.8%	2.0%	-0.1%	7.7%
DJ's and celebrity hosts provide commentary and personality	6.7%	0.7%	5.3%	8.0%	6.3%	0.786%	4.7%	7.8%	7.8%	1.5%	4.8%	10.7%	5.9%	1.3%	3.4%	8.4%	6.0%	1.4%	3.2%	8.7%	5.8%	2.9%	0.1%	11.4%
I can hear live studio performances and live concerts	6.6%	0.6%	5.4%	7.8%	5.7%	0.690%	4.3%	7.0%	9.4%	1.2%	7.1%	11.7%	3.4%	0.8%	1.8%	5.1%	3.3%	1.0%	1.3%	5.3%	4.0%	1.4%	1.3%	6.7%

t-value for 95% confidence intervals, 2-tailed test: 1.96

Appendix 3. Exhibit N-1. Willingness to Pay Using Pelcovits Cut-off - Not Reweighted

Comparison of willingness to pay using cut-off from Pelcovits												
Across all orders:	**Overall**	**Overall**	**Overall**	**Overall**	**Subscribers**	**Subscribers**	**Subscribers**	**Subscribers**	**Considerers**	**Considerers**	**Considerers**	**Considerers**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
Would cancel*	14.6%	2.1%	10.5%	18.6%	14.5%	2.4%	9.8%	19.2%	14.8%	3.9%	7.1%	22.5%
Would pay less than $7.27	25.8%	2.6%	20.8%	30.8%	26.6%	3.0%	20.7%	32.5%	23.5%	4.7%	14.2%	32.7%
Base:	295				214				81			
If music shown first:	**Overall**	**Overall**	**Overall**	**Overall**	**Subscribers**	**Subscribers**	**Subscribers**	**Subscribers**	**Considerers**	**Considerers**	**Considerers**	**Considerers**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
Would cancel*	56.0%	8.6%	39.1%	72.9%	56.5%	10.3%	36.2%	76.8%	54.5%	15.0%	25.1%	83.9%
Would pay less than $7.27	74.6%	7.4%	60.1%	89.1%	78.3%	8.6%	61.5%	95.1%	63.6%	14.5%	35.2%	92.0%
Base:	34				23				11			
If music shown last:	**Overall**	**Overall**	**Overall**	**Overall**	**Subscribers**	**Subscribers**	**Subscribers**	**Subscribers**	**Considerers**	**Considerers**	**Considerers**	**Considerers**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
Would cancel*	4.4%	--	0.0%	11.1%	5.9%	--	0.0%	14.7%	0.0%	0.0%	0.0%	0.0%
Would pay less than $7.27	6.7%	--	0.0%	15.6%	5.9%	--	0.0%	14.7%	9.1%	--	0.0%	27.3%
Base:	45				34				11			

** A respondent will cancel if their willingness to pay is $0.00.*
***When percents are close to zero the exact binomial distribution is used.*

t-value for 95% confidence intervals 1.96

Appendix 3. Exhibit N-2. Willingness to Pay Using Pelcovits Cut-off - Reweighted

Comparison of willingness to pay using cut-off from Pelcovits												
Across all orders:	**Overall**	**Overall**	**Overall**	**Overall**	**Subscribers**	**Subscribers**	**Subscribers**	**Subscribers**	**Considerers**	**Considerers**	**Considerers**	**Considerers**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
Would cancel*	12.2%	1.9%	8.4%	15.9%	11.8%	2.2%	7.5%	16.1%	13.3%	3.8%	5.9%	20.7%
Would pay less than $7.27	21.8%	2.4%	17.1%	26.5%	22.3%	2.8%	16.7%	27.9%	20.3%	4.5%	11.5%	29.1%
N	295				214				81			
If music shown first:	**Overall**	**Overall**	**Overall**	**Overall**	**Subscribers**	**Subscribers**	**Subscribers**	**Subscribers**	**Considerers**	**Considerers**	**Considerers**	**Considerers**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
Would cancel*	39.9%	8.5%	23.3%	56.5%	38.0%	10.1%	18.2%	57.8%	45.6%	15.0%	16.2%	75.0%
Would pay less than $7.27	53.1%	8.7%	36.1%	70.1%	52.6%	10.4%	32.2%	73.0%	54.5%	15.0%	25.1%	83.9%
N	34				23				11			
If music shown last:	**Overall**	**Overall**	**Overall**	**Overall**	**Subscribers**	**Subscribers**	**Subscribers**	**Subscribers**	**Considerers**	**Considerers**	**Considerers**	**Considerers**
	Mean	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**	**Mean**	**S.E. Mean**	**95% C.I. Lower**	**95% C.I Upper**
Would cancel*	4.4%	--	0.0%	11.1%	5.9%	--	0.0%	14.7%	0.0%	0.0%	0.0%	0.0%
Would pay less than $7.27	6.7%	--	0.0%	15.6%	5.9%	--	0.0%	14.7%	9.1%	--	0.0%	27.3%
N	45				34				11			

** A respondent will cancel if their willingness to pay is $0.00.*
***When percents are close to zero the exact binomial distribution is used.*

t-value for 95% confidence intervals, 2-tailed test: 1.96

Appendix 3. Exhibit O. Value of Sound Recording Rights Disaggregated by Time Period

Value of Sound Recording Rights

A. Unweighted								
Overall[1]	Music From the 40's 50's and 60's	Music From the 40's 50's and 60's	Music From the 40's 50's and 60's	Music From the 40's 50's and 60's	Music From the 70's, 80's, 90's and Today	Music From the 70's, 80's, 90's and Today	Music From the 70's, 80's, 90's and Today	Music From the 70's, 80's, 90's and Today
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
	$1.32	$0.11	$1.10	$1.54	$2.05	$0.17	$1.72	$2.38
B. Reweighted								
Overall[1]	Music From the 40's 50's and 60's	Music From the 40's 50's and 60's	Music From the 40's 50's and 60's	Music From the 40's 50's and 60's	Music From the 70's, 80's, 90's and Today	Music From the 70's, 80's, 90's and Today	Music From the 70's, 80's, 90's and Today	Music From the 70's, 80's, 90's and Today
	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper	Mean	S.E. Mean	95% C.I. Lower	95% C.I Upper
	$1.15	$0.11	$0.94	$1.36	$1.78	$0.16	$1.46	$2.10

1) Base is 288

t-value for 95% confidence intervals, 2-tailed test: 1.96

Benston

Before the
COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of	)	
ADJUSTMENT OF RATES AND TERMS FOR PREEXISTING SUBSCRIPTION SERVICES AND SATELLITE DIGITAL AUDIO RADIO SERVICES	)	Docket No. 2006-1 CRB DSTRA

REBUTTAL TESTIMONY OF GEORGE J. BENSTON

I. INTRODUCTION AND QUALIFICATIONS

My qualifications, in brief, are as follows. I presently hold the position of John H. Harland Professor of Finance, Accounting and Economics at the Goizueta Business School and Professor of Economics in the College, both at Emory University. I have held these positions since mid-1987. In addition, I have been Associate Dean for Research, Chair of the Accounting Area and Chair of the Finance Area at the Goizueta Business School. From 1966 through 1987, I was at the Simon Graduate School of Management of the University of Rochester, where I held the titles first of Associate Professor and then Professor of Accounting, Finance and Economics. From 1962 through 1966, I was an Assistant Professor of Accounting at the Graduate School of Business of the University of Chicago, and in 1957-58 Assistant Professor of Accounting at Georgia State University. I presently also am Honorary Visiting Professor at City University, London, England and have been a Distinguished Visiting Fellow at Oxford University in England, and Visiting Professor at the London School of Economics, London Business School, Hebrew University in Israel, and University of California at Berkeley.

For seventeen years, I was an invited instructor in a program of economics and finance for federal judges and law professors sponsored first by the Law and Economics Center of

Emory University and then by the Law and Economics Center of George Mason University. At these programs, I taught federal judges and law professors the application of accounting and financial data for understanding markets (including securities markets), the assessment of damages, and antitrust economics.

I received a Ph.D. in finance and economics from the Graduate School of Business of the University of Chicago in 1962, an M.B.A. in accounting and taxation from the Graduate School of Business of New York University in 1953, and a B.A. in liberal arts and accounting from Queens College (New York City) in 1952. I am a C.P.A., registered in North Carolina, where I passed the examination with the highest grades in the state.

Prior to entering the U.S. Navy in 1953, where I served for three years on active duty, I worked in public accounting. After being honorably discharged as a Lieutenant Junior Grade (LTJG), I worked for the First National Bank of Atlanta and taught part-time at Georgia State University.

I am the author or co-author of over 155 books, monographs, and articles in refereed academic journals (not including comments and articles in non-academic publications) that cover the subjects of accounting, finance, and economics. These include analyses of securities markets, banking markets, banking operations, regulation of financial markets, financial and managerial accounting, cost estimation, mortgage markets, and discrimination in lending and retirement annuities.

I have been qualified as an expert witness for plaintiffs, defendants, the U.S. Department of Justice, and the U.S. Internal Revenue Service. I have never been disqualified as an expert witness. I have testified (at depositions, hearings, or trial) over thirty-five times. This testimony includes analysis of and recommendations to U.S. District Courts and the Copyright Board of

Canada on the pricing of blanket music-performances licenses to television broadcasters from ASCAP and BMI, issues involving securities, investment banking and underwriting, commercial banking, saving and loan associations, antitrust, taxation, accounting, and auditing. In one instance, I was appointed by a federal judge to serve as the Court's independent expert witness in a predatory pricing case. I have also testified before committees of the U.S. Congress and the Canadian Parliament, the Securities and Exchange Commission, and the Financial Accounting Standards Board. I have been a consultant to the Federal Reserve Board, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation (FDIC). My curriculum vitae as of December 31, 2006 is attached hereto as Benston Rebuttal Exhibit 1.

