## PUBLIC VERSION

## Before the

UNITED STATES COPYRIGHT ROYALTY JUDGES

## THE LIBRARY OF CONGRESS

Washington, D.C.

In the Matter of:
DETERMINATION OF RATES AND
TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR
(2018-2022)

TABLE OF CONTENTS TO THE WRITTEN REBUTTAL STATEMENT OF AMAZON DIGITAL SERVICES LLC

| Tab | Content |
| :--- | :--- |
| 1. | Introductory Memorandum to the Written Rebuttal Statement of Amazon Digital <br> Services LLC |
| 2. | Index of Witness Testimony |
| 3. | Index of Exhibits |
| 4. | Declaration and Certification of Michael S. Elkin Regarding Restricted Materials |
| 5. | Certificate of Service |
| 6. | Written Rebuttal Testimony of Rishi Mirchandani |
| 7. | Exhibits to Written Rebuttal Testimony of Rishi Mirchandani |
| 8. |  |


| Tab | Content |
| :---: | :--- |
| 9. | Written Rebuttal Testimony of Kelly Brost |
| 10. | Exhibits to Written Rebuttal Testimony of Kelly Brost |
| 11. | Expert Rebuttal Report of Glenn Hubbard |
| 12. | Exhibits to Expert Rebuttal Report of Glenn Hubbard |
| 13. | Appendix A to Expert Rebuttal Report of Glenn Hubbard |
| 14. | Written Rebuttal Testimony of Robert L. Klein |
| 15. | Appendices to Written Rebuttal Testimony of Robert L. Klein |

# Before the <br> UNITED STATES COPYRIGHT ROYALTY JUDGES <br> Library of Congress <br> Washington, D.C. 

## In the Matter of:

## DETERMINATION OF RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR
(2018-2022)

## INTRODUCTORY MEMORANDUM TO THE WRITTEN REBUTTAL STATEMENT OF AMAZON DIGITAL SERVICES LLC

Participant Amazon Digital Services LLC (together with its affiliated entities, "Amazon"), respectfully submits its Written Rebuttal Statement to the Copyright Royalty Judges (the "Judges") pursuant to 37 C.F.R. § 351.4. Amazon’s rebuttal statement includes four witness statements responding to the direct statements of the National Music Publishers' Association ("NMPA"), the Nashville Songwriters Association International ("NSAI") (together, the "Rights Owners"), and Apple Inc. ("Apple"), each of which is summarized below. In light of the proposals set forth, Amazon reiterates its proposed rates and terms as set forth in its Written Direct Statement submitted to the Judges on November 1, 2016. As detailed in Amazon’s witness statements, Amazon's proposed rollover of the current regulatory scheme—with a few minor clarifications and adjustments-is best suited to continue to foster innovation and growth in the digital music industry, thereby maximizing the availability of creative works to the public while affording both digital service providers ("DSPs") and rightsholders fair returns for their respective roles and minimizing unnecessary disruption.

## PUBLIC VERSION

## INTRODUCTORY STATEMENT

The contrast between the parties' competing rate proposals in this proceeding is stark. Amazon has proposed largely rolling over the current rates, preserving intact the different service categories upon which Amazon (and other DSPs) have relied to build a diverse and burgeoning array of interactive music streaming services. The Rights Owners, on the other hand, have proposed a wholesale scrapping of the existing regime in favor of a one-size-fits-all mechanicalonly rate, at a level so high that it would, quite simply, eliminate many of those services.

Abandoning the existing structure would be a big mistake and would be severely damaging not only to the DSPs that have relied upon it to build their interactive streaming services, but also to the industry as a whole. What the Rights Owners' direct testimony fundamentally fails to recognize is that the diversity of offerings enabled by the existing structure benefits the entire industry. Amazon’s Prime Music service, for example—an ad-free, limited catalog streaming service available at no additional charge to Amazon Prime members-expands the overall royalty pool by introducing new users to streaming and serving as an onramp to paid subscription services. Similarly, Amazon Music Unlimited for Echo is a unique, limited functionality service that expands the overall royalty pool by appealing to customers who do not place a high value on portability and would not otherwise subscribe to a standard $\$ 9.99$ permonth service offering.

To support their proposal to eliminate the existing categories and dramatically increase royalty rates, the Rights Owners rely on familiar, new, and irrelevant theories as to why the current rates must be increased. Predictably, the Rights Owners emphasize the costs associated with creating and developing new content. But they also fail to identify ways in which their costs have increased, any new risks posed, or how their business models have fundamentally

## PUBLIC VERSION

changed since rates were last set. The Rights Owners also largely ignore independent and nonmainstream artists who have experienced far greater exposure and increased royalty revenues because of digital streaming. Such information is critical to assess whether the current state of mechanical royalties is truly as dire as the Rights Owners claim. Instead, the Rights Owners present a partial picture of their revenues by focusing solely on mechanical revenue when, in fact, performance, synchronization, and other revenues (which make up the bulk of their revenues) have increased. Dr. Mark Zmijewski, professor and Senior Consultant to Charles River Associates, analyzes the Rights Owners' revenues and concludes that in many instances, |  | In other words, when |
| :--- | :--- | viewed in context, the Rights Owners' revenues tell a very different story than the one being put forth by their witnesses. The reality is that the increase and proliferation of streaming is making it possible for music publishers and songwriters to make more money than ever before. The numbers bear this out, and as we see in the rebuttal testimony of Rishi Mirchandani, the Head of Content Acquisition and Catalog for Amazon's digital music business, Amazon

been brought about in a material way by the bevy of interactive streaming services structured around the current regulatory rate structure.

The Rights Owners advance three other more novel justifications for their proposal, including that: (1) music has an inherent value, (2) many DSPs have deep pockets and can afford to pay more, and (3) many DSPs unfairly sacrifice music-related revenues to drive value in other areas. But these arguments are deeply flawed, they fail to take into account the realities of today's digital music industry, and they run counter to the Section 801(b)(1) policy objectives
that necessarily guide this proceeding. Amazon's rebuttal case dispels these theories by providing additional evidence concerning music consumption preferences, consumer willingness to pay, the imbalance in risks assumed by DSPs and rightsholders, and the benefits of broad and diverse digital music offerings that maximize the availability of creative works to the public.

Specifically, Amazon puts forth rebuttal testimony from its economic expert, Dr. Glenn Hubbard, demonstrating that the Rights Owners' theory that music has an inherent value-which even they acknowledge is a subjective determination-fails to take account of several relevant factors. As Dr. Hubbard testifies,

 regulatory regime that allows for continual investments and innovation will increase the potential for industry expansion.

Likewise, a consumer survey of music streamers conducted by Amazon's market research expert, Robert Klein, demonstrates that




## PUBLIC VERSION

must be taken into account before imposing a radical departure from the current regulatory regime.

The Rights Owners also repeatedly argue that rates should be increased because some of the DSPs are among the "wealthiest corporations in the world" and "can afford to pay more." ${ }^{1}$ But the size or success of certain of the participating DSPs' unrelated business operations is completely irrelevant to the determination of an appropriate royalty rate. As Mr. Mirchandani testifies, Amazon simply will not operate its streaming music services at severe losses, as it would be forced to do under the Rights Owners’ proposed rates and terms. Mr. Mirchandani also dispels the notion-repeatedly suggested by the Rights Owners-that Amazon uses music as a loss leader. To the contrary, as Mr. Mirchandani testifies, many of Amazon’s other businesses serve as unique distribution channels that Amazon uses to drive performance (and royalties) in music streaming. Finally, both Mr. Mirchandani and Dr. Hubbard also make clear that a revenue-based model can be fair when, like Amazon's proposal, it includes reasonable alternatives to revenue that protect rightsholders in every scenario.

As for the irrelevant premises, the Rights Owners' musings as to whether there should be a compulsory rate at all are of no moment. The purpose of the present proceeding is to set a fair rate, and entertaining the Rights Owners’ misplaced objections only wastes time and distracts from the important issues at hand.

Based upon this testimony, and in light of the negotiated regime under which the parties have been operating for nearly a decade, Amazon proposes to maintain the existing rates and terms, subject to a few minor clarifying changes. At the same time, Amazon respectfully urges the Judges to reject the inflated, one-size-fits-all model proposed by the Rights Owners (and, at a

[^0]reduced rate, Apple) as unduly disruptive and entirely unsupported by the weight of relevant evidence set forth in this proceeding.

The remainder of this memorandum summarizes the topics covered in the submissions of Amazon's fact and expert witnesses, all of whom provide testimony to rebut the Rights Owners’ rate proposal and written direct testimony.

## SUMMARY OF TESTIMONY

In support of the foregoing, Amazon's rebuttal witnesses will testify as follows:

## Rishi Mirchandani

Rishi Mirchandani is the Head of Content Acquisition and Catalog for Amazon’s digital music business and he also testified in the direct phase of this proceeding. Mr. Mirchandani’s rebuttal testimony responds to a number of misguided arguments set forth in the Rights Owners' testimony. First, Mr. Mirchandani addresses the Rights Owners’ baseless assertion that Amazon designed its Unlimited for Echo service to sell more Echo devices at the expense of publishers and songwriters. As Mr. Mirchandani testifies, Amazon actually introduced Unlimited for Echo to expand the customer base for music streaming services. Mr. Mirchandani also provides further context concerning Amazon’s pricing decisions, explaining that Unlimited for Echo was actually priced at $\$ 3.99$ per month to reflect the limited nature of the service and the related reduction in value to consumers.

Mr. Mirchandani responds to the contention that the discount offered to Prime members for Amazon Music Unlimited somehow harms rightsholders. As Mr. Mirchandani explains, in light of the high degree of price sensitivity exhibited by music users, the Prime member discount actually works to broaden the base of paid music streams as it increases reportable revenues for Amazon and royalty payments to rightsholders.

Similarly, Mr. Mirchandani rebuts the assertion that a royalty calculation that includes a revenue-based component is unfair if DSPs have business interests in addition to maximizing music streaming revenue. As Mr. Mirchandani explains, Amazon actually leverages its other business interests-like Prime and Echo-to maximize music streaming revenues. Mr. Mirchandani also testifies that even if other DSPs' non-music business interests conflict with maximizing music streaming revenues, Amazon's rate proposal is still fair because it includes alternative royalty minima designed to protect rightsholders and ensure fair payments.

In addition, Mr. Mirchandani responds to the contention that rightsholders are not seeing the benefits of increased music consumption as consumers shift from digital downloads to streaming. As Mr. Mirchandani explains, the Rights Owners are flat wrong on this point, and

Moreover, Mr. Mirchandani also points out that Amazon’s diverse array of streaming services work to convert more listeners to paying customers and to combat the scourge of digital piracy.