II. ASSIGNMENT

I have been asked by counsel for XM Satellite Radio Inc. (XM) and Sirius Satellite Radio Inc.(Sirius), the pre-existing satellite digital audio radio services (SDARS), to review and evaluate one of the analyses first presented by SoundExchange economist Dr. Michael Pelcovits in his Amended Written Direct Testimony. In particular, I have been asked to review and discuss Dr. Pelcovits' use of the SDARS non-music programming costs as a benchmark for the sound recording performance right.

III. ASSESSMENT OF DR. PELCOVITS' NON-MUSIC PROGRAMMING COST ANALYSIS

In his Amended Written Direct Testimony, Dr. Pelcovits introduces an analysis that attempts to use the SDARS' payments for non-music content as a benchmark for SDARS payments for music programming. He asserts: "The total costs to the SDARS for their music channels (including the sound recording royalty, the publishers' royalty, and the SDARS internal programming expenses) ought to comprise at least the same percent of revenues as the comparable payments for non-music channels. This is so because music provides greater value

to the companies than does the non-music programming, as revealed not only in the Wind survey data relied on in my original testimony, but also the data in XM's and Sirius's own surveys, showing that subscribers spend significantly more than 50% of their time on an SDARS service listening to music [p. 9]."

Dr. Pelcovits' proposed non-music programming expense benchmark suffers from significant conceptual and methodological flaws. As a preliminary matter, Dr. Pelcovits' analysis generally suffers from the fact that the SDARS' non-music programming contracts do not reflect the section 801(b) factors. Moreover, the SDARS's non-music content agreements involve different sellers, who likely have different opportunity costs and different rights than those at issue in this proceeding. Thus, they do not make a very good benchmark to use in assessing the value of the performance rights for post-1972 sound recordings.

Second, his reliance on the underlying assumption that the ratio of marginal cost to marginal product provides a basis for pricing different inputs is simply wrong as a matter of elementary economics. That relationship does not hold for average costs, which, at best, are the numbers he presents. Furthermore, he neglects the vital economic concept of "supply," wherein market-clearing prices are determined by competition among suppliers and by competition among alternative purchasers of their products. Thus, there is no economic justification for accepting Dr. Pelcovits' proposition that the SDARS' music programming costs "ought to comprise at least the same percent of revenues as comparable payments for non-music channels."

Third, Dr. Pelcovits introduces substantial and unjustifiable bias into his analysis by basing his estimates on 2006 numbers, when it should have been clear from even Mr. Butson's projections that programming expenses do not scale in proportion to revenues.[1] Thus, Dr.

---

[1] See Written Direct Testimony of Sean Butson, Appendix A & B.

Pelcovits' use of 2006, a year in which the SDARS earned revenues substantially below the annual revenues expected during the license period, dramatically overstates the non-music programming costs as a percentage of revenue, as I show later.

Finally, Dr. Pelcovits ignores the substantial benefits that the SDARS obtain from non-music programming expenditures that they do not obtain from music programming. These benefits include sales of advertising on non-music channels. Those advertising revenues provide a direct offset to the programming cost that is not available on music channels, which, for competitive reasons, are commercial free. The SDARS also benefit from the association with valuable brands, such as the NFL, Oprah and NASCAR, including the added promotion that the SDARS receive from mentions in the press and from direct endorsements by the likes of Oprah and Martha Stewart, and the benefit of exclusivity, which is not present for the sound recording performance right.

Assuming for the sake of argument, however, that Dr. Pelcovits' theoretical construct were correct, which it is not, I replicate Dr. Pelcovits' analysis with several important corrections. Specifically: (1) I perform the analysis using current projections for the actual license term, rather than only for 2006; (2) I use more precise projected musical works royalties and non-royalty music programming costs; and (3) I properly account for the offsetting advertising sales made by the SDARS on non-music channels. I thus demonstrate that Dr. Pelcovits' analysis, with these corrections, would result in a sound recording performance right equal to [[ ]] of the SDARS' combined revenues over the license term.

A. Conceptual and Methodological Flaws in Dr. Pelcovits' Proposed Non-Music Programming Cost Benchmark

1. *Dr. Pelcovits Is Wrong To Assume that the Amounts Paid for Music and Non-Music Programming Should Be Equal.*

Dr. Pelcovits' proposition that non-music and music programming costs should be equal and his use of Howard Stern's contract and other non-music content agreements as meaningful indicators of the value of sound recording performance right to the SDARS, are contrary to basic economic reasoning. Dr. Pelcovits' statement that "SoundExchange is not fairly compensated under the compulsory license if sound recording payments, relative to the value sound recordings provide, are lower than the comparable market-based payments to which parties in an unfettered market agree" is not consistent with pricing in competitive markets, let alone with the section 801(b) factors.

Dr. Pelcovits' theory is analogous to the age-old economic misunderstanding or puzzle that, because water provides greater value to people than diamonds, net of the cost of producing and delivering water and diamonds, water should sell at a greater price than diamonds. After all, water is necessary for human existence, while people can do without diamonds. It is empirically obvious that all people need water and most purchase it, while relatively few people purchase diamonds. Yet, it also is empirically obvious that diamonds sell at a higher price than water.

Similarly, Dr. Pelcovits argues that music should sell at the same price, measured as a percentage of the SDARS' revenue, as non-music programming. (For the moment, I will not consider the inappropriateness of his using costs that do not vary with revenue as a basis for calculating the royalty.) He cites surveys showing that subscribers to the SDARS' services listen extensively to music. (At this point I will not consider the validity of a survey that asks people what they listen to in broad generalities as a measure of the amount they would pay to listen to specific recordings or groups of recordings.) Using the same reasoning as did people before they

understood basic economic analysis (marginal utility), Dr. Pelcovits opines that the owners of music performing rights should be paid the same amounts (relative to revenue) as suppliers of non-music.

William Jevons and Carl Menger (independently) solved this puzzle in their books published in 1871, when they pointed to the missing element – supply. In most environments, water is much more plentiful and less costly to produce than diamonds. Although, all other things equal, people would pay more for water than for diamonds, all other things are not equal. Markets clear at a price where supply is equated with demand. Given the much greater supply of water than diamonds, the market-clearing price of water is much lower than the market-clearing price of diamonds. Consequently, as Jevons and Menger pointed out, while on average in aggregate water is more highly valued than diamonds, the prices of these products are determined by their marginal rather than their average utility. And, their marginal utility is a function of their supply as well as their demand.

Essentially, the market price for goods depends on the extent to which those goods have close substitutes and the competitiveness of the suppliers of those goods. The closer the substitutes, the lower the market price of the goods, all other things equal. For example, the price that Howard Stern can get for his services is higher than the price that a performer who is similar to other performers can get, because Stern has few, if any, substitutes. In addition, Stern offers Sirius exclusive radio broadcast rights, which increases the amount he can command in a competitive market.

In contrast, although some music recordings have few substitutes, much (perhaps most) recorded music is similar to other recorded music. Consequently, while for many consumers there is no substitute for Howard Stern, many recordings are substantially inter-changeable.

When there is competition among suppliers of an input, the extent of substitution is greater (indeed, that is the measure of the competitiveness of a market), and the price of the good supplied is lower, all other things equal.

2. *Dr. Pelcovits Introduces Significant Bias by his Use of Programming Expenses and Revenues in 2006 as a Benchmark Year for the License Term.*

In his "surplus" analysis, Dr. Pelcovits declared that the correct year to analyze is 2012, notably the year in which Mr. Butson projected that the SDARS would have the highest revenues. He ignores prior years in which the SDARS are incurring losses on the ground that they are investing in their business and are not mature. For reasons he does not explain, in his Amended Written Direct Testimony, Dr. Pelcovits decides not to rely on projections for 2012; although he uses such numbers to project his "surplus" for the Shapley model. Instead, in undertaking this analysis, he relies on 2006 information. This decision introduces serious bias into his results and leads to a dramatic overstatement of the proposed sound recording performance rights fee that results from his analysis.

Mr. Butson testified that the SDARS' non-music programming costs are "related to major sports and personality deals" and are "fixed costs,"[2] meaning, these costs will decline as a percentage of revenue as the SDARS' subscriber base and revenues grow over time. Dr. Pelcovits recognized this phenomenon with respect to non-royalty music programming costs,[3] but he ignores it in connection with his analysis of non-music programming expenses.

Of course, even recognizing the diminished expectations now facing the SDARS, it is clear from analyst consensus projections that the revenues of the SDARS are expected to grow

---

[2] Written Direct Testimony of Sean Butson, p. 20.

[3] Amended Testimony of Michael Pelcovits, p. 3.

substantially and consistently over the license period. Thus, the non-music programming costs, as a percentage of revenue, will decline substantially over the license period. The effect of Dr. Pelcovits' use of 2006 is to overstate dramatically non-music programming costs (and thus his resulting sound recording performance right fee) as a percentage of revenue during the license period.

3. *Dr. Pelcovits Ignores Important Offsetting Benefits Obtained by the SDARS from Non-Music Programming.*

In a sense, Dr. Pelcovits compares apples to oranges by comparing the price paid by the SDARS for non-music programming to the costs paid for music programming and then by further using that comparison to determine a fee for the sound recording performance right. Non-music programming provides important benefits to the SDARS that are not conferred by the sound recording performance right.

First, and most directly, the SDARS are able to advertise on their non-music channels, while still maintaining a differentiated product. These advertising revenues (net of the cost of selling the advertising and any revenue shares from the advertising) serve as a direct offset to the cost of obtaining the non-music content. Dr. Pelcovits' analysis does not take this value into account.

Second, many of the non-music content deals are with well-known and well-respected brands, such as the NFL, NASCAR, Major League Baseball, Oprah Winfrey and Martha Stewart. The SDARS are permitted to use these brands in their own promotional activities. Thus, they obtain substantial value from their association with these brands. The sound recording performance right does not provide similar brand value, as it grants no right to the SDARS to use famous consumer brands.

Third, many of the non-music content deals have led, and were expected to lead, to significant publicity and press exposure. This exposure is a form of advertising and is potentially very valuable, as in the case of the massive publicity surrounding Sirius' agreement with Howard Stern.[4] The amounts paid by the SDARS for these inputs, then, reflect promotional benefits to the SDARS that are not obtained from the sound recording performance right. For purposes of the analysis proposed by Dr. Pelcovits, these benefits reduce the recorded amounts paid for non-music content and should be deducted from annual non-music programming expenses.

B. Re-Computation of Dr. Pelcovits's Non-Music Programming Cost Benchmark Correcting Certain Significant Methodological Flaws

I have been asked to recreate Dr. Pelcovits' analysis to correct two of the most significant computational flaws he makes—his use of 2006 only and his failure to recognize the offsetting value to the SDARS of advertising sales on non-music channels. Because they are available to me, I also use the SDARS' projections of the musical work royalty and the SDARS' projections of non-royalty music programming costs during the license term. In other respects, I use Dr. Pelcovits' approach, such as the inclusion of all XM non-music programming expenses and Sirius' non-Stern, non-music programming expenses (recognizing the unique characteristics and circumstances of the Stern agreement). I do not include the offsetting benefits to the SDARS arising from the value of brand association or the publicity obtained by the SDARS, which means that the results of this re-analysis most likely significantly over-value the sound recording performance right.

This re-analysis shows that, with just these corrections, Dr. Pelcovits' analysis results in a much lower imputed sound recording performance right (one much closer to the fees proposed

---

[4] See generally, Written Direct Testimony of Mel Karmazin; Written Direct Testimony of David Frear; 6/6/07 Transcript (Frear).

by the SDARS than by SoundExchange). By doing this re-analysis, I do not mean to understate the basic conceptual flaws in Dr. Pelcovits' approach that renders it invalid from the viewpoint of economic theory and practice.

The full impact of these two errors is set forth in Tables 1, 1A and 1B where I calculate the net non-music programming costs for both SDARS, using the recent projections for 2007-2012 provided by the two companies as part of their respective rebuttal cases. On a combined basis, Dr. Pelcovits' corrected methodology yields a weighted average net non-music programming expense benchmark of [[ ]]

Certification

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

Dated: New York, NY
July 24, 2007

George J. Benston, Ph.D.

TABLE 1 COMBINED CONTAINS RESTRICTED INFORMATION PURSUANT TO THE DECEMBER 20, 2006 PROTECTIVE ORDER AND THEREFORE WAS OMITTED FROM THIS PUBLIC VERSION

TABLE 1A CONTAINS RESTRICTED INFORMATION PURSUANT TO THE DECEMBER 20, 2006 PROTECTIVE ORDER AND THEREFORE WAS OMITTED FROM THIS PUBLIC VERSION

TABLE 1B CONTAINS RESTRICTED INFORMATION PURSUANT TO THE DECEMBER 20, 2006 PROTECTIVE ORDER AND THEREFORE WAS OMITTED FROM THIS PUBLIC VERSION

SDARS – Benston
Ex. 1

GEORGE J. BENSTON

December 2003

John H. Harland Professor of Finance, Accounting, and Economics
Roberto C. Goizueta Business School
Professor of Economics, College of Arts and Sciences
Emory University
Atlanta, GA 30322
Tel: (404) 727-7831; Fax: (404) 727-5238
E-Mail: george_benston@bus.emory.edu

3572 Knollwood Drive
Atlanta, GA 30305
Tel: (404) 233-6424; Fax: (404) 239-6289

Personal

Married, wife (Alice) is Ph.D., Associate Professor of Theater Studies at Emory University (formerly Associate Dean of Graduate Studies and Chair of Theater Studies Department)
Children, two boys (both married)
Veteran, U.S. Navy (LTJG), 1953-1956

Education

Degrees Earned

Ph.D. (Economics), 1963, University of Chicago, Graduate School of Business
M.B.A. (Accounting and Taxation), 1953, New York University, Graduate School of Business Administration
B. A. Queens College, City University of New York, February, 1952.
C.P.A. North Carolina, 1955

Honors and Awards

Distinguished Scholar Award, Eastern Finance Association, 2003
Adam Smith Award, National Association of Business Economists (NABE) (awarded jointly with George Kaufman and Edward Kane), 2002
Henry Thornton Invited Distinguished Lecturer (19th), City University, London, UK, October 1997
John M. Olin Distinguished Visiting Fellowship, Templeton College, Oxford University, 1987
American Accounting Association Distinguished International Lecturer for 1980 (Lectured in Central and South America)
Beta Gamma Sigma Distinguished Scholar for 1975
Phi Beta Kappa (Queens College)
Beta Gamma Sigma (New York University)
C.P.A. examination passed with highest marks in the state
Ford Foundation Dissertation Fellow, 1961-62
Federal Reserve Bank of Chicago Research Fellow, 1960-61
United States Steel Foundation Fellow, 1958-59 and 1959-60
Woodrow Wilson Fellow (Honorary), 1958-59
Tuition Scholarships, New York University
Departmental Honors - Economics (Accounting), Queens College

American Accounting Association Competitive Manuscript Award, First prize 1966 for "Multiple Regression Analysis of Cost Behavior"

Positions

Administration (Emory University)

Area Coordinator, Finance Group, Goizueta Business School, Emory University, 1988 - 1990, 1992 - 1996

Area Coordinator, Accounting Group, Goizueta Business School, 1992 - 1993

Associate Dean for Faculty Research and Center Development, Goizueta Business School, 1990 - 1992

Teaching

1987-Present	Emory University
1985-Present	Honorary Visiting Professor, City University, London
1979-1996	Invited Lecturer, Law and Economics Center, George Mason University Law School: Advanced Courses for Federal Judges in Statistics, Econometrics and Financial Data Antitrust Economics Economics Institute for Law Professors
1987	John M. Olin Distinguished Visiting Fellow Templeton College, Oxford University (UK)
1969-1987	Professor of Accounting, Economics, and Finance William E. Simon Graduate School of Business Administration University of Rochester
1981 (Lenten Term)	Visiting Professor of Accounting London School of Economics (UK)
1979 (Summer)	Arthur Young McClelland Moores Distinguished Visiting Professor London Graduate School of Business Studies (UK)
1978 and 1972	Distinguished Visiting Faculty American Accounting Association Doctoral Consortium
1973 (Spring)	Visiting Professor London Graduate School of Business Studies London School of Economics Hebrew University of Jerusalem (May)
1966-1969	Associate Professor of Accounting and Finance College of Business Administration, University of Rochester
1962-1966	Assistant Professor of Accounting Graduate School of Business, University of Chicago
1963 (Summer)	Visiting Assistant Professor of Finance, University of California Berkeley
1956-1958	Instructor and Assistant Professor of Accounting, Georgia State College, Atlanta

Industry and Consulting

Various Times	Expert witness in regulation, SEC, banking, and antitrust cases for private defendants and plaintiffs, Department of Justice, Internal Revenue Service, and Federal District Court Judge Kenneth Ryskamp
2003	Advisor on accounting to the Examiner in Bankruptcy, Neal Batson (Alston & Bird, Atlanta, GA), Enron Corporation
1987 -	Member, Interim and Permanent Board of Directors, Federal Agricultural Mortgage Corporation (Farmer Mac) -- Presidential
Appointments	
1984-1985, 1988	Consultant, The World Bank
1981-1984 2002-2004	Visiting Scholar, Federal Reserve Bank of Atlanta
1983	Director, Sixty-Fourth American Assembly on "The Future of American Financial Services Institutions," Arden House, Harriman, NY, April
1981-1982	Academic Advisory Committee, Study of the Payments Mechanism conducted by Arthur D. Little, Inc. funded by The Association of Reserve City Bankers
1969-1978	Federal Reserve Board, Washington, D.C.
1970-1972	National Commission on Consumer Finance
1970-1971	Commission on Financial Structure and Regulation (Hunt Commission)
1970-1971	Savings Banks Association of New York State
1970-1971	Morgan Guaranty Trust Company of New York (paper on overdraft banking)
1966-1969	Federal Home Loan Bank Board, Washington, D.C.
1965-1968	American Bankers Association, Banking and Financial Affairs Sub-Committee
1965-1966	Regional Economic Advisor, Comptroller of the Currency
1964-1965	Banking and Currency Committee, House of Representatives
1964-1966	NABAC, The Association for Bank Audit, Control and Operations (now Bank Administration Institute)
1957-1958	The First National Bank of Atlanta (as a consultant, designed and implemented a cost accounting system for the bank)
1956-1957	The First National Bank of Atlanta Accounting and Tax Specialist
1953-1956	Auditor and Supply Officer (LTJG) U.S. Navy Cost Inspection Service, Mobile Audit Staff, Atlanta, GA Resident Auditor, Western Electric Company, Burlington, NC

Industry and Consulting (continued)

1952-1953	Accountant, Benjamin Smith & Company, CPA, N.Y.C.
1952-1953	Junior Accountant, David Shain & Company, CPA, N.Y.C.