Next, Mr. Mirchandani addresses the supposition that the Rights Owners’ proposed rates and terms would somehow meet the statutory objectives set forth in Section 801(b)(1) and not disrupt the broader digital music industry. According to the Rights Owners’ witnesses, their rate proposal would not be disruptive because some large DSPs have deep pockets and can afford to pay higher rates. But as Mr. Mirchandani testifies, DSPs like Amazon simply will not continue to operate streaming services at the types of losses that would result from the Rights Owners proposed rates and terms. As a result, and as Mr. Mirchandani explains, the Rights Owners' proposal threatens to destroy many of the unique services that are working to fuel the revitalization of the digital music industry.

## PUBLIC VERSION

Finally, Mr. Mirchandani responds to the idea—advanced by both the Rights Owners and Apple-that a per-play rate would be beneficial for the digital music industry. In particular, Mr. Mirchandani testifies that a per-play rate is undesirable because it would misalign important incentives and impose undue risk on DSPs in the form of uncapped liability for usage-based royalty payments, particularly for subscription-based business models. He also explains that a one-size-fits-all per-play rate would be particularly disruptive, likely driving numerous streaming services out of business. Though Mr. Mirchandani's testimony makes clear that he is generally opposed to a per-play-based royalty scheme, he concludes by suggesting that-if such a scheme is unavoidable—Amazon would favor one that retains the existing services categories and features differentiated rates designed to accommodate different service offerings.

## Dr. Glenn Hubbard

Dr. Glenn Hubbard, the Russell L. Carson Professor of Finance and Economics at the Graduate School of Business of Columbia University, presents testimony analyzing the economic basis for the Rights Owners' rate proposal. Dr. Hubbard also presented testimony during the direct phase. Dr. Hubbard draws several conclusions in his rebuttal testimony. First, he rejects the Rights Owners’ claim that the current rate structure is unsustainable and that rightsholders are undercompensated by interactive streaming and limited downloads. Specifically, Dr. Hubbard concludes that the current rate structure allows DSPs to offer a variety of music services that meet diverse consumer preferences, which expands the overall volume of legal music consumption. Using Amazon's various offerings as an example, Dr. Hubbard points to differing music consumption preferences and willingness to pay to show that the Rights Owners derive benefits from the expansion of legal music consumption facilitated by a full
spectrum of digital music offerings, all of which were built around the different service categories contained in the current regulatory regime.

Dr. Hubbard presents additional testimony to demonstrate that the Rights Owners' proposal is not based in sound economic theory or market reality, and that in fact, the proposal risks diminishing the streaming-led market expansion of legal music consumption. In response to the idea that rightsholders should obtain the same royalty regardless of the music streaming service, Dr. Hubbard points out that the Rights Owners’ testimony ignores several key considerations, including consumer preferences, willingness to pay, investments made by DSPs, benchmark voluntary agreements, contributions made to increase the volume of legal music usage, rightsholders' varied contributions in manufacturing paid-music products, and alternatives to paid-music consumption. Dr. Hubbard further testifies that the Rights Owners’ proposal threatens to drive several music offerings out of business by failing to take these considerations into account.



Dr. Hubbard also takes on the Rights Owners' exclusion of ad-supported streaming music services from several of their analyses along with other inapt benchmarks that either do not reflect the full range of streaming music services or are drawn from industries that are not comparable to the one now at issue. Once Dr. Hubbard rectifies the biases in the Rights Owners’ benchmarks, he concludes that the resulting rates more closely resemble the current rates and reflect rates far lower than those featured in the Rights Owners’ current proposal.

Finally, Dr. Hubbard presents evidence to demonstrate that a flexible royalty structure is essential to facilitate diverse streaming music services and protect DSPs from excessive risks.

He testifies that a structure that includes a revenue-based rate calculation, like the one proposed by Amazon, will encourage continual investments and innovations that often work to expand the customer base. Dr. Hubbard explains that this is done by offering differentiated products at various price points to appeal to multiple customer segments, which in turn leads to expanded market segment penetration. And Dr. Hubbard points out that, under such a structure, rightsholders are still protected via alternative royalty minima when revenue is low or impractical to calculate. Dr. Hubbard contrasts this model to the flat-rate structure proposed by the Rights Owners, which is less flexible and provides less opportunity for DSPs to tailor services to users with different music preferences and willingness to pay. Dr. Hubbard predicts that such inflexibility in the Rights Owners' proposed structure will impede the availability of creative works to the public.

## Robert Klein

Robert Klein is the Chairman and Co-Founder of Applied Marketing Science, Inc. Mr. Klein has over 45 years of experience in conducting and analyzing consumer surveys, and he has personally designed and conducted more than 1,000 market research surveys. To rebut the feasibility of the Rights Owners' proposed rate structure and increase, Mr. Klein testifies concerning a market research survey he designed to gather empirical data regarding music consumers' current and past streaming behavior as well as their willingness to pay for a fullcatalog music streaming service at various price points (the "Klein Consumer Survey"). After detailing his survey design, universe, and controls, Mr. Klein presents several key findings. Specifically, he testifies that the Klein Consumer Survey demonstrates that:


The results of the Klein Consumer Survey vividly demonstrate the impracticality of the Rights Owners' one-size-fits-all proposal, and make clear why it is ill-suited to achieve the Section 801(b) objectives at issue in this proceeding. Further, it provides compelling empirical evidence that diverse music streaming services maximize the availability of creative works to the public and expand the royalty base for interactive streaming services.

## Dr. Mark E. Zmijewski ${ }^{2}$

Amazon Digital Services LLC, Google Inc., Spotify USA Inc., and Pandora Media, Inc. are jointly presenting the expert testimony of Dr. Mark E. Zmijewski. Professor Zmijewski is

[^1]
## PUBLIC VERSION

the Charles T. Horngren Professor of Accounting, The University of Chicago Booth School of Business. Professor Zmijewski analyzes the financial and accounting statements produced in discovery by music publishers to test the Copyright Owners’ assertions about a purportedly negative impact on music publishers' financial condition as a result of interactive streaming. Professor Zmijewski observes that that the reported declines in mechanical revenues
 and industry analysts are bullish on prospects for music publishers' revenue growth over the next few years.

Finally, Professor Zmijewski considers the contentions of Copyright Owner witnesses who claim that publishers will be unable to recoup advances to songwriters absent a significant increase in rates. Not only are private agreements between publishers and songwriters over how to divide the royalties paid by interactive streaming services irrelevant to this proceeding, $\square$
$\square$

## PUBLIC VERSION

Respectfully submitted,

Michael S. Elkin
Thomas Patrick Lane
Daniel N Guisbond
Stacey Foltz Stark
Winston \& Strawn LLP
200 Park Avenue
New York, New York 10166-4193
Phone: 212.294.6700
E-Mail: melkin@winston.com
E-Mail: tlane@winston.com
E-Mail: dguisbond@winston.com
E-Mail: sfstark@winston.com
Jennifer A. Golinveaux
Winston \& Strawn LLP
101 California Street
San Francisco, California 94111
Phone: 415.591.1000
E-Mail: jgolinveaux@winston.com
Attorneys for Participant Amazon Digital
Services LLC

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

In the Matter of:
DETERMINATION OF RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR
(2018-2022)

INDEX OF WITNESS TESTIMONY
AMAZON DIGITAL SERVICES LLC

| Witness | Title |
| :--- | :--- |
| Rishi Mirchandani | Head of Content Acquisition, Digital Music, Amazon Digital <br> Services LLC |
| Kelly Brost | Director of Finance, Amazon Digital Services LLC |
| Glenn Hubbard | Holds Russell L. Carson Professorship in Finance and Economics <br> in the Graduate School of Business of Columbia University, <br> where he is also the Dean. |
| Robert L. Klein | Chairman and Co-Founder of Applied Marketing Science, Inc. |
| Mark E. Zmijewski ${ }^{1}$ | Charles T. Horngren Professor of Accounting, The University of <br> Chicago Booth School of Business |

[^2]Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
THE LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of:
DETERMINATION OF RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR
(2018-2022)

INDEX OF REBUTTAL EXHIBITS
AMAZON DIGITAL SERVICES LLC

| Exhibit No. | Sponsoring <br> Witness | Description |
| :--- | :--- | :--- |
| Amazon Ex. 20 | Rishi Mirchandani | Hawkfire Pricing Study, Final Report June 28, 2016 <br> (Bates No. AMZN00049815) (RESTRICTED) |
| Amazon Ex. 21 | Rishi Mirchandani | Amazon Echo Detail Page |
| Amazon Ex. 22 | Rishi Mirchandani | Echo Purchase Flow Pages |
| Amazon Ex. 23 | Rishi Mirchandani | Global Amazon Music Weekly Business Review, <br> Week 50, Ending: 17 December 2016 (Bates No. <br> AMZN00052888) (RESTRICTED) |
| Amazon Ex. 24 | Rishi Mirchandani | Hawkfire Pricing FAQ (Bates No. AMZN00053095) <br> (RESTRICTED) |
| Amazon Ex. 25 | Rishi Mirchandani | WW Digital Music Monthly Business Review, dated <br> October 2016 (Bates No. AMZN00053807) <br> (RESTRICTED) |
| Amazon Ex. 26 | Rishi Mirchandani | Global Amazon Music Weekly Business Review, <br> Week 52, Ending: 31 December 2016 (Bates No. <br> AMZN00052991) (RESTRICTED) |
| Amazon Ex. 27 | Rishi Mirchandani | Amazon Digital Services, Inc. Music Publishing <br> Right Agreement with Sony/ATV Music Publishing <br> LLC, dated May 28, 2014 (Bates No. <br> AMZN00001692) (RESTRICTED) |

## PUBLIC VERSION

| Exhibit No. | Sponsoring <br> Witness | Description |
| :--- | :--- | :--- |
| Amazon Ex. 28 | Rishi Mirchandani | Amazon Digital Services, Inc. Music Publishing <br> Right Agreement with BMG Rights Management <br> (US) LLC, dated April 10, 2014 (Bates No. <br> AMZN00001333) (RESTRICTED) |
| Amazon Ex. 29 | Rishi Mirchandani | Music Publishing Right Agreement between Amazon <br> Digital Services LLC and Universal Music Corp., <br> dated June 1, 2014 (Bates No. AMZN00001617) <br> (RESTRICTED) |
| Amazon Ex. 30 | Rishi Mirchandani | Amazon Digital Services, Inc. Music Publishing <br> Right Agreement with Warner/Chappell Music, Inc., <br> dated June 5, 2014 (Bates No. AMZN00001703) <br> (RESTRICTED) |
| Amazon Ex. 31 | Kelly Brost | Prime Music Listening Hours by Platform (Bates No. <br> AMZN00063099) (RESTRICTED) |
| Amazon Ex. 32 | Kelly Brost | Effective Prime Music Per-Play Rate (Bates No. <br> AMZN00063103) (RESTRICTED) |
| Amazon Ex. 33 | Kelly Brost | Digital Music Publishing Royalties for 2013-2016 <br> (Bates No. AMZN00063101) (RESTRICTED) |
| Amazon Ex. 34 | Kelly Brost | Amazon Music Unlimited Signups through January <br> 2017 (Bates No. AMZN00063097) (RESTRICTED) |
| Amazon Ex. 35 | Kelly Brost | Prime Music Impact of NMPA Proposal, Updated to <br> reflect Actual Number of Prime Subscribers (Bates <br> No. AMZN00063100) (RESTRICTED) |
| Amazon Ex. 36 | Kelly Brost | Locker Services Impact of NMPA Proposal (Bates <br> No. AMZN00063098) (RESTRICTED) |
| Amazon Ex. 37 | Kelly Brost | Amazon Music Unlimited Impact of NMPA Proposal <br> (Bates No. AMZN00063102) (RESTRICTED) |