Legislative Testimony

Various Times	U.S. Senate and House Judiciary and Banking Committees House of Commons, Standing Committee on Finance, Trade and Economic Affairs, Canada Securities and Exchange Commission Hearings Financial Accounting Standards Board Ontario (Canada) Securities Commission Hearings Federal Trade Commission Hearings

Publications (grouped, roughly, by subject areas)

Accounting (including accounting-economics and accounting-finance)

Books

Following the Money: The Enron Failures and the State of Corporate Disclosure (with Michael Bromwich, Robert E. Litan, and Alfred Wagenhofer), AEI-Brookings Joint Center for Regulatory Studies, Washington DC, 2003

Contemporary Cost Accounting and Control, editor, Dickenson Publishing Company, Belmont, CA, First Edition, 1970; Second Edition, CBI Publishing Company, Boston, MA, 1977

Corporate Financial Disclosure in the U.K. and the U.S.A., Saxon/Lexington Books (D.C. Heath) and the Institute of Chartered Accountants in England and Wales (London), 1976, 206 pp.

Monographs:

Investors' Use of Financial Accounting Statement Numbers: A Review of Evidence from Stock Market Research, University of Glasgow Press (an earlier version was delivered as the Arthur Young Distinguished Lecture presentation, Glasgow University), October 1979

Voluntary vs Mandated Disclosure (An Evaluation of the Basis for the Recommendations of the Working Group on Improved Product and Adviser Disclosure), Report prepared for the New Zealand Business Roundtable, Wellington, NZ, May 1997.

Articles in Academic Journals and Publications:

"Appraising the Defensive Position of a Firm: The Interval Measure" (with George H. Sorter), The Accounting Review, XXXV, October 1960, 633-640

"The Role of the Firm's Accounting System for Motivation," The Accounting Review, XXXVIII, April 1963, 347-354. (Reprinted in Rappaport, eds., Information for Decision Making, Prentice-Hall; Bruns and DeCosta, eds., Accounting and its Behavioral Implications, McGraw-Hill; and other books)

"Multiple Regression Analysis of Cost Behavior," The Accounting Review, XLI, October 1966, 657-672. (First Prize American Accounting Association Manuscript Contest, read before 1966 Annual AAA Meeting, Miami, Florida.) (Reprinted in David Solomons, ed., Studies in Cost

Analysis, second edition, Irwin; Alfred Rappaport, Information for Decision Making, Prentice-Hall; and other books)

Accounting (including accounting-economics and accounting-finance)

Articles in Academic Journals and Publications: (continued)

"Published Corporate Accounting Data and Stock Price, "The Journal of Accounting Research, Empirical Research in Accounting: Selected Studies, 1967, 1-54

"The Effectiveness and Effects of the SEC's Accounting Disclosure Requirements," in Economic Policy and the Regulation of Corporate Securities, Henry G. Manne, ed., the American Enterprise Institute, Washington, D.C., 1969, 23-79

"The Value of the SEC's Accounting Disclosure Requirements," The Accounting Review, XLIV, July 1969, 515-532 (originally presented to the Annual Meeting of the American Accounting Association, San Diego, California, August 1968)

"Required Disclosure and The Stock Markets: An Evaluation of the Securities Exchange Act of 1934," American Economic Review, LXIII, March 1973, 132-155

"Financial Reporting and the Stock Markets: 'Evaluation of the Securities Exchange Act of 1934,' George J. Benston: 'The Other Side,' A.A. Sommer, Jr.: Comments on 'The Other Side,' George Benston, "Financial Executive, May 1974, 28-42 (a less technical version of "Required Disclosure and the Stock Market: An Evaluation of the Securities Act of 1934," that appeared in the American Economic Review, March 1973)

"A Critique of the Rationale for Required Corporation Financial Disclosure," in Emanuel Saxe Distinguished Lecture Series, 1973-74, Reed K. Storey, ed., Baruch College, City University of New York, 1975, 37-52

"Accountants' Integrity and Financial Reporting," Financial Executive, XLIII, August 1975, 10-14 (an earlier version was presented at the American Accounting Association annual meeting, August 1974)

"Accounting Standards in the U.S. and the U.K.: Their Nature, Causes and Consequences," Vanderbilt Law Review, 28, January 1975, 235-268. (Reprinted in Corporate Counsel's Annual-1976, Ed., H. Friedman, J.P. O'Brien and H.J. Schlegman, Mathew Bender, New York, 1976)

"Public (U.S.) Compared to Private (U.K.) Regulation of Corporate Financial Disclosure," Accounting Review, LI, July 1976, 483-498. (Reprinted in Notable Contributions to the Periodical International Accounting Literature-1975-78, Selected by the International Accounting Section of the American Accounting Association, 1979)

"Cost Measurement," in Handbook of Cost Accounting, Sidney Davidson and Roman Weil, eds., McGraw-Hill, 1978, Chapter 5, 1-32

"An Appraisal of the Costs and Benefits of Government-Required Disclosures: SEC and FTC Requirements," Law and Contemporary Problems, XLI, Summer 1977, 30-62. (Reprinted in Corporations at the Crossroads: Governance and Reform, Deborah A. DeMott, ed., New York: McGraw-Hill, 1980, 37-69)

"The Economic Consequence of Financial Accounting Statements" (With Melvin A. Krasney), in Economic Consequences of Financial Accounting Standards, Selected Papers [one of five papers chosen in competition with other submissions], Financial Accounting Standards Board Research Report, July 1978, 159-252

Accounting (including accounting-economics and accounting-finance) (continued)

Articles in Academic Journals and Publications (continued)

"DAAM: The Demand for Alternative Accounting Measurements" (with Melvin A. Krasney), Journal of Accounting Research, Supplement, 16, 1978, 1-45

"Required Periodic Disclosure Under the Securities Acts and the Proposed Federal Securities Code," University of Miami Law Review, 33, September 1979, 1471-1484. (Reprinted in the Journal of Accountancy, October 1980, 34-45)

"The Market for Public Accounting Services: Demand, Supply and Regulation," The Accounting Journal, 2, 1979/1980, 1-46. (First presented to a Liberty Fund Seminar conducted by the Law and Economics Center, University of Miami). Republished (with small changes) in the Journal of Accounting and Public Policy, 4, No. 1, Spring 1985, 33-79

"The Establishment and Enforcement of Accounting Standards: Methods, Benefits and Costs," Accounting and Business Research, 41, Winter 1980, 51-60. (The paper was prepared for the Arthur Young McClelland Moores Distinguished Visiting Accounting Professorship, London Graduate School of Business Studies, Summer 1979.) Also published in the 1980 Accounting Research Convocation, John O. Mason, Jr., ed., University of Alabama, 25-43

"Are Accounting Standards Necessary?," in British Accounting Standards: The First Ten Years, edited by Sir Ronald Leach and Edward Stamp, Woodhead-Fulkner Ltd., 1981, 201-214

"Security for Investors," chapter 6 in Instead of Regulation, Robert W. Poole, Jr., ed., Lexington Books, Lexington, MA, 1982, 169-205

"Accounting and Corporate Accountability," Accounting, Organization and Society, 7, No. 2, 1982, 87-105. (An earlier version of this paper was presented as a University of London Special University Lecture, February 1981)

"An Analysis of the Role of Accounting Standards for Enhancing Corporate Governance and Social Responsibility," Journal of Accounting and Public Policy, 1, 1982, 5-17. (First presented at a conference on international accounting standards held at the London Graduate School of Business Studies, January 1982). Also published in Accounting Standard Setting, Michael Bromwich and Anthony Hopwood, eds., Pitman Books Ltd., London, 1983, 13-26

"The Costs of Complying with a Government Data Collection Program: The FTC's Line of Business Report," Journal of Accounting and Public Policy, 3, 1984, 123-137

"On the Value and Limitations of Financial Accounting," Contemporary Accounting Research, 1, No. 1, 1985, 47-57

"The Self-Serving Management Hypothesis: Some Evidence," Journal of Accounting and Economics, 7, 1985, 67-84

"Market-Value vs. Historical Cost Accounting: Evidence from Southeastern Thrifts", with Mike Carhill, and Brian Olasov, in Reform of Deposit Insurance: Disciplining the Government and Protecting Taxpayers James R. Barth and R. Dan Brumbaugh, Jr., eds, New York: Harper Business, 1992, 277-304

Accounting (including accounting-economics and accounting-finance) (continued)

Articles in Academic Journals and Publications (continued)

"Financial Reporting of Derivatives: An Analysis of the Issues, Evaluation of Proposals, and a Suggested Solution," with Shehzad Mian, Journal of Financial Engineering, 4, 1995, 217-246

"Accounting for Derivatives: Back to Basics," Journal of Applied Corporate Finance, 10, 1997 (Fall), 46-58.

"Enron: what happened and what we can learn from it," with Al L. Hartgraves, Journal of Accounting and Public Policy, 21, 2002, 105-127.

"The Evolving Accounting Standards for Special Purpose Entities (SPEs) and Consolidation," with Al L. Hartgraves, 16, Accounting Horizons, 2002, 245-58.

"Measuring Corporate Performance: The Perils of Turning to Cash Flow," with Ray Hill and Al L. Hartgraves, Public Utilities Fortnightly, 2003 (May 15).

"Accounting Doesn't Need Fixing (Just Reinterpreting)," Journal of Applied Corporate Finance, 15, 2003 (Spring), 83-96.

"The Regulation of Accountants and Public Accounting Before and After Enron," Emory Law Journal, 52, 2003 (Summer), 1325-1351.

"The Quality of Corporate Financial Statements and Their Auditors before and after Enron" (Policy Analysis, No. 497, Cato Institute, November 6, 2003).

"The Role and Limitations of Financial Accounting and Auditing for Financial Market Discipline," in Market Discipline: The Evidence Across Countries and Industries," W. Curt Hunter, ed., Cambridge MA: MIT Press, 2004, forthcoming.

Reviews and Comments

Review of Accounting, Evaluation and Economic Behavior by Raymond J. Chambers, American Economic Review, XLIV, March 1967, 297-299

Comment on "Empirical Research in Accounting, 1960-70: An Appraisal," by Nils Hakansson, in Nicholas Dopuch and Lawrence Revsine, eds., Accounting Research 1960-70: A Critical Evaluation, University of Illinois, Center for International Education and Research in Accounting, Champaign, Illinois, 1973, 174-178

Review article on Unaccountable Accounting by Abraham Briloff, Journal of Accounting Research, 12 (Autumn 1974), 348-354. Also published in Wall Street Review of Books, 1, December 1973, 465-470

"Corporate Disclosure: Who Needs More?" New York Times, Sunday Business Section, March 17, 1974

"Required Disclosure and the Stock Market: Rejoinder," American Economic Review, 65, June 1975, 473-477

"There's No Real News in Earnings Reports," Fortune Magazine, April 1976, 73-75

Comments on "The Ups and Downs of Income Numbers: Intertemporal Smoothing," by Joshua Ronen and Simcha Sadan, Proceedings of the Conference on Topical Research in Accounting, Ross Institute, New York University, 1976, 317-323

Review of The SEC and Corporate Disclosure: Regulation in Search of a Purpose, by Homer Kripke, The Accounting Review, LVI, April 1981, 431-434

Accounting (including accounting-economics and accounting-finance) (continued)

Reviews and Comments (continued)

"Rejoinder to 'Accounting and Corporate Accountability: An Extended Comment'," Accounting, Organizations and Society, Vol. 9, No. 3/4, 1984, 417-419

"Disclosure Rules Do Not Work," Financier, IX, October 1985, 44-48

"Toward A Cost-Benefit Analysis of the SEC: Have the British a Better Way?," Midland Corporate Finance Journal, 3. Summer 1985, 65-85 (a revised version of "Security for Investors," originally published in Instead of Regulation)

"Do We Really Need the SEC?," CFO Magazine, April 1986, 10-12

"The Benefits and Costs of Managers of Voluntary Accounting Disclosure -- A Discussion of: 'Current Cost Accounting in Canada: Disclosers and Non-Disclosers'," (by Daniel Thornton), Contemporary Accounting Research, Fall 1986 (3, No. 1),.35-44

Discussion of "Credibility in Private Sector Standard Setting" by Thomas Dyckman and "Political Economy of Accounting Standards," by Shyam Sunder, in Journal of Accounting Literature, 7, 1988, 42-49

Review article on Defining the Roles of Accountants, Bankers and Regulators in the United States, A Study Group Report (Washington DC: Group of Thirty, 1994), Accounting Horizons, 9, 1995, 138-142

Banking and Finance

Books

Financial Services: The Changing Institutions and Government Policy, editor, Prentice-Hall, Englewood Cliffs, NJ, 1983 (papers commissioned and edited for a conference sponsored by The American Assembly, Arden House, April 1983, of which I was director), 285 pp.

Perspectives on Safe and Sound Banking: Past, Present, and Future, (with Robert A. Eisenbeis, Paul M. Horvitz, Edward J. Kane, and George G. Kaufman), Boston, MA: MIT Press, 1986, 358 pp.

The Separation of Commercial and Investment Banking: The Glass-Steagall Act Revisted and Reconsidered, London, UK: Macmillan Press Ltd., and New York, NY: Oxford University Press, 1990

Discrimination in Financial Services, co-edited with W. Curt Hunter and George G. Kaufman, Boston: Kluwer Academic Publishers, 1997

Monographs

"Savings Banking and the Public Interest," Journal of Money, Credit and Banking, IV, February 1972, Part II, 130-226

"Bank Examination," The Bulletin (New York University Institute of Finance), Nos. 89-90, May 1973, 73 pp. (Originally prepared for the Commission on Financial Structure and Regulation)

Federal Reserve Membership: Consequences, Costs, Benefits and Alternatives, Trustees of the Banking Research Fund, Association of Reserve City Bankers (Chicago), monograph series, 1978, 77 pp. (The Executive Summary also is published in the Journal of Bank Research, 10, Spring 1980, 57-60) (Reprinted in Havrilesky and Boorman, eds., Current Perspectives in Banking, second edition, ANM Publishing, Arlington Heights, IL, 1980)

Banking and Finance (continued)

Monographs (continued)

An Economic Analysis of the Federal Home Loan Bank Board's Proposed Regulation "Limitations on Direct Investment by Insured Institutions" (with an introduction and evaluation by Alan Greenspan), December 1984, 108 pp.

An Analysis of The Causes of Savings and Loan Failures, Monograph Series in Finance and Economics, Salomon Center, New York University Graduate School of Business Administration, Monograph 1985 - 4/5, 180 pp.

Risk and Solvency Regulation of Depository Institutions: Past Policies and Current Options (with George G. Kaufman), Monograph Series in Finance and Economics, Salomon Center, New York University Graduate School of Business Administration, Monograph 1988 -1, 86 pp.

Restructuring America's Financial Institutions (with R. Dan Brumbaugh, Jr., Jack M. Guttentag, Richard J. Herring, George G. Kaufman, Robert E. Litan, and Kenneth E. Scott), Washington, DC: The Brookings Institution, 1989, 34 pp.

Regulating Financial Markets: A Critique and some Proposals, Hobart Paper 135, Institute of Economic Analysis, London, UK (an earlier version was presented as the 19th Henry Thornton Lecture, City University, London (November 1997), 130 pp. Also published (same title, with some changes) by the American Enterprise Institute, AEI Studies on Financial Market Deregulation, Washington, DC. 1999, 136 pp.

Reforming Bank Capital Regulation: A Proposal by the U.S. Shadow Financial Regulatory Committee (with other SFRC members: Charles Calomiris, Franklin Edwards, Scott Harrington, Richard Herring, Paul Horvitz, Roberta Romano, Hal Scott, Kenneth Scott, and Peter Wallison), American Enterprise Institute, Washington, DC. 2000.

Articles in Academic Journals and Publications

"Interest Payments on Demand Deposits and Bank Investment Behavior," Journal of Political Economy, LXXII, October 1964, 431-449. (An earlier version of the paper was presented at the Summer 1963 meetings of the Econometric Society)

"Commercial Bank Price Discrimination Against Small Loans: An Empirical Study," Journal of Finance, XIX, December 1964, 631-643

"Branch Banking and Economies of Scale," Journal of Finance, XX, May 1965, 312-331. (Presented at the 1984 meeting of the American Finance Association)

"Economies of Scale and Marginal Costs in Banking Operations," National Banking Review, 2, June 1965, 507-549. (Reprinted in Analytical Methods in Banking, Kalman J. Cohen and Frederick S. Hammer, eds., Irwin, 1966; Studies in Banking Competition and the Banking Structure, Office of the Comptroller of the Currency, Washington, 1966; and Frederick Bell and Neil Murphy, Cost in Commercial Banking, Federal Reserve Bank of Boston, 1968)

"Substandard Loans," The National Banking Review, 4, March 1969, 271-281

"An Analysis and Evaluation of Alternative Reserve Requirement Plans," The Journal of Finance, XXIV, December 1969, 849-870

"Cost of Operations and Economies of Scale in Savings and Loan Associations," research paper in Study of the Savings and Loan Industry, directed by Irwin Friend, Federal Home Loan Bank Board, U.S. Government Printing Office, Washington, D.C., 1970, 677-761

"Economies of Scale of Financial Institutions," Journal of Money, Credit and Banking, IV, May 1972, 312-341. (First presented to the 1970 ABA Conference of University Professors)

Banking and Finance (continued)

Articles in Academic Journals and Publications (continued)

"Overdraft Banking: Its Implications for Monetary Policy, the Commercial Banking Industry and Individual Banks," Journal of Bank Research, 3, Spring 1972, 7-25

"The Optimal Banking Structure: Theory and Evidence from the United States, "Kredit und Kapital, 5, December 1972, 438-476; also published in an almost identical version as "The Optimal Banking Structure: Theory and Evidence," in Journal of Bank Research, 3, Winter 1973, 220-236 (Reprinted in Havrilesky and Boorman, eds., Current Perspectives in Banking, first and second editions, ANM Publishing, Arlington Heights, IL, 1976 and 1980)

"Bank Examiners' Evaluation of Credit: An Analysis of the Usefulness of Substandard Loan Data," with John Tepper Marlin, The Journal of Money, Credit and Banking, VI, February 1974, 23-44. (An earlier version was presented at the Econometric Society Meeting, New Orleans, LA)