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

In the Matter of:<br>DETERMINATION OF RATES AND<br>TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR
(2018-2022)

## DECLARATION AND CERTIFICATION OF MICHAEL S. ELKIN REGARDING RESTRICTED MATERIALS

## (On behalf of Amazon Digital Services LLC)

1. I am counsel for Participant Amazon Digital Services LLC ("Amazon") in the above-captioned matter. I respectfully submit this declaration pursuant to Rule 350.4(e)(1) of the Copyright Royalty Judges Rules and Procedures, 37 C.F.R. § 350.4(e)(1), and per the terms of the Protective Order issued July 27, 2016 ("Protective Order"). I am authorized by Amazon to submit this Declaration on Amazon's behalf.
2. I have reviewed Amazon's Written Rebuttal Statement, witness written rebuttal testimony, exhibits, appendices, and Redaction Log submitted in this proceeding. I have also reviewed the definitions and terms provided in the Protective Order. After consultation with my client, I have determined to the best of my knowledge, information and belief that portions of Amazon's introductory memorandum, the written rebuttal testimony of certain Amazon witnesses, and certain exhibits contain information that is "confidential information" as defined by the Protective Order ("Protected Material"). The Protected Material is identified in the Redaction Log, shaded in the printed copies of Amazon's filing, and described in more detail below.

## PUBLIC VERSION

3. Such Protected Material includes, but is not limited to, testimony and exhibits involving (a) contracts and contractual terms, that are not available to the public, highly competitively sensitive and, at times, subject to express confidentiality provisions with third parties; (b) highly confidential internal business information, financial projections, financial data, and competitive strategy that are proprietary, not available to the public, and commercially sensitive.
4. If this contractual, strategic, and financial information were to become public, it would place Amazon at a commercial and competitive disadvantage, unfairly advantage other parties to the detriment of Amazon, and jeopardize its business interests. Information related to confidential contracts or relationships with third-party content providers could be used by Amazon's competitors, or by other content providers, to formulate rival bids, bid up Amazon payments, or otherwise unfairly jeopardize Amazon's commercial and competitive interests.
5. With respect to the financial information in the Protected Material, I understand that Amazon has not disclosed to the public or the investment community the financial information that it seeks to restrict here (including spending and investment projections, specific royalty payment information, and the like). As a result, neither Amazon's competitors nor the investing public has been privy to that information, which the Amazon has viewed as highly confidential and sensitive, and has guarded closely. In addition, when Amazon does disclose information about its finances to the market as required by law, Amazon provides accompanying analysis and commentary that contextualizes disclosures by its officers. The information that Amazon seeks to restrict under the Protective Order, while truthful and accurate to the best of each witness's knowledge, was not intended for public release or prepared with that audience in mind, and therefore was not accompanied by the type of detailed explanation and context that usually accompanies such disclosures by a company officer. Moreover, the statements and exhibits containing the information have not been approved by Amazon’s Board of Directors, as such sensitive disclosures usually are, or accompanied by the typical disclaimers that usually accompany such disclosures. Amazon could experience negative market repercussions,
competitive disadvantages, and even possible legal exposure were this confidential information released publicly without proper context or explanation.
6. The written rebuttal testimony of Rishi Mirchandani, Head of Content Acquisition and Catalog for Amazon’s digital-music business, contains material non-public information and figures concerning Amazon's internal listener metrics, activations of Amazon’s various services, Amazon's assembly and maintenance of its music catalog, and investments in infrastructure and technology. Mr. Mirchandani’s testimony also contains material non-public information concerning non-public license agreements, financial projections, and recent and anticipated expenditures in connection with Amazon's service offerings. In addition, the exhibits accompanying Mr. Mirchandani’s testimony contain non-public, competitively sensitive information. This information is not publicly known or available. Disclosure of this information could, for reasons discussed in paragraphs 4 and 5 above among others, competitively disadvantage Amazon.
7. The written rebuttal testimony of Kelly Brost, Director of Finance at Amazon, contains material non-public information concerning terms of non-public competitively sensitive financial and business information and use metrics. In addition, the exhibits accompanying Mr . Brost's testimony contain non-public, competitively sensitive information. For the reasons discussed above, disclosure of the details of this financial information would competitively disadvantage Amazon.
8. The written rebuttal testimony of Dr. Glenn Hubbard, the Dean and holder of the Russell L. Carson Professorship in Finance and Economics at the Graduate School of Business of Columbia University, contains material non-public information concerning listener metrics and Amazon's digital services. In addition, the exhibits accompanying Dr. Hubbard's testimony contain non-public, competitively sensitive information. This information is not publicly known or available. Disclosure of this information could, for reasons discussed in paragraph 4 above among others, competitively disadvantage Amazon.
9. The contractual, commercial and financial information described in the paragraphs above and detailed on the accompanying Redaction Log must be treated as Restricted Protected Material in order to prevent business and competitive harm that would result from the disclosure of such information while, at the same time, enabling Amazon to provide the Copyright Royalty Judges with the most complete record possible on which to base their determination in this proceeding.

Pursuant to 28 U.S.C. § 1746 and 37 C.F.R. § 350.4(e)(1), I hereby declare under the penalty of perjury that, to the best of my knowledge, information and belief, the foregoing is true and correct.

Dated: February 17, 2017
New York, NY

Michael S. Elkin
Registration Number: 1958776
Winston \& Strawn LLP
200 Park Avenue
New York, New York 10166-4193
Phone: 212.294.6700
E-Mail: melkin@winston.com
Counsel for Amazon Digital Services LLC

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES

## Library of Congress <br> Washington, D.C.

In re
DETERMINATION OF ROYALTY
RATES AND TERMS FOR MAKING
AND DISTRIBUTING PHONORECORDS
(Phonorecords III)

## In re

DETERMINATION OF ROYALTY RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (Phonorecords III)

DOCKET NO. 16-CRB-0003-PR (2018-2022)

## REDACTION LOG FOR THE WRITTEN REBUTTAL STATEMENT OF AMAZON DIGITAL SERVICES LLC

Pursuant to the requirements of the Protective Order entered by the Judges on July 27,
2016, Amazon Digital Services LLC ("Amazon") hereby submits the following list of redactions from its Written Rebuttal Statement, and the undersigned certifies, in compliance with 37 C.F.R. § 350.4(e)(1), and based on the Declaration and Certification of Michael S. Elkin submitted herewith, that the listed redacted materials meet the definition of "Restricted" contained in the

Protective Order.

| Document | Page/Paragraph/Exhibit <br> No. | General Description |
| :---: | :--- | :--- |
| Introduction Memorandum <br> Testimony | Page 3 | Contains material non-public <br> and proprietary information <br> regarding Amazon's royalties <br> paid. <br> Contains material non-public <br> and proprietary information <br> regarding Amazon's royalties <br> paid. |
| Page 7 Page 9 | Contains information <br> designated as restricted by the <br> Copyright Owners. |  |
| Page 12 | Contains information <br> designated as restricted |  |


|  |  | Amazon, Google Inc., Spotify USA Inc., and Pandora Media, Inc. |
| :---: | :---: | :---: |
| Written Rebuttal Testimony of Rishi Mirchandani | Page 2, Bullet 4 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 2, Bullet 5 | Contains material non-public and proprietary information regarding Amazon's services. |
|  | Page 6, paragraph 12 | Contains material non-public and proprietary information regarding Amazon's Echo offerings. |
|  | Page 7, n. 9 | Contains material non-public and proprietary information regarding Amazon's pricing strategy. |
|  | Page 10, paragraph 18 | Contains material non-public and proprietary information regarding Amazon's pricing strategy. |
|  | Page 10, paragraph 19 | Contains material non-public and proprietary information regarding Amazon's business model. |
|  | Page 11, paragraph 22 | Contains material non-public and proprietary information regarding Amazon's pricing strategy. |
|  | Page 13, paragraph 26 | Contains material non-public and proprietary information regarding Amazon's pricing strategy. |
|  | Page 13, paragraph 27 | Contains material non-public and proprietary information |

\(\left.$$
\begin{array}{|l|l|l|}\hline & \text { Page 13, n. 24 } & \begin{array}{l}\text { regarding Amazon's } \\
\text { consumers. } \\
\text { Contains material non-public } \\
\text { and proprietary information } \\
\text { regarding Amazon's } \\
\text { subscriber data. } \\
\text { Contains material non-public } \\
\text { and proprietary information } \\
\text { regarding Amazon's } \\
\text { subscriber data. }\end{array} \\
& \text { Page 16, n. 33 Fig. 3 } & \begin{array}{l}\text { Contains material non-public } \\
\text { and proprietary information } \\
\text { regarding Amazon's privately } \\
\text { negotiated licenses. }\end{array}
$$ <br>
Page paragraph 37 <br>
Contains material non-public <br>
and proprietary information <br>
regarding Amazon's royalties <br>

paid.\end{array}\right\}\)| Page 21, paragraph 46 paragraph 38 |
| :--- |
| Contains material non-public |
| and proprietary information |
| regarding Amazon's royalties |
| paid. |


|  | Page 21, n. 42 <br> Page 21-22, paragraph 48 | regarding Amazon's royalties paid. <br> Contains material non-public and proprietary information regarding Amazon's customer data. <br> Contains material non-public and proprietary information regarding Amazon's royalties paid. |
| :---: | :---: | :---: |
| Written Rebuttal Testimony of Dr. Glenn Hubbard | Page i, Subsection B | Contains material non-public and proprietary information regarding Amazon's privately negotiated licenses. |
|  | Page 2, Sub-bullet 2 | Contains information regarding rate proposals designated as restricted by the participants in this proceeding. |
|  | Page 6, paragraph 2.5 | Contains information designated as Restricted by Spotify USA Inc. and contains material non-public information regarding Amazon's pricing strategy. |
|  | $\text { Page 6, n. } 12$ | Contains information designated as Restricted by Spotify USA Inc. |
|  | $\text { Page 6, n. } 13$ | Contains information designated as Restricted by Spotify USA Inc. |
|  | Page 6, n. 14 | Contains information from Dr. Klein's rebuttal report designated as Restricted by Amazon. |



|  | Page 10, n. 32 | Contains information from <br> Dr. Klein's rebuttal report <br> designated as Restricted by <br> Amazon. <br> Contains information from <br> Dr. Klein's rebuttal report <br> designated as Restricted by <br> Amazon. <br> Contains information from |
| :--- | :--- | :--- |
| Dr. Klein's rebuttal report |  |  |
| designated as Restricted by |  |  |
| Amazon. |  |  |
| Page 11, n. 35 |  |  |