"Determinants of Bid-Asked Margins in the Over-the-Counter Market" (with Robert L. Hagerman), Journal of Financial Economics, 1, December 1974, 353-364

"The Costs to Consumer Finance Companies of Extending Consumer Credit," The National Commission on Consumer Finance, U.S. Government Printing Office, Washington, D.C., Technical Studies, Volume II, 1975, 1-158

"An Analysis of Maine's '36 Month Limitation' on Finance Company Small Loans," The National Commission on Consumer Finance, U.S. Government Printing Office, Washington, D.C., Technical Studies, Volume II, 1975, 1-63

"State Controls on Consumer Finance Company Loans: The Case of Maturity Regulation in Maine," in Government Credit Allocation: Where Do We Go From Here?, Karl Brunner, ed., Institute for Contemporary Studies (San Francisco), 1975, 181-208

"A Transactions Cost Approach to the Theory of Financial Intermediating" (with Clifford W. Smith, Jr.), Journal of Finance, XXXI, May 1976, 215-231 (An earlier version was presented at the 1975 American Finance Association annual meeting)

"An Analysis of the Capital Requirements of S&L Associations," in Change in the Savings and Loan Industry (Proceedings of the Second Annual Conference), Federal Home Loan Bank of San Francisco, December 1976, 159-166

"The Impact of Maturity Regulation on High Interest Rate Lenders and Borrowers," Journal of Financial Economics, 4, January 1977, 23-49

"A Summary Report on Bank Holding Company Affiliation and Economies of Scale" with Gerald A. Hanweck), in Bank Structure and Competition, Federal Reserve Bank of Chicago, Chicago, Illinois, 1977, 158-167

"Risk on Consumer Finance Company Personal Loans", Journal of Finance, XXXII, May 1977, 593-607 (first presented at the 1976 American Finance Association annual meeting)

"Graduated Rate Ceilings and Operating Costs by Size of Consumer Cash Loans," Journal of Finance, XXXII, June 1977, 695-707

"Rate Ceiling Implications of the Cost Structure of Consumer Finance Companies," Journal of Finance, XXXII, September 1977, 1169-119

"Risk, Volume and Spread" (with Robert L. Hagerman), Financial Analysts Journal, January/February 1978, 46-49

Banking and Finance (continued)

Articles in Academic Journals and Publications (continued)

"Scale Economies in Banking: A Restructuring and Reassessment" (with Gerald A. Hanweck and David B. Humphrey), Journal of Money, Credit and Banking, XIV, November 1982, part 1, 435-456

"Operating Costs in Commercial Banking" (with Gerald A. Hanweck and David B. Humphrey), Economic Review, Federal Reserve Bank of Atlanta, LXVII, November 1982, 6-21 (Reprinted in Havrilasky, Schweitzer, and Boorman, eds., Dynamics of Banking, Harlan Davidson, Arlington Heights, IL, 1985

"Federal Regulation of Banking: Analysis and Policy Recommendations," Journal of Bank Research, 13, Winter 1983, 216-244. Reprinted with small changes in George G. Kaufman and Roger C. Kormendi, eds., Deregulating Financial Services: Public Policy in Flux, 1986, as "Federal Regulation of Banking: Historical Overview," 1-47

"Deposit Insurance and Bank Failures," Economic Review (Federal Reserve Bank of Atlanta), March 1983, 4-17

"The Regulation of Financial Services," Financial Services: The Changing Institutions and Government Policy, George J. Benston ed., Prentice-Hall, Englewood Cliffs, NJ, 1983, 28-63 (also "Introduction" and "A Summary of Public Policy Questions")

"Economies of Scale and Scope in Banking" (with Allen N. Berger, Gerald A. Hanweck, and David B. Humphrey), in Proceedings from A Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1983, 432-455

"The Cost of Banking Operations and Interstate Banking," in Interstate Banking Expansion: Market Forces and Competitive Realities, Report of the Florida Interstate Banking Study Group, January 1984, 141-148 and The Journal of Corporate Law, 9, Summer 1984, 720-724. Also published in Commercial Banking and Interstate Expansion, Larry A. Frieder et al., VMI Research Press, Ann Arbor, Michigan, 1985, 121-125

"Financial Disclosure and Bank Failures," Economic Review (Federal Reserve Bank of Atlanta), March 1984, 5-12. (Reprinted in Havrilasky, Schweitzer, and Boorman, eds., Dynamics of Banking, Harlan Davidson, Arlington Heights, IL, 1985

"The Effects of Regulation," Chapter 6 in Payments in the Financial Services Industry of the 1980s, Federal Reserve Bank of Atlanta, Quorum Books, 1984, 125-137

"Brokered Deposits and Deposit Insurance Reform," Issues in Bank Regulation, 7, Spring 1984, 17-24

"Interest on Deposits and the Survival of Chartered Depository Institutions," Economic Review (Federal Reserve Bank of Atlanta), October 1984, 42-56

"The Regulation of U.S. Banking," in Canadian Financial Institutions: Changing the Regulatory Environment, The Faculty of Law-University of Toronto, Institute for Policy Analysis-University of Toronto, Canadian Bar Association-Ontario, and Ontario Economic Council, 1986, 219-35

"Risks and Failures in Banking: Overview, History and Evaluation," (with George G. Kaufman) in Deregulating Financial Services: Public Policy in Flux, edited by George G. Kaufman and Roger C. Kormendi, Ballinger Press, 1986, pp. 49-77 (Chapter 2). Also in this volume, "Federal Regulation of Banking: Historical Overview: (Chapter 1, pp. 1-47), a slightly revised version of a previously published article.

Banking and Finance (continued)

Articles in Academic Journals and Publications (continued)

"The Role of Regulation for the Stability of Financial Institutions," in Symposium on Debt, Financial Stability, and Public Policy, Federal Reserve Bank of Kansas City, 1986, 137-152

"Why Continue to Regulate Banks?: An Historical Assessment of Federal Banking Regulation," Midland Corporate Finance Journal, 5, Fall 1987, 67-82 (a revised, updated version of "Federal Regulation of Banking: Analysis and Policy Recommendations," Journal of Bank Research, 13, Winter 1983)

"The Problems and Future of Commercial Banks," Midland Corporate Finance Journal, Winter 1988, 6-13

"Regulating Bank Safety and Performance," with George G. Kaufman, in Restructuring the Financial System, William S. Haraf, and Rose Marie Kushmeider, eds., Washington, D.C.: American Enterprise Institute, 1988, 63-99 (a more extensive version is published as a monograph Risk and Solvency Regulation of Depository Institutions, Monograph Series in Finance and Economics, Salomon Center, New York University Graduate School of Business Administration, Monograph 1988 –1.

"On the Controversy Over Asset Restrictions for Thrift Institutions," with R. Dan Brumbaugh, Jr., Housing Finance Review, 7, 1988, (Fall/Winter), 361-369

"The Federal 'Safety Net' and the Repeal of the Glass-Steagall Act's Separation of Commercial and Investment Banking," Journal of Financial Services Research, 2, 1989, pp. 287-305

"Direct Investments and FSLIC Losses," Research in Financial Services: Private and Public Policies, George G. Kaufman, ed., Vol. 1, (JAI Press), 1989, 25-77

"Market-Value Accounting: Benefits, Costs and Incentives," Proceedings: A Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1989, 547-69

"Understanding the Savings and Loan Debacle," with George G. Kaufman, The Public Interest, 99, Spring 1990, 79-95

"U.S. Banking in an Increasingly Integrated and Competitive World Economy," Journal of Financial Services Research, 4, 1990, pp. 311-339. Also in International Competitiveness in Financial Services, Marvin H. Kosters and Allan H. Meltzer, eds, Kluwer Academic Publishers, Norwell, MA, 53-82. (An earlier version was presented to a conference sponsored by the American Enterprise Institute, "International Competitiveness in Financial Services," Washington, DC, May 31 - June 1, 1990).

"Does Bank Regulation Produce Stability? Lessons from the United States," in Unregulated Banking: Order or Chaos?, Forrest Capie and Geoffrey E. Wood, eds., MacMillan, London, UK, 1991, 207-232.

"The Failure and Survival of Thrifts: Evidence from the Southeast," with Mike Carhill, and Brian Olasov, in Financial Markets in Financial Crisis, R. Glenn Hubbard, ed., National Bureau of Economic Research, University of Chicago Press, 1991, 305-384.