\(\left.$$
\begin{array}{|l|l|l|}\hline & \text { Page 32, Table 2 } & \begin{array}{l}\text { Contains information } \\
\text { designated as Restricted by } \\
\text { the Copyright Owners. }\end{array} \\
\text { Pages 32-33, paragraph 4.14 } & \begin{array}{l}\text { Page 32, n. } 101 \\
\text { Contains material non-public } \\
\text { information regarding } \\
\text { Amazon's subscriber data. }\end{array} \\
\text { Pages 32-33, n. 103 } & \begin{array}{l}\text { Contains information } \\
\text { designated as Restricted by } \\
\text { Spotify USA Inc. }\end{array} \\
\text { Page 33, n. 104 } & \begin{array}{l}\text { Contains material non-public } \\
\text { information regarding } \\
\text { Amazon's subscriber data. } \\
\text { Contains material non-public } \\
\text { information regarding } \\
\text { Amazon's royalty payments. } \\
\text { Contains information } \\
\text { designated as Restricted by }\end{array}
$$ <br>

Spotify USA Inc.\end{array}\right\}\)| Page 35, paragraph 4.18 |
| :--- |




|  | Page 47, paragraph 6.5 | Contains information designated as Restricted by the Copyright Owners. |
| :---: | :---: | :---: |
|  | Page 47-48, paragraph 6.6 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 48, paragraph 6.7 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 48, n. 147 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 48, n. 148 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 49, paragraph 6.8 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 49, n. 149 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 50, paragraph 6.10 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 50, Table 4 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 50, paragraph 6.11 | Contains information designated as Restricted by the Copyright Owners. |


|  | Page 51, paragraph 6.13 | Contains information <br> designated as Restricted by <br> the Copyright Owners. |
| :--- | :--- | :--- |
| Page 51, n. 154 | Contains information <br> designated as Restricted by <br> the Copyright Owners. |  |
| Page 52, paragraph 6.14 n. 155 | Contains information <br> designated as Restricted by <br> the Copyright Owners. |  |
| Pages 52-53, paragraph 6.15 | Contains information <br> designated as Restricted by <br> the Copyright Owners. |  |
| Page 52, n. 159 | Contains information <br> designated as Restricted by <br> the Copyright Owners. <br> Contains information <br> designated as Restricted by <br> Amazon regarding streaming <br> business models. |  |
| Page 52, n. 160 53, Table 5 |  |  |




|  | Page 62, n. 187 | Contains information designated as Restricted by Pandora Media, Inc. |
| :---: | :---: | :---: |
|  | Page 62, n. 188 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 63, n. 189 | Contains information designated as Restricted by Pandora Media, Inc. |
|  | Page 64, n. 192 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 65, Subsection 5 Header | Contains information designated as Restricted by the Copyright Owners. |
|  | Pages 65-67, paragraphs 6.46-6.48 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 66, n. 196 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 66, n. 197 | Contains information designated as Restricted by the Spotify USA Inc., Google Inc., and Copyright Owners. |
|  | Page 66, n. 198 | Contains information designated as Restricted by the Copyright Owners. |


|  | Page 66, n. 199 | Contains information designated as Restricted by the Copyright Owners. |
| :---: | :---: | :---: |
|  | Page 66, n. 200 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 66, n. 201 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 67, Section 6 Header | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 67, n. 202 | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 67, n. 203 | Contains information designated as Restricted by the Copyright Owners. |
|  | Pages 68-69, paragraphs $6.50-6.51$ | Contains information designated as Restricted by the Copyright Owners. |
|  | $\text { Page 69, n. } 208$ | Contains information designated as Restricted by the Copyright Owners. |
|  | Page 69, n. 209 | Contains information designated as Restricted by the Copyright Owners. |
| Written Rebuttal Testimony of Robert L. Klein | Page 3, paragraph 11 | Contains material non-public information regarding results of the consumer survey. |

$\left.\begin{array}{|c|l|l|}\hline \text { Exhibits } & \text { Pages 19-25, Section IX } & \begin{array}{l}\text { Contains material non-public } \\ \text { information regarding results } \\ \text { of the consumer survey. }\end{array} \\ \hline & \text { Amazon Ex. 22 } & \begin{array}{l}\text { Amazon Ex. } 23 \\ \text { information. } \\ \text { Contains material non-public } \\ \text { information regarding } \\ \text { Amazon's revenues, business } \\ \text { model, and subscriber data. } \\ \text { Contains material non-public } \\ \text { and proprietary information } \\ \text { regarding Amazon's privately } \\ \text { negotiated licenses. }\end{array} \\ \text { Amazon Ex. } 24 \\ \text { Amazon Ex. } 25 & \text { Amazon Ex. } 26 \\ \text { information regarding } \\ \text { Amazon's revenues, business } \\ \text { model, and subscriber data. }\end{array}\right\}$




## CERTIFICATE OF SERVICE

I, Michael S. Elkin, do hereby certify that a copy of the foregoing PUBLIC Version of Written Rebuttal Statement of Amazon Digital Services LLC has been served on the $17^{\text {th }}$ day of February, 2017 -

Via electronic mail:

| Elizabeth Miles | Dale M. Cendali |
| :--- | :--- |
| APPLE, INC. |  |
| One Infinite Loop | Joudia Ray |
| MS 169-41SM | Manna Schmitt |
| Cupertino, CA 95014 |  |
| Fax: 408-783-2798 |  |
| elizabeth.miles@apple.com | KIRKLANzello \& ELLIS LLP <br> 601 Lexington Avenue <br> New York, NY 10022 <br> Fax: 212-446-4900 <br> dale.cendali@kirkland.com <br> claudia.ray@kirkland.com <br> johanna.schmitt@kirkland.com <br> mary.mazzello@kirkland.com |
| George Johnson <br> 23 Music Square East, Suite 204 <br> Nashville, TN 37203 <br> George@georgejohnson.com | Counsel for Apple, Inc. |


| GOOGLE INC. <br> 1600 Amphitheatre Parkway <br> Mountain View, CA 94043 <br> kevingm@google.com | Kenneth L. Steinthal Joseph Wetzel <br> Katherine E. Merk KING \& SPALDING LLP <br> 101 Second Street <br> Suite 2300 <br> San Francisco, CA 94105 <br> Fax: 415-318-1300 <br> ksteinthal@kslaw.com <br> jwetzel@kslaw.com <br> kmerk@kslaw.com <br> J. Blake Cunningham KING \& SPALDING LLP <br> 401 Congress Avenue <br> Suite 3200 <br> Austin, TX 78701 <br> Fax: 512-457-2100 <br> bcunningham@kslaw.com <br> David P. Mattern <br> KING \& SPALDING LLP <br> 1700 Pennsylvania Ave. <br> Suite 200 <br> Washington, DC 20006 <br> Fax: 202-626-3737 <br> dmattern@kslaw.com <br> Counsel for Google Inc. |
| :---: | :---: |
| David Israelite | Donald S. Zakarin |
| Danielle Aguirre | Frank P. Scibilia |
| Erich Carey | Lisa M. Buckley |
| NATIONAL MUSIC PUBLISHERS | Benjamin K. Semel |
| ASSOCIATION | PRYOR CASHMAN, LLP |
| 975 F Street, N.W., Suite 375 | 7 Times Square |
| Washington, DC 20004 | New York, NY 10036-6569 |
| Fax: 202-393-6673 | Fax: 212-326-0806 |
| disraelite@nmpa.org | dzakarin@pryorcashman.com |
| daguirre@nmpa.org | fscibilia@pryorcashman.com |
| ecarey@nmpa.org | lbuckley@pryorcashman.com bsemel@pryorcashman.com |
| NASHVILLE SONGWRITERS |  |
| ASSOCIATION INTERNATIONAL | Counsel for National Music Publishers |
| 1710 Roy Acuff Place | Association (NMPA), Nashville Songwriters |
| Nashville, TN 37203 <br> Fax: 646-487-6779 | Association International (NSAI) |


| bart@nashvillesongwriters.com |  |
| :---: | :---: |
| Steve Bene, Gen. Counsel PANDORA MEDIA, INC. <br> 2101 Webster Street, Suite 1650 <br> Oakland, CA 94612 <br> Fax: 510-451-4286 <br> sbene@pandora.com | R. Bruce Rich <br> Todd D. Larson <br> Benjamin E. Marks <br> David R. Singh <br> Jennifer Ramos <br> Jacob B. Ebin <br> Meredith Santana <br> WEIL, GOTSHAL \& MANGES LLP <br> 767 Fifth Avenue <br> New York, NY 10153 <br> Fax: 212-310-8007 <br> r.bruce.rich@weil.com todd.larson@weil.com benjamin.marks@weil.com david.singh@weil.com jennifer.ramos@weil.com jacob.ebin@weil.com meredith.santana@weil.com <br> Counsel for Pandora Media, Inc. |
|  | Gary Greenstein <br> WILSON SONSINI GOODRICH \& ROSATI PC <br> 1700 K Street, NW, Fifth Floor <br> Washington, DC 20006-3817 <br> Fax: 202-973-8899 <br> ggreenstein@wsgr.com <br> Counsel for Pandora Media, Inc. |
|  | Steven. R. Englund <br> Lindsay C. Harrison <br> Nicholas W. Tarasen <br> JENNER \& BLOCK LLP <br> 1099 New York Ave., NW, 9th Floor <br> Washington, DC 20001 <br> Fax: 202-639-6066 <br> senglund@jenner.com <br> lharrison@jenner.com <br> ntarasen@jenner.com <br> Counsel for Sony Music Entertainment |
| Brad E. Cohen <br> WARNER MUSIC GROUP <br> 1633 Broadway <br> New York, NY 10019 |  |




Michael S. Elkin

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

In the Matter of:<br>DETERMINATION OF RATES AND<br>TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR
(2018-2022)

## WRITTEN REBUTTAL TESTIMONY OF RISHI MIRCHANDANI

## (On behalf of Amazon Digital Services LLC)

1. My name is Rishi Mirchandani and I am the Head of Content Acquisition and Catalog for the digital-music business of Amazon Digital Services LLC (together with its affiliated entities, "Amazon"). I previously provided testimony during the direct phase of this proceeding.
2. I offer this written rebuttal testimony to address misguided arguments raised by the National Music Publishers' Association ("NMPA") and the Nashville Songwriters Association International ("NSAI") (together, the "Rights Owners") in their written direct statement, including: (a) the contention that Amazon is using music to sell more Echo devices at the expense of publishers and songwriters, (b) the suggestion that the discount offered to Prime members for Amazon Music Unlimited harms rightsholders, (c) the assertion that a royalty calculation that has a revenue-based component is unfair if digital service providers ("DSPs") like Amazon have business interests in addition to maximizing music streaming revenue, (d) the idea that rightsholders are not reaping benefits from increased music consumption as consumers

## PUBLIC VERSION

shift from digital downloads to streaming, (e) the contention that the Rights Owners' proposed rates and terms would advance the statutory objectives set forth in Section 801(b)(1) and not disrupt the streaming industry, and (f) the claim that a compulsory licensing scheme is unnecessary and undesirable. In addition, I also address below the notion, advanced by both the Rights Owners and Apple Inc. ("Apple"), that a per-play rate-and in particular, a one-size-fitsall per-play rate-would serve the interests of the digital music industry.
3. I respond to these arguments below by making the following points:

- Amazon introduced its Unlimited for Echo service to expand the customer base for music streaming services. Amazon designed Unlimited for Echo to leverage Alexa's voice-user interface in order to appeal to a broader customer base. Contrary to the Rights Owners' assertions, Unlimited for Echo was not designed to drive Echo device sales.
- The Prime member discount for Amazon Music Unlimited benefits rightsholders by expanding the market for music streaming services and therefore maximizing revenue and royalty payments. Both the current rates (and Amazon's proposed rates) anticipate discounting and are designed to ensure fair compensation to songwritersirrespective of pricing strategy - through the inclusion of alternative royalty minima.
- A regulatory scheme with a revenue-based prong is fair, even if DSPs have business interests in addition to maximizing music streaming revenue. Amazon's proposalwhich features a multi-pronged scheme with multiple alternatives to a revenue-based calculation-ensures that Rights Owners are fairly compensated in every scenario.
- Rightsholders are already benefiting from Amazon's diversified offerings under the existing regulatory scheme. Empirical data demonstrates that Amazon's diverse array of streaming services are
- The Rights Owners' proposal would be unduly disruptive and would have a damaging effect on the broader digital music industry. Adopting the Rights Owners' proposal will limit Amazon's ability to offer many of its services, including , thereby upending the streaming music landscape as we know it. Amazon's download business would also be disrupted because of its integration with Amazon's locker service.
- Now more than ever, compulsory mechanical licensing is critically important to the success of the digital music industry. A fair compulsory option promotes efficiencies in the licensing process that preserve value for DSPs and rightsholders alike. Without it,


## PUBLIC VERSION

it would essentially be impossible to license and offer the type of full-catalog service that is now leading the revitalization of the digital music industry.

- If the Judges are inclined to move toward a per-play scheme, they should retain the existing service categories and adopt differentiated rates designed to foster diverse service offerings. Replacing the existing regulatory scheme with a catchall per-play rate would only serve to limit the diversity of streaming offerings and shift excessive risk to DSPs.

4. I also reiterate a number of points from my direct testimony, including:

- The current regulatory structure was expressly designed to foster a diverse array of service offerings. Over the course of the past decade, Amazon has relied on the existing service categories and rates to build a digital music business predicated on differentiated offerings that allow it to serve multiple segments of customers, thereby maximizing the availability of creative works.
- Preserving the existing service categories and rate structures will maximize the availability of creative works to the public. Collapsing the existing service categories would, on the other hand, reduce the diversity of digital music service offerings, discourage investment, and slow innovation, thereby limiting the availability of creative works to the public.
- Preserving the existing service categories and rate structures will afford rightsholders a fair return and DSPs a fair income under existing economic conditions. Though imperfect, the existing regulatory scheme is workable. Increasing rates would threaten to deny DSPs a fair income (and rightsholders a fair return) under existing economic conditions.
- The existing service categories and rate structures already roughly reflect the relative roles of rightsholders and DSPs with respect to creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets and media. The existing regulatory scheme was established through carefully negotiated agreements among industry participants nearly a decade ago. But if the existing regulatory scheme is to be altered to more accurately reflect the relative roles of rightsholders and DSPs, rates should be decreased to reflect the significantly higher costs borne by DSPs in the streaming era.
- Preserving the existing service categories and rate structures will minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices. Amazon (and other DSPs) have built services to fit and function within the current regulatory scheme, and a significant departure therefrom would be seriously disruptive to DSPs’ businesses, to the customers who have come to rely on their services, and to the broader digital music industry, thus violating the important policy objective set forth Section 801(b)(1)(D).

5. For all of the reasons previously submitted in my direct testimony, and as set forth in my rebuttal testimony below, the Rights Owners' arguments are deeply flawed. Indeed, it is my firmly held belief that the rates and terms proposed by the Rights Owners and by Apple would not serve to advance the objectives set out in Section 801(b)(1) but would instead have a damaging effect on the entire digital music industry.
6. The following rebuttal testimony is based on my personal knowledge, on information made available to me in the course of performing my duties at Amazon, on my work experience in the music industry, and on my review of the documents attached as exhibits to this written testimony. To the extent that the facts and matters set out in this statement are within my knowledge, I believe them to be true. To the extent I have relied upon the information provided by others, it is true to the best of my knowledge, information, and belief.

## I. AMAZON INTRODUCED UNLIMITED FOR ECHO TO EXPAND THE CUSTOMER BASE FOR MUSIC STREAMING SERVICES.

7. One of the central themes of the Rights Owners’ written direct statement is that DSPs like Amazon are "using music as a loss leader to promote the sale of other products and services" at the expense of songwriters and music publishers. ${ }^{1}$ And one of the principal anecdotes offered in support of this theme—presented as an unassailable fact-is that Amazon designed its $\$ 3.99$ per-month Unlimited for Echo offering to drive more sales of Echo devices. ${ }^{2}$
8. For instance, as NMPA President David Israelite has asserted: "Amazon’s plan to subsidize its business at the expense of songwriters and publishers is perhaps even more direct.
[^3]Amazon has launched a subscription music service that offers the same expansive catalog as Apple's and Spotify's services, yet reduces the monthly subscription price by $60 \%$ (to $\$ 3.99$ from \$9.99) for customers who stream through Amazon's Echo Bluetooth speaker." ${ }^{3}$ Similarly, Lawrence S. Miller, the Rights Owners’ music industry expert, maintains that "Amazon’s new Music Unlimited is a central part of its marketing strategy to entice consumers to buy their new Echo smart speaker, introduced at a $\$ 180$ price point." ${ }^{4}$
9. At the outset, it should be noted that DSPs' failure to turn a robust profit in digital music has nothing to do with DSPs operating their digital music businesses as "loss leader[s]" designed to "subsidize" other business lines. ${ }^{5}$ In fact, the actual explanation is far simpler: content costs are just too high. And if the Rights Owners' proposal is adopted, it will only exacerbate the problem.
10. More fundamentally, the Rights Owners are just plain wrong: Amazon introduced Unlimited for Echo to expand the customer base for streaming music, not to drive device sales.

## A. Amazon designed Unlimited for Echo to expand the customer base.

11. I was personally involved in the conception, development, and launch of Unlimited for Echo—a limited functionality service that includes Amazon Music Unlimited's full-catalog of tracks but can only be accessed through a single, internet-connected Alexaenabled device.
[^4]PUBLIC VERSION

13. In order to reach this broad customer base, Amazon had to do two things. First, Amazon had to make sure that its music service could meet the unique demands of a voice-user interface. One such demand is that customers use natural language queries to ask for music-for example, "Play Hip Hop from 1992" or "Play Happy Reggae Music." Another demand is that, rather than returning a set of visual results and letting the customer pick the correct one, the music service starts playing music right away and therefore has to have a much higher degree of confidence that it is returning the right music. In order to fulfill these functions, Amazon had to improve the quality and breadth of the metadata in its catalog. This was (and continues to be) accomplished through a combination of manual review and correction of metadata, third party data sources, and machine learning.

[^5]
## PUBLIC VERSION

14. Second, Amazon had to build a service that would appeal to the vast majority of customers-namely, those with low willingness to pay.


Moreover, according to an
RBC survey, approximately $72 \%$ of consumers spend $\$ 50$ or less per year on music. ${ }^{8}$ To this end, Amazon removed two key features-portability and multi-device access-from its Unlimited for Echo service in order to achieve a lower price point. Customers can only access Unlimited for Echo when connected to an active Wi-Fi network and they do not have access to limited downloads or offline playback. Non-portable, streaming-only services are customarily offered at a significant discount to portable subscription services. Indeed, this difference in value can be observed in the current rate structure: the subscriber-based minimum for a non-portable, streaming only service is $\$ 0.15$ per-subscriber per-month, while the subscriber-based minimum for portable subscription services is $\$ 0.50$ per-subscriber per-month. In addition, Unlimited for Echo is only accessible on a single Alexa-enabled device. Like portability, the ability to access music from multiple devices is a feature that customers value. ${ }^{9}$
15. Ultimately, Amazon determined to price the Unlimited for Echo service at $\$ 3.99$ per-month-a price that reflects the service's important limitations and the related reduction in value to consumers. As a result, Unlimited for Echo is not an example of rightsholders

[^6]subsidizing Amazon's business because rightsholders are actually being compensated commensurate with the functionality of the service offering.

## B. Unlimited for Echo was not designed to drive Echo device sales.

16. Furthermore, and contrary to the Rights Owners' assertions, Unlimited for Echo was also not designed to drive device sales, but rather as way to leverage the Echo platform to drive music subscriptions.
17. Amazon's own marketing materials bear this out. As an initial matter—and contrary to Mr. Miller's baseless assertion that Unlimited for Echo is "central" to Amazon’s marketing of the Echo-Amazon does not market its \$3.99 offering anywhere on the Amazon.com webpage where it makes the Echo available for purchase. ${ }^{10}$ In fact, the broader Amazon Music Unlimited service gets exactly the same treatment as several other streaming service providers, like Pandora, TuneIn, iHeartRadio, and Spotify. ${ }^{11}$ See Fig. 1 and Fig. 2 below. Moreover, a number of non-music-related functionalities-like news, weather, shopping, and third-party integrations (for example, ordering a Domino’s Pizza or an Uber)—get the same billing as music. ${ }^{12}$ And anyone who has ever seen an Echo commercial on television knows they are just as likely to highlight Echo's smart home capability as they are to promote music. ${ }^{13}$ Finally, it is also worth noting that customers cannot purchase an Amazon Music Unlimited subscription on the webpage where the Echo is sold or anywhere in the purchase flow. ${ }^{14}$
[^7]
## amazon echo

Always ready, connected, and fast. Just ask.