"Is There a Credit Crunch? And What Should We Do About It?", Journal of Applied Corporate Finance, Spring 1991, 86-91

Banking and Finance (continued)

Articles in Academic Journals and Publications (continued)

"Competition Versus Competitive Equality in International Financial Markets," in Regulating International Financial Markets: Issues and Policies, Franklin R. Edwards and Hugh T. Patric, eds., Boston, MA: Kluwer Academic Publishers, 1992, 277-289. Reprinted in Global Risk Based Capital Regulations: Capital Adequacy, Charles A. Stone and Anne Zissu, eds., Irwin, 1994, 121-134

"The Purpose of Capital for Institutions with Government-Insured Deposits," Journal of Financial Services Research, 1992, 5, 369-384. Reprinted in Global Risk Based Capital Regulations: Capital Adequacy, Charles A. Stone and Anne Zissu, eds., Irwin, 1994, 342-362

"The Future of Asset Securitization: The Benefits and Costs of Breaking Up the Bank," Journal of Applied Corporate Finance, 5, Spring 1992, 71-82. Reprinted in The Global Asset Backed Securities Market, Charles Stone, Anne Zissu, and Jess Lederman, eds., Chicago, IL and Cambridge, England: Probus Publishing Company, 1993, 3-14

"FSLIC Forbearance and the Thrift Debacle," with Mike Carhill, Proceedings: A Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, 1992, 121 - 144

"International Regulatory Coordination of Banking" in The Internationalisation of Capital Markets and the Regulatory Response, John Fingleton and Dirk Schoenmaker, eds., Graham & Trotman, London, 1992, 51-73 (earlier version was presented at a conference sponsored by the London School of Economics, London October 1991), 197 - 209

"International Bank Capital Standards," in Emerging Challenges for the International Financial Services Industry, James R. Barth and Phillip F. Bartholomew, eds., Volume 9 of Research in International Business and Finance, series editor H.Peter Gray, Greenwich, CT: JAI Press. 1992 (an earlier version was presented at the Joint Universities Conference on Regulating Commercial Banks: Australian Experience in Perspective, Canberra, Australia, August 1989)

"An Analysis of the Case Against Commercial Firms Owning Banks," in Emerging Challenges for the International Financial Services Industry, James R. Barth and Phillip F. Bartholomew, eds., Volume 9 of Research in International Business and Finance, series editor H.Peter Gray, Greenwich, CT: JAI Press, 1992, 231-236 (also published in Banking Policy Report, 10, Aguust 5, 1991, 4-7)

"The Intellectual History of the Federal Deposit Insurance Corporation Improvement Act of 1991," with George G. Kaufman, Assessing Bank Reform: FDICIA One Year Later, George G. Kaufman and Robert E. Litan, eds., The Brookings Institution, Washington, DC, 1993, 19-32. Reprinted in Reforming Financial Institutions and Markets in the United States, George G. Kaufman, Kluwer Academic Publishers, Boston, 1994, 1-17

"Improving the FDIC Improvement Act: What Was Done and What Still Needs to Be Done to Fix the Deposit Insurance Problem," with George G. Kaufman, Reforming Financial Institutions and Markets in the United States, George G. Kaufman, ed., Kluwer Academic Publishers, Boston, 1994, 99-120 (an earlier version was presented at the American Finance Association annual meeting, January 1993)

Banking and Finance (continued)

Articles in Academic Journals and Publications (continued)

"Market Discipline: The Role of Uninsured Depositors and Other Market Participants," in Richard E. Randall, ed., Safeguarding the Banking System in an Environment of Financial Cycles, Federal Reserve Bank of Boston Conference Series No. 37, 1994, 65-95

"International Harmonization of Banking Regulations and Cooperation Among National Regulators: An Assessment," Journal of Financial Services Research, 8, 1994, 205-225

"Universal Banking," Journal of Economic Perspectives, 8, 1994, 121-143

"The Causes and Consequences of the Thrift Disaster," with Mike Carhill, Research in Financial Services, George G. Kaufman, ed., Greenwich, CN: JAI Press, 1994, 103-169

"Safety Nets and Moral Hazard in Banking," in Financial Stability in a Changing Environment, Kuniho Sawamoto, Zenata Nakajima, and Hiroo Taguchi, eds., St. Martin's Press, New York, 1995, 329-377 (earlier version presented at an international conference sponsored by the Bank of Japan, October 1993)

"Motivations for Bank Mergers and Acquisitions: Enhancing the Deposit Insurance Put Option versus Earnings Diversification," (with Curt Hunter and Larry Wall), Journal of Money, Credit and Banking, 27, 1995 (August), 777-788

"Is the Banking and Payments System Fragile?" (with George G. Kaufman), Journal of Financial Services Research, 9, 1995, 209-240

"The Origins of and Justification for the Glass-Steagall Act," in Financial Systems Design: Universal Banking Considered, Anthony Saunders and Ingo Walter, eds., NY: Business One Irwin, 1996, 31-69

"The Appropriate Role of Bank Regulation" (with George G. Kaufman), Economic Journal, 106, May 1996, 688-697

"The Case for Downsizing the Fed," with David Humphrey, Banking Strategies, LXIII, January/February 1997, 30-37 (less two pages of advertising material)

"FDICIA After Five Years," with George G. Kaufman, Journal of Economic Perspectives, 11, 1997 (Summer), 139-158

"Discrimination in Mortgage Lending: Why HMDA and CRA Should be Repealed," Journal of Retail Banking Services, 19, 1997 (Autumn), 47-57

"Ingreso y Retiro de Bancos in América Latina y el Caribe: Preocupaciones por la Polítaca Publica y Propuesta de Solución," Superbancaria, Superintendencia Barcaria de Colombia, Marzo de 1998, 25-36

"Banking Fragility, Effectiveness, and Regulation in Less-Developed Countries," in Asia: An Analysis of Financial Crisis, William C. Hunter, George G. Kaufman, and Thomas H. Krueger, eds., Kluwer Academic Publishers, Norwell, MA., 1999, 269-289

"The Community Reinvestment Act: Looking for Discrimination That Isn't There," Policy Analysis, 354, October 1999, Cato Institute (Washington, DC), 1-15

"Consumer Protection as a Justification for Regulating Financial Service Firms and Products," Journal of Financial Services Research, 17, 2000, 277-301

"Is Government Regulation of Banks Necessary?," Journal of Financial Services Research, 2001, Journal of Financial Services Research, 18, 2000, 185-202.

Banking and Finance (continued)

Articles in Academic Journals and Publications (continued)

"Bank Capital Structure, Regulatory Capital, and Securities' Innovations" with Paul Irvine*, Jim Rosenfeld, and Joseph F. Sinkey, Jr., Journal of Money, Credit, and Banking, 35, 2003, 301-322.

"What's Special About Banks?," Financial Review, 2004, forthcoming.

Research Papers in Congressional Hearings

Committee on Government Operations, House of Representatives, Federal Regulation of Direct Investments by Savings and Loans and Banks and Condition of the Federal Deposit Insurance Funds, February 27-28, 1985:

"Direct Investments by Savings and Loan Associations: Return and Risk," 505-571

"Savings and Loan Failures: An Analysis of Proximate Causes," 572-622

"Growth, Return and Risk Among Savings and Loan Associations," 623-683

Committee on Banking, Finance and Urban Affairs, Subcommittee on Financial Institutions, Supervision, Regulation and Insurance, House of Representatives, October 2, 1985:

"Investments By and the Failure of Savings and Loan Associations: An Analysis with Particular Concern for Direct Investments and Nonmortgage Loans"

Articles (Selected) in Non-Academic Publications and Short Articles

Abstract, "The Cost of Banking Operations: A Statistical Study," Journal of Finance, XIX, 1964, 111-112

"Controls on Banking and 'A World Without Money'," Journal of Bank Research, 2, Winter 1972, 59-61

"Are Larger Banks More Efficient?," The Banker (England), June 1974, 605-610

"How We Can Learn From Past Bank Failures," The Bankers Magazine, 158, Winter 1975, 19-24

"Why Did Congress Pass New Financial Service Laws in the 1930s? An Alternative Opinion," Economic Review (Federal Reserve Bank of Atlanta), LXVII, April 1982, 7-10

"Financial Institutions," in Manhattan Report on Economic Policy, Manhattan Institute for Policy Research, IV:1, 1984, 20-21

"An Examination of Deregulation," American Banker, June 22, 1984, 8, 10, 12

"Justice's Revised Merger Guidelines Offer New Opportunities For Thrifts" (with Joseph W. Gelb and Leonard S. Simon), American Banker, September 13, 1983, pp. 6, 8, 18

"The Continental Illinois Rescue: Why the Government Can't Run a Bank" New York Times, Sunday Business Section, July 29, 1984, 3

"Will Foreign Loan Defaults Ruin Us?" Chief Executive, 31, Spring 1985, 22-25

"Look Before Leaping to Regulate Thrifts," Wall Street Journal, November 12, 1985

"What Does Experience Tell Us About Competition?", in Interstate Banking: Strategies for a New Era, Federal Reserve Bank of Atlanta, Quorum Books, 1985, 139-145

Banking and Finance (continued)

Articles (Selected) in Non-Academic Publications and Short Articles (continued)

"The Bank Board Fiction of Regulatory Accounting Principles," The American Banker, January 31, 1986

"Dealing with Poorly Capitalized Banks from the Perspective of the Deposit Insurance Agency," Proceedings of the 27th Annual Conference on Bank Structure and Competition, Chicago: Federal Reserve Bank of Chicago, 1991, 358-372

"Why Not Bank Where You Buy a Car?," New York Times, Sunday Business Section, March 2, 1986, p. 2

"Thrift Failures and Direct Investments" The Bankers Magazine, April/May, 1986, 55-61

"Stock crash clearly shows risk of betting on investor optimism,:" Atlanta Journal-Constitution, November 2, 1987

"Misuse of Accounting Methods Helped Cause S&L Mess," American Banker, March 8, 1989, p. 4

"How the [Savings and Loan] Industry Got into Trouble," New York Times, Sunday Business Section, April 23, 1989, p. 1

"European banking after 1992 - lessons from America and Germany," The Global Asset Manager (Credit Suisse), Spring, 1989, 38-40

"The Savings and Loan Crisis: What Lessons Have We Learned", USA Today, 118, May 1990, 14-17

"Radical Surgery for Dying Banks," New York Times, Friday, December 14, 1990 (editorial page)

"Financial Restructuring: Analyzing the Case Against Commercial Firms Owning Banks," Banking Policy Report, Vol. 10 No. 15, August 5, 1991, 4-7

"Don't Deform Bank Reform," New York Times, Op-Ed, September 23, 1991, A4

"Let Banks Compete," New York Times, Op-Ed, November 2, 1991
"History of U.S. Banking," in Encyclopedia Americana, Dunbury, CT: Grolier Inc, 1992, 174-176

"How to Forestall a Taxpayer Bank Bailout," Wall Street Journal, Op-Ed Page, April 16, 1992

"Redlining - Or Color-Blindness," New York Times, Op-Ed Page A15, May 12, 1992

"In Defense of FDICIA: Reply to Golembe" (with George G. Kaufman), The Golembe Reports, 1994-7, 8-14

"The Sins of Banking in the USA," Economic Affairs (UK), 15, Spring 1995, 18-23

"The History and Value of HMDA Data For Studies of Invidious Discrimination," in Fair Lending Analysis: A Compendium of Essays on the Use of Statistics, Anthony M Yezer, ed., Washington DC: American Bankers Association, 1995, 5-12

Commercial Banking and Securities Activities: A Survey of the Risks and Returns (with George G. Kaufman), American Bankers Association, Washington DC, October 1995.