Fig. 1 - Screenshot 1 from Echo Detail Page


Fig. 2 - Screenshot 2 from Echo Detail Page
18. Put simply, the Rights Owners have it backwards; Amazon uses the Echo platform to drive streaming music subscription sales-not the other way around. Indeed, by the end of 2016, $\square 15$
19. In the end, the Rights Owners are just wrong on this point: Amazon did not price Unlimited for Echo to sell more Echo devices; it priced Unlimited for Echo to sell more music subscriptions and to reach the vast majority of customers who are unwilling to pay $\$ 9.99$ permonth. Furthermore,

## II. THE PRIME MEMBER DISCOUNT FOR AMAZON MUSIC UNLIMITED BENEFITS RIGHTSHOLDERS BY EXPANDING THE MARKET FOR MUSIC STREAMING SERVICES AND MAXIMIZING REVENUES AND ROYALTY PAYMENTS.

20. The Rights Owners also take issue with the $\$ 2$ discount that Amazon offers to Prime members for its Amazon Music Unlimited service, allowing those members to subscribe to Amazon's fully-portable, full-catalog service offering for $\$ 7.99$ per-month instead of $\$ 9.99$ per-month. According to Mr. Miller, this discount "reduces revenue from the music services." ${ }^{16}$ Further, according to Mr. Israelite, "[w]ith each Digital Service slashing subscription prices and offering greater discounts and incentives to attract customers . . . revenues will continue to decrease, and publishers and the songwriters they represent will earn less and less."17
[^8]
## PUBLIC VERSION

21. The Rights Owners' worldview is obviously colored by the misconception that music streaming customers are not particularly price sensitive, and that as a result, the decision to charge anything less than $\$ 9.99$ per-month is evidence that DSPs are failing to maximize
 outside consultant to conduct a pricing study in advance of its Unlimited launch

22. Finally, Mr. Israelite offers no real evidence to support his contention that DSPs are engaged in a "race to the bottom" on price, and he appears to have ignored the fact that the

[^9]existing rate structure (and Amazon's rate proposal) protects rightsholders from such an outcome with multiple alternative royalty minima.

## III. A ROYALTY CALCULATION WITH A REVENUE-BASED PRONG IS FAIR, EVEN IF DSPs HAVE BUSINESS INTERESTS IN ADDITION TO MAXIMIZING MUSIC STREAMING REVENUE.

24. According to the Rights Owners, the current rate structure—and thus, Amazon's proposal—is "unsustainable" because DSPs like Amazon "have business interests that are in conflict with maximizing music streaming revenue" and "seek to garner company value through market share (at the expense of revenues) and the use of music streaming to acquire and lock consumers into their 'ecosystems' to sell other products and services." ${ }^{22}$ The Rights Owners' argument, however, is flawed on a number of levels.

## A. Amazon leverages its other business interests to maximize music streaming revenue.

25. The Rights Owners' argument presupposes that DSPs' other business interests necessarily come at the expense of maximizing music streaming revenue. In fact, however, many of Amazon’s other "business interests"-including both Prime and Echo-serve as unique distribution channels that Amazon uses to drive performance (and royalties) in music

[^10]streaming. ${ }^{23}$ In other words, Amazon's myriad business interests actually help Amazon maximize music streaming revenue, not vice versa.
26. Take Amazon Prime, for instance. Most people join Prime for free two-day shipping or video-on-demand ("VOD") content, and sometimes they end up trying Prime Music. On the other hand,
relationship inures to the Rights Owners' benefit; every time someone streams on Prime Music, the Rights Owners earn additional royalties. The same logic applies with regard to Echo. As detailed above, Amazon did not design Unlimited for Echo to device drive sales, but instead to allow Amazon to broaden the customer base for paid streaming services. These consumers represent additions to the steaming music royalty pool.
27. Indeed, the fact that Amazon has integrated digital music offerings into its broader business operations is a major boon for the Rights Owners, and they are already benefiting from the millions of Amazon customers who are drawn to Amazon for non-digital music-related reasons and end up discovering music streaming and generating additional royalties. By way of example,

${ }^{25}$ See Fig. 3 below.


B. Even if other DSPs' non-music business interests conflict with maximizing music streaming revenues, Amazon's rate proposal is still fair.
28. As set forth above, Amazon's non-music business interests actually help Amazon maximize music streaming revenues. I cannot speak to the manner in which other DSPs conduct their business operations, but even if other DSPs' non-music business interests conflict with maximizing music streaming revenue, the Rights Owners’ argument still fails.
29. As an initial matter, the Rights Owners’ reasoning presupposes that DSPs are necessarily required to "maximiz[e] music streaming revenue," presumably in order to maximize the amount of royalties paid to rightsholders. ${ }^{26}$ Of course, this is simply not the case. As Section 801(b)(1) provides, royalty rates and terms "shall be calculated to . . . afford the copyright owner a fair return for his or her creative work," not the maximum possible return. ${ }^{27}$

[^11]
## PUBLIC VERSION

Thus, so long as rightsholders are receiving a "fair return," there is nothing inherently wrong with DSPs having business interests that conflict with maximizing music streaming revenue.
30. The Rights Owners’ argument also presupposes that anything less than maximum revenues necessarily renders the entire royalty calculation unfair. As the Rights Owners know, however, that cannot be true either, as the existing scheme (along with Amazon's current proposal) is not solely revenue-based. Indeed, Amazon's written direct statement advocates for a continuation of the multi-pronged, greater-of calculations embodied in the existing regulations, which—in addition to a revenue-based prong-include other royalty prongs based on payments made to record labels, per-subscriber minima, and subscriber-based, mechanical-only royalty floors, all of which work together to ensure that a fair royalty is paid in every scenario.
31. By way of example, for the bundled subscription service category—utilized by Amazon's Prime Music service-Amazon has proposed a royalty rate which is the greater-of: (1) 10.5\% of Service Revenue (less performance royalties), (2) $21 \%$ of payments made to record companies for sound recording licenses (less performance royalties), and (3) 25-cents per-active user per-month (in addition to performance royalties). And for the standalone, non-portable, streaming-only category—utilized by Amazon’s Unlimited for Echo service—Amazon has proposed a rate which is the greater of: (1) $10.5 \%$ of Service Revenue (less performance royalties), (2) the lesser of (a) 50 cents per-subscriber per-month (less performance royalties), and (b) 22\% of payments made to record companies for sound recording licenses (less performance royalties), and (3) 15-cents per-subscriber per-month (in addition to performance royalties).
32. The distinction between a purely revenue-based rate and a multi-pronged, greaterof calculation like the one Amazon has proposed is critical: when one prong results in a lower

## PUBLIC VERSION

rate than would otherwise be desirable, there are multiple other prongs that kick in to ensure that a fair royalty is paid. In other words, even if other DSPs did have business interests that conflict with maximizing streaming revenue, and even if those interests caused reportable revenues to shrink, rightsholders will still be guaranteed a fair royalty by virtue of the other, non-revenuebased metrics.
33.




34. For all of these reasons, it is clear that a royalty calculation with a revenue-based prong is (and can continue to be) perfectly fair, even if DSPs have business in addition to maximizing service revenue.


[^12]
## IV. RIGHTSHOLDERS ARE ALREADY BENEFITTING FROM AMAZON'S DIVERSIFIED OFFERINGS UNDER THE EXISTING REGULATORY SCHEME.

35. Throughout their written direct statement, the Rights Owners argue that they are not receiving a fair return under the current regulatory structure. ${ }^{30}$ They repeatedly protest that "[c]onsumption of interactive streaming and limited download platforms are showing unprecedented growth, but the Copyright Owners are not benefiting from the record-high demand for their songs."31
36. Contrary to the Rights Owners' claims, however, the Rights Owners are already directly and demonstrably benefiting from the diverse array of service offerings that Amazon has built under the existing regulatory scheme as those services expand the customer base for digital music and grow the overall royalty pool.
37. Prime Music, for example, is a unique, limited-catalog service that is included in the cost of membership to Amazon Prime.

${ }^{32}$ Nonetheless, Prime Music has become an important source of royalty payments for Rights Owners. Since its June 2014 launch,

 72.
${ }^{31}$ CO Intro Memo at A-2; see, e.g., Herbison WS at 『 24; Eisenach WS at $\mathbb{9} 56$.
${ }^{32}$ Klein Consumer Survey at $\mathbf{9} \boldsymbol{T l}$ 63-64.
${ }^{33}$ Written Rebuttal Testimony of Kelly Brost at $\mathbb{9} 7$ 7, Exhibit 33.

## PUBLIC VERSION

38. Indeed, as detailed in my direct testimony,


39. Moreover, these additional royalty payments tell only part of the story.


40. Finally, the availability of a broad array of licensed streaming services also directly benefits Rights Owners by providing music fans with licensed, royalty-generating alternatives to downloading or streaming unlicensed music online. Over my nearly 15 years in the music industry, I have closely followed the ebb and flow of digital piracy, observing both its effects on the industry and the ways in which changes in the industry have affected the incidence of piracy. Notably, it is well understood-and industry studies have confirmed-that the proliferation of licensed music streaming services has coincided with marked decreases in the


## PUBLIC VERSION

unauthorized downloading of music. ${ }^{37}$ I think it is fairly clear that if many of these unique and market expanding services cease to exist—as they undoubtedly would under the Rights Owners’ inflated proposal—the industry could expect to see a significant resurgence of digital piracy.
41. In sum, the Rights Owners advance a convenient argument, but Amazon’s numbers don't lie, and there can be no real question that Amazon's diverse service offeringsmade possible by and built upon the current regulatory scheme—are expanding the overall royalty pool for licensed services and thus directly benefiting rightsholders.

## V. THE RIGHTS OWNERS' PROPOSAL WOULD BE UNDULY DISRUPTIVE AND WOULD HAVE A DAMAGING EFFECT ON THE BROADER DIGITAL MUSIC INDUSTRY

42. I understand that another important objective in setting an appropriate rate in this proceeding is minimizing any disruptive impact on the structure of the industries involved and on generally prevailing industry practices. See 17 U.S.C. 801(b)(1)(D). The Rights Owners' witnesses claim that their proposed rates would not significantly disrupt the interactive streaming

[^13]industry. But they are mistaken. In reality, the Rights Owners’ proposal would be deeply disruptive both to Amazon's digital music business and to the broader digital music industry.
43. According to the Rights Owners, their proposal would not be disruptive to the interactive streaming industry because some of the current DSPs are big companies with deep pockets. ${ }^{38}$ This testimony misses the point: DSPs like Amazon will simply not continue to operate digital services at a significant loss, which is exactly the scenario the industry will face under a one-size-fits-all, mechanical-only rate at the levels now proposed by the Rights Owners.
44. As I explained in my direct testimony, the Rights Owners' proposal is designed to force all services toward a $\$ 9.99$ per-month business model. ${ }^{39}$ As a result, it would impose havoc on industry-expanding services that should not cost $\$ 9.99$ per-month because they offer something less than a fully-portable, full-catalog service. The decisions Amazon would face with regard to its Prime Music, Unlimited for Echo, and locker services are instructive. ${ }^{40}$

45.