Banking and Finance (continued)

Articles (Selected) in Non-Academic Publications and Short Articles (continued)

"What Should Bank Regulators Do? Why Should Regulators Do Anything?," Proceedings: Rethinking Bank Regulation: What Should Regulators Do (32nd Annual Conference on Bank Structure and Competition), Federal Reserve Bank of Chicago, May 1996, 36-42.

"The FSA [UK Financial Services Authority] and consumer protection," The Financial Regulator (UK), December 1997, 34-36.

"Financial services regulation – US Style," The Financial Regulator (UK), June 1998, 25-26.

Academic Reviews and Comments

Review of The Money Market and Monetary Management, by G.W. Woodworth, American Economic Review, LV, December 1965, 1224-1226

Review of Analytics and Institutions of Money and Banking, by William J. Frazer, Jr. and William P. Yohe, Journal of Finance, XXI, September 1966, 588-590

Review of Competition and Controls in Banking, by David Alhadeff, Journal of Finance, XXIV, December 1969, 1006-1008

Comment on "Competition and Measures of Bank Performance," by Eric Brucher, Journal of Finance, XXVII, June 1972, 722-723

"Discussion of the Hunt Commission Report," Journal of Money, Credit and Banking, IV, November 1972, 985-989

Discussion of "A Revised Monetary Framework," by Joseph W. Barr, in Policies for a More Competitive Financial System, Conference Series No. 8, Federal Reserve Bank of Boston, June 1972

Review of Bank Management and Portfolio Behavior, by Donald D. Hester and James L. Pierce, Journal of Finance, XXXI, December 1976, 1519-1522

Comments on three papers on "Early Warning System for Problem Financial Institutions - Efforts at the Federal Reserve Bank of New York, the FDIC and the Comptroller's Office," in Financial Crises: Institutions and Markets in a Fragile Environment, ed. E.J. Altman, Wiley Interscience, New York, 1977, 58-61

Review of The Deregulation of the Banking and Securities Industries, Lawrence G. Goldberg and Lawrence G. White, eds., Journal of Money, Credit and Banking, XII, August 1980, 560-562

"Why Did Congress Pass New Financial Service Laws in the 1930s? An Alternative Opinion," Economic Review (Federal Reserve Bank of Atlanta), LXVII, April 1982, 7-10

Review of State and Federal Regulation of Commercial Banks, by Leonard Lapidus and Others, Journal of Money, Credit and Banking, August 1983, 397-401

"Justice's Revised Merger Guidelines Offer New Opportunities For Thrifts" (with Joseph W. Gelb and Leonard S. Simon), American Banker, September 13, 1983, pp. 6, 8, 18

"What Does Experience Tell Us About Competition?", in Interstate Banking: Strategies for a New Era, Federal Reserve Bank of Atlanta, Quorum Books, 1985, 139-145

Review of The Regulation of International Banking, by Richard Dale, The Banker (U.K.), May 1985

Banking and Finance (continued)

Academic Reviews and Comments (continued)

Review of The Gathering Crisis in Federal Deposit Insurance by Edward J. Kane, The Banker (U.K.), May 1986, 109-110

Comment, "The Role of Regulation for the Stability of Financial Institutions" Reserve Bank of Kansas City. (Originally presented at the Bank's Symposium on Debt, Financial Stability, and Public Policy, Jackson Hole, Wyoming, August), 1986

Review of The Changing Structure of American Banking, by Peter S. Rose, Journal of Economic Literature, XXVI (September) 1988, 1202-1204

Comment, "Party Realignments and the Growth of Federal Economic Regulation," 1861-1986 by Kathleen A. Kemp, Journal of Financial Services Research, 2, September 1989, 227-229

Review of The Revolution in U.S. Finance by Robert E. Litan, Business History Review, 66, 1992 (Winter), 66, 806-809

Comment (with George G. Kaufman) on "Deposit insurance reform: a functional approach" by Robert Merton and Zvi Bodie, Carnegie-Rochester Conference Series on Public Policy, 38, 1993 (June), 41-50

Comment on "Management and organizational changes in banking: a comparison of regulatory intervention with private creditor actions in nonbank firms" by Joel Houston and Christopher James, Carnegie-Rochester Conference Series on Public Policy, 38, June 1993, 179 - 190

Comment on "Financial Repression and the Capital Crunch Recession: Political and Regulatory Barriers to Growth Economics," by Glenn Yago and on "Bank Capitalization Standards, the Credit Crunch, and Resource Allocation under Regulation," by Benjamin Zycher, Economic Policy, Financial Markets, and Economic Growth, Benjamin Zycher and Lewis C. Solomon, eds., The Milken Institute Series in Economics and Education, Westview Press, Boulder, CO., 1993, 135-156

Review of Comptetitive Strategies in European Banking by Jordi Canals, The Journal of Economic Literature, XXXIII, March 1995, 232-233

"Narrow Banking - Costs and Benefits," Comment on "Does Argentina Provide a Case for Narrow Banking?" by Roque Fernandez and Liliana Schumacher, in Preventing Banking Sector Distress and Crises in Latin America, Suman K. Bery and Valeriano F. Garcia, The World Bank, Washington DC, 1997, 35-39.

Comment on "Make or Buy? Approaches to Financial Market Integration," by Michael Gavin and Ricardo Hauseman, in Safe and Sound Financial Systems: What Works for Latin America, Liliana Rojas-Suarez, ed., Washington DC: Inter-American Development Bank, 1997, 170-173.

"Regulation of Stock Trading: Private Exchanges vs. Government Agencies," Virginia Law Review, 83, October 1997, 1501-1507.

Review of U.S. Bank Deregulation in Historical Perspective By Charles W. Calomiris, (Cambridge University Press, 2000), Cato Journal, 2001.

Urban Studies

Monograph

An Empirical Study of Mortgage Redlining, with Dan Horsky and H. Martin Weingartner, Monograph Series in Financial and Economics, Salomon Brothers Centers for the Study of Financial Institutions, New York University, Monograph 1978-5, 110 pp.

Articles in Academic Journals and Publications

"Urban Decline and Redlining," in Innovations and New Directions in the U.S. Financial System: Implications for Real Estate Markets and Investments, Real Estate Chair Lecture Series, John M. Clapp, ed., Housing,. Real Estate & Urban Land Studies Program, Urban Resources Center, Graduate School of Management University of California, Los Angeles, December 1977, 63-84

The Anti-Redlining Rules: An Analysis of the Federal Home Loan Bank Board's Proposed Nondiscrimination Requirements, Law and Economics Center (University of Miami) occasional Paper, February 1978, 19 pp.

"The Urban Financing Dilemma Reconsidered," in Urban Housing (Proceedings of the Fourth Annual Conference), Federal Home Loan Bank of San Francisco, December 1978, 102-149

"Redlining and the Demand for Mortgages in the Central City and Suburbs" (with Dan Horsky), Journal of Bank Research, 10, Summer 1979, 72-87

"Mortgage Redlining Research: A Review and Critical Analysis," in The Regulation of Financial Institutions, Conference Series No. 21, October 1979, Federal Reserve Bank of Boston, 144-195. (The paper excluding the appendix also is published in the Journal of Bank Research, 12, Spring 1981, 8-23.

"The Relationship Between the Demand and Supply of Home Financing and Neighborhood Characteristics: An Empirical Study of Mortgage Redlining," with Dan Horsky, Journal of Financial Services Research, 5, 1991, 235-260

Articles in Non-Academic Publications and Comments

"The Persistent Myth of Redlining," Fortune Magazine, March 13, 1978, 66-69 (Reprinted in a number of very widely circulated real estate and appraisal publications)

"Discrimination in Home Improvement Loans: Comment on a Rejoinder," Journal of Bank Research, 13, 1982 (Autumn), 207-208

"Charges of redlining have little foundation in fact," Atlanta Journal-Constitution, June 19, 1988

"The History and Value of HMDA Data for Studies of Invidious Discrimination," in Fair Lending Analysis: A Compedium of Essays on the Use of Statistics, Anthony M. Yezer, ed., Washington, DC: American Bankers Association, 1995, 5-12

"Discrimination in Financial Services: What Don't We Know?," Journal of Financial Services Research, special issue on discrimination in mortgage lending, 11, 1997, 209-213.