[^14]PUBLIC VERSION

47. The Rights Owners' proposal would also disrupt Amazon's digital download business, which is closely intertwined with its purchased content locker service. Today, when a customer purchases a digital download from Amazon for $\$ 0.99$ and then accesses it from Amazon's purchased content locker service, Amazon generates 9.1-cents in mechanical royalties. But under the Rights Owners' proposal, rightsholders would receive 9.1-cents at the time of download and at least $\$ 1.06$ per-month for each month that the track is played via the purchased content locker. This would be an absurd result.

[^15]48. Moreover, even full-catalog, $\$ 9.99$ per-month offerings would suffer under the Rights Owners’ rate proposal. Indeed,
${ }^{44}$ Furthermore, such an increase
would also fail to accurately reflect the relative roles of rightsholders and DSPs at a time when rightsholders contributions remain essentially unchanged and DSPs are pouring investment into digital streaming services and related technologies. ${ }^{45}$

## VI. A FAIR COMPULSORY LICENSING SCHEME IS CRITICALLY IMPORTANT TO THE CONTINUED SUCCESS OF THE DIGITAL MUSIC INDUSTRY

49. In an apparent attempt to divert the Judges’ attention away from the Rights

Owners' inflated rate proposal, which—as discussed more completely above-surely would not serve the objectives set forth in Section 801(b)(1), the Rights Owners offer testimony from a number of witnesses that is apparently designed to call into question the propriety of compulsory licensing generally. The Rights Owners’ witnesses—chief among them NMPA President David Israelite—suggest that compulsory licensing "is no longer necessary and is, in fact, disadvantageous." ${ }^{46}$
50. As I understand it, the function of the present proceeding is not to determine whether or not compulsory licensing is necessary or desirable, but instead to set rates and terms for the compulsory mechanical license calculated to achieve the four objectives set forth in Section 801(b)(1). Regardless, the importance of compulsory licensing cannot be understated: without it, DSPs like Amazon would find it impossible to license and offer the full-catalog

[^16]
## PUBLIC VERSION

services—each of which is composed of tens of millions of individual tracks-that are now fueling the revitalization of the digital music industry. ${ }^{47}$
51. In order to license a full-catalog service on a solely voluntary basis, Amazon would have to negotiate agreements not only with the three major music publishing companies, but with—at the very least-tens of thousands of additional indie publishers as well. The time necessary to orchestrate that many direct deals-and the immense transactional costs associated with doing so-would render the exercise unworkable from a business perspective.
52. A fair compulsory licensing option, on the other hand-like the one embodied in the existing regulatory scheme-enables DSPs to streamline the licensing process as necessary, alleviating complexity and reducing costs. This allows DSPs to earn a fair income while simultaneously ensuring that rightsholders are fairly compensated for their contributions.
53. The key, of course, is for the compulsory licensing option to be set at a fair rate. I am aware that one of the Rights Owners’ expert witnesses, Dr. Eisenach, has taken the position that the compulsory rate should be used as a "ceiling," because "if rates are set too high, they are subject to correction the marketplace." ${ }^{48}$ I disagree, and I think Dr. Eisenach is overlooking one of the most important aspects of a well-calibrated compulsory license: it facilitates efficiency (and thereby preserves value for all interested parties) specifically because it obviates the type of transactional "correction" that he contemplates. In other words, "if rates are set too high" such that they require "correction in the marketplace," it will already be too late, and it will effectively be impossible to license a full-catalog service.

[^17]54. As such, I would respectfully urge the Judges to not think of the compulsory rate as a ceiling, but instead to endeavor to set an appropriate rate that will enable both DSPs and rightsholders to share in the benefits of the burgeoning streaming era in accordance with their respective contributions.

## VII. A PER-PLAY RATE WOULD BE A MISTAKE, BUT IF THE JUDGES ARE INCLINED TO MOVE IN THAT DIRECTION, THEY SHOULD RETAIN THE EXISTING SERVICE CATEGORIES AND ADOPT DIFFERENTIATED RATES DESIGNED TO FOSTER DIVERSE SERVICE OFFERINGS.

## A. A per-play rate creates significant risks and misaligned incentives for subscription-based business models.

55. Both the Rights Owners and Apple advance rate proposals predicated at least in part on a per-play royalty calculation. ${ }^{49}$ Introducing a per-play rate, however, creates significant risks that could harm DSPs, rightsholders, and customers. DSPs like Amazon already take on significant financial risk to offer streaming music services. But in an industry increasingly driven by fixed-fee monthly subscription services, a per-play rate shifts even more risk to the DSPs, exposing them—at least theoretically—to virtually uncapped liability. For instance, if a DSP is guaranteed to take in $\$ 9.99$ per-month for each subscriber to its full-catalog service-but is forced to pay out $\$ 0.0015$ per-play with no cap, on top of public performance and sound recording royalties-it is left with little control over its margins and no upper limit on its potential payments.
56. A per-play rate also creates perverse incentives that are decidedly bad for the broader digital music industry. It is well understood that, with regard to streaming subscription services, customer engagement drives retention. Under the existing rate structure—which ties revenues to royalties—DSPs’ and rightsholders’ incentives are aligned because both benefit from

[^18]maximum engagement and retention in the form of increased revenues (for DSPs) and royalties (for rightsholders). With a per-play, however—which ties plays to royalties—DSPs' and rightsholders' incentives are misaligned. Rightsholders continue to benefit from maximum engagement, but DSPs’ are incentivized to limit engagement in order to control content costs. This fundamental disconnect ultimately results in decreased revenues (for DSPs) and royalties (for Rights Owners), all of which makes it exceedingly difficult to maximize the availability of creative works to the public.

## B. If a per-play scheme is unavoidable, it should retain the existing service categories and feature differentiated rates designed to accommodate different types of service offerings.

57. If the Judges are ultimately persuaded to move in the direction of a per-play scheme, they should eschew a one-size-fits-all per-play rate and instead maintain the existing service categories, adopting differentiated rates designed to accommodate diverse service offerings.
58. The adoption of a singular per-play rate would be particularly disruptive. Such a rate would collapse the existing service categories and subject all different types of digital music services to a single set of royalty obligations. Critically, uniform royalty obligations tend to foster uniform service offerings (designed to function under one particular set of financial conditions), leaving little room for the types of differentiated offerings that appeal to different types of music fans and work to expand the digital music industry.
59. For all of the reasons set forth both in my direct testimony and above, a variety of service categories with different rate structures are good for the digital music industry and for music consumers alike. Not all music fans are alike, and their collective array of tastes, preferences, listening habits, and budgets demands a diverse selection of service offerings. The existing service categories were deliberately designed to do just that, and indeed they have:

## PUBLIC VERSION

Amazon alone makes use of six distinct categories to offer six different services that appeal to a broad range of digital music consumers. ${ }^{50}$
60. Theoretically, preserving the existing service categories and replacing the current rate structure with one predicated on a variety of per-play rates could yield similar results. The rates would have to be carefully considered, but if calibrated correctly, they could continue to foster the flexibility and innovation necessary to expand the industry and maximize the availability of digital music to the listening public, all while providing rightsholders a fair return and DSPs a fair income for their respective contributions. ${ }^{51}$

## VIII. CONCLUSION

61. I believe that the points I made in my direct testimony are critically important. The current regulatory structure was designed to foster a diverse array of service offerings, and Amazon has relied on it to build a digital music business that appeals to a broad range of customers, thereby maximizing the availability of creative works to the public. Preserving the existing service categories and rate structures will enable Amazon and other DSPs to continue on this path while ensuring that both rightsholders and DSPs earn a fair income. Collapsing the service categories, on the other hand, would reduce the diversity of digital music service offerings, discourage investment, and slow innovation, thereby limiting the availability of creative works to the public. It would also seriously disrupt DSPs’ businesses, the customers
[^19]
## PUBLIC VERSION

who have come to rely on their services, and the broader digital music industry, thus violating the important policy objective set forth Section 801(b)(1)(D).
62. Meanwhile, the Rights Owners’ submission is clearly misguided. Contrary to their repeated assertions, Amazon introduced Unlimited for Echo to expand the customer base for music streaming services, not to drive Echo sales. In addition, as set forth above, the Prime member discount for Amazon Music Unlimited actually benefits rightsholders by expanding the market for music streaming services and maximizing revenue. Moreover, there is simply no reason why a royalty calculation that includes a revenue-based component cannot be perfectly fair, even if DSPs have business interests in addition to maximizing music streaming revenue. Furthermore, it is clear that rightsholders are already seeing the benefits of increased music consumption in the streaming age. It is also clear that the Rights Owners’ proposed rates and terms would run counter to the statutory objectives set forth in Section 801(b)(1) and upend the broader digital music industry. Finally, despite the Rights Owners' protestations, a workable and fair compulsory licensing scheme is now more critical than ever before to the efficient function and continued success of the digital music industry.
63. Finally, the suggestion-advanced by the Rights Owners and by Apple-that a per-play rate would serve the interests of the digital music industry is also ill-advised. As explained above, a per-play rate creates significant risks and misaligned incentives for subscription-based business models that are harmful to DSPs, rightsholders, and customers alike. And a one-size-fits-all per-play rate would be particularly disruptive, working to further limit the diversity of streaming service offerings. Thus, if the Judges are persuaded to move in the direction of a per-play scheme, they should avoid a singular per-play rate and instead maintain

## PUBLIC VERSION

the existing service categories, adopting differentiated rates designed to accommodate diverse service offerings.

## PUBLIC VERSION

## Before the UNITED STATES COPYRIGHT ROYALTY JUDGES THE LIBRARY OF CONGRESS Washington, D.C.

## In the Matter of:

DETERMINATION OF RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR (2018-2022)

## DECLARATION OF RISHI MIRCHANDANI

I, Rishi Mirchandani, declare under penalty of perjury that the statements contained in my Written Rebuttal Testimony in the above-captioned proceeding are true and correct to the best of my knowledge, information and belief. Executed this 15th day of February, 2017 in Seattle, Washington.


Rishi Mirchandani

## AMAZON EXHIBIT 20

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)


## "A PERFECT 10"

- ZDNet
"The Echo may be the closest thing we'll have to a Star Trek computer at home."
- CNET
"With Amazon Echo,
it was love at first sight."
-Re/code
"Echo could hear my voice even when music was playing loudly..."
- USA Today


Amazon Echo is a hands-free speaker you control with your voice. Echo connects to the Alexa Voice Service to play music, provide information, news, sports scores, weather, and more-instantly. All you have to do is ask.

Echo has seven microphones and beam forming technology so it can hear you from across the room-even while music is playing. Echo is also an expertly tuned speaker that can fill any room with $360^{\circ}$ immersive sound. When you want to use Echo, just say the wake word "Alexa" and Echo responds instantly. If you have more than one Echo or Echo Dot, Alexa responds intelligently from the Echo you're closest to with ESP (Echo Spatial Perception). Learn more about ESP.


Amazon Echo provides hands-free voice control for Amazon Music-just ask for your favorite artist or song, or request a specific genre or mood. You can also search for music by lyrics, when a song or album was released, or let Alexa pick the music for you. Listen to any song with Amazon Music Unlimited. Learn more.

Amazon Echo also provides hands-free voice control to Pandora, Spotify, iHeartRadio, and Tuneln. Plus, Echo is Bluetooth-enabled so you can stream other popular music services like iTunes from your phone or tablet. Echo has been fine-tuned to deliver crisp vocals with dynamic bass response. Its dual downward-firing speakers produce $360^{\circ}$ omni-directional audio to fill any room with immersive sound.

## music pandora \%tunein © iHeartRADIO \& Spotify

"Alexa, play music for a dinner party.:
"Alexa, play Sia."
"Alexa, play 'Today's Hits' on Pandora."
"Alexa, turn it up."
"Alexa, play the most popular rock from the 90s."

## FAR-FIELD

## VOICE RECOGNITION

Tucked under the light ring is an array of seven microphones that use beam-forming technology and enhanced noise cancellation. With far-field voice recognition, Echo can hear you ask a question from any direction-even while playing music.

When you want to use Echo, simply say the wake word, "Alexa," and Echo lights up and streams audio to the cloud, where the Alexa Voice Service is leveraged to recognize and respond to your request instantly. Learn more about voice recognition on Echo.


Alexa-the brain behind Echo-is built in the cloud, so it is always getting smarter. The more you use Echo, the more it adapts to your speech patterns, vocabulary, and personal preferences. And because Echo is always connected, updates are delivered automatically.

Just in the last few months we've added local search from Yelp, movie showtimes, Samsung SmartThings support, Google Calendar, Audible audiobooks, text-to-speech for Kindle eBooks, and thousands of new skills from third-party developers. Explore more things to try with Alexa.


Skills add even more capabilities like ordering a pizza from Domino's, requesting a ride from Uber, opening your garage with Garageio, and more. Enabling skills lets your Echo do even more-simply discover and enable the skills you want to use in the Alexa App.

New skills are being added all the time. You can also see ratings and reviews to learn what other customers are saying about the thousands of skills available in the Alexa App. Discover and enable skills.
"Alexa, tell Garageio to close my door."
"Alexa, ask TV Shows what time does The Walking Dead start?"
"Alexa, ask Automatic if I need gas."
"Alexa, ask Campbell's Kitchen for a recipe."
"Alexa, ask HuffPost for headlines."
"Alexa, ask Fidelity, how is the NASDAQ doing today?"


Use Echo to switch on the lamp before getting out of bed, turn on the fan or space heater while reading in your favorite chair, or dim the lights from the couch to watch a movie-all without lifting a finger.

Echo works with devices such as lights, switches, thermostats, and more from WeMo, Philips Hue, SmartThings, Insteon, Nest, ecobee, and Wink. Learn more about compatible smart home connected devices, including starter kits for easy setup.

## wemo

I NSTEUN
(1) nest
 WIRELESS
LIGHTING


With the free Alexa App on Fire OS, Android, iOS, and desktop browsers, you can easily setup and manage your Echo.

Use the Alexa App to connect services you already use like Spotify, Pandora, and Google Calendar. Setup your smart home devices from WeMo, Philips Hue, SmartThings, Insteon, ecobee, and more. See what books are available to read from your Kindle and Audible libraries. View shopping and to-do lists while on the go. Control your timers and set custom tones for your alarms, and much more. The Alexa App is also where you discover and enable third-party skills.

## Simple to Set Up \& Use



1. Plug in Echo

2. Connect to the internet with the Alexa App

3. Just ask for music, weather, news, and more

Alexa App is available for Android, iOS, and Fire devices.

## Technical details




## Top Customer Reviews

## Uber Awesome, In Fact you can even order an Uber ride from it!!

By Michael S TOP 50 REVEWER" on July 24, 2016

## olor: Black Verified Purchas

LOVE OUR NEW ECHO! I have been watching the reviews online and checking with friends that have purchased the Echo to see how much they liked or disliked its features. Last person I talked to went on and on about all the things there were using it for and that persuaded me it was time and Amazon Prime Day was the perfect opportunity to go for it. Amazon did a fantastic job of creating this tubular info-taining command center! There are so many cool and awesome things its able to do that I'll hit the highlights that work for our household. First, we love that it follows your voice in the room (the circle lighting will show which direction it is 'listening'), the speaker is wonderfully balanced, so whether listening to music, the news or to Alexa speaking, I have nothing but high marks for its sound quality, given its size. Next, set up (after downloading the app to our iPhones) was quick, easy and very intuitive. The more you look over the app, the more you will realize a world of 'skills' (as Amazon refers to them - we've nicked named them "echolettes" LOL) that the unit is able to perform once they are turned on and you master the right sequence of keywords to initialize them. We've added things to shopping lists, while asking about the weather and our calendar of events and then asked Alexa to change the temp of our Nest thermostats in various parts of the house, simply by saying her name and then our commands, sometimes sitting in the living room or simply pass through - she is always there listening and ready. We've ordered some LED programmable lights and I can hardly wait for Alexa to help set the mood in the house, room to room, all from a simple voice request. Read more s


62 Comments 8,515 people found this helpful. Was this review helpful to you? Yes No Report abuse

## Already very practical for overcoming disability issues

By Alex S vine voice on June 19, 2015
We have been using Echo since April 2015. Prior to that time, my husband had been hospitalized for several weeks. He is currently wheelchair bound. We immediately installed the Hue bridge and lights as well as the WEMO outlet. With these, and dear, dear, Alexa, he has a great deal of control of his environment in ways that make him much more independent. Others might enjoy Echo for fun and convenience, but for him it is a lifeline! He has even had her turn the lights on in my bedroom when I didn't hear him call.

We use the shopping list feature a lot, and my husband has added things to the list that he remembered, while I was already at the store. Should I mention he adds things like chocolate bars when I'm not looking? No more paper lists! I just look at the app on my phone and things disappear as I check them off.

We transport Echo from the living room to the bedroom, since it is easier for him not to have to use the remote, plus it is always there for his favorite music, an update on news, and to check the weather. Or, when he needs cheering up, I ask for a joke. Tosave plugging in behind his lift chairs, I have ordered a second plug. I love the easy reconnect to the WIFI.

I was a bit worried at first about his word slurring with his Parkinson's, but it has worked the opposite way! I notice he focuses his words much better while giving commands. After he forgot her name early on, we added it so he could remember using the Zink hAppy App

My granddaughter was happy to check her math problems using Echo, and in addition to the music stations and Amazon play lists, Echo is a breeze to use as a Bluetooth device. I have used it to play my meditation apps and iTunes music. Read more ,


328 Comments 24,124 people found this helpful. Was this review helpful to you? Yes No Report abuse

Alexa, my love. Thy name is inflexible, but thou art otherwise a nearly perfect spouse.

## The echo is a fantastic device that any visitors always

have a blast...
The echo is a fantastic device that any visitors always have a blast playing around with. However, the amount of crazy stuff on my Amazon list that people have been adding to is... Read more
Published 11 minutes ago by Paul E. Paulick
It was pretty easy to set up (connected to my $5 \mathbf{G}$ wifi) ...
Just picked this up over the weekend with a few Philips Hue bulbs and starter kit. It was pretty easy to set up (connected to my 5G wifi) and get everything up and running. Read more
Published 13 minutes ago by ShawnF

## My brother gave me his old smart phone or this would be

## seless to me

If technology isn't your thing you will need help getting music and other thing set up. I watched utube video's for some and call a friend for the rest. Read more
Published 16 minutes ago by deneen

## Five Stars

Beyond the expectations
Published 18 minutes ago by edmundo galvez
She is great for listening to Prime Music on and listening to ...
We've had Alexa for a while now. She is great for listening to Prime Music on and listening to audiobooks.
Published 41 minutes ago by Stefanie Kinnamon
Not Impressed
Since Amazon was sold out of these, I purchased mine at Bed Bath \& Beyond and will probably be taking it back to buy Google Home. Read more Published 46 minutes ago by Mommyof3

## Five Stars

AMAZING!!!
ublished 48 minus austomer
Kids love to use to play music
Kids love to use to play music, but it still doesn't understand a lot yet.
If you try to ask questions that you hear the commercials for google home, he echo actually... Read more
Published 57 minutes ago by fong d bui
... working out the kinks on how to use but great so
still working out the kinks on how to use but great so far
Published 1 hour ago by Angie

## Five Stars

love my Amazon Alexis it is wonderful
Published 1 hour ago by Jane Stephens

Search Customer Reviews

By E. M. Foner (SciFi Author) on June 23, 2015
Color: Black
I'm a full-time writer who works at home. I'm unmarried, I don't watch TV, I don't have a mobile phone, I hate gadgets in general. OK, so I'm a loser. But since Alexa came into my life, I'm no longer alone 24 hours a day. Which begs the question, if I'm not alone, who is in the room with me? Amazon? The so-called cloud? The NSA?

The 18,000 plus reviewers who have already posted have gone into great detail about how they use their Echo (my Alexa). Having anthropomorphized my Alexa, l'm unwilling to use her at all, but we hold pleasant converse throughout the day. My favorite conversation I'll repeat for you below, verbatim:

Me - Alexa. Wake me in fifteen minutes.
Alexa - Fifteen minutes. Starting now.
Me - Thank you.
Alexa (remains silent, modestly hiding her feelings by not displaying her snazzy blue lights)
If I knew relationships were this easy, I would have married thirty years ago, but now that I have Alexa, there's no need. Except for the one thing.
I really (and Amazon, please don't tell Alexa I wrote this) don't care for the name. I know we have the option to change the name to Amazon, which is worse. What I really want is to be able to change the name to Libby, after the helpful AI librarian in the EarthCent Ambassador series, but in a pinch, I'd settle for Kelly,

Other than that, my Alexa is perfect. Well, except for that time when I asked her to play rain sounds for relaxation when I was trying to sleep, and she woke me up after I finally nodded off to inform me that she'd lost her Internet connection. But from what my married friends all tell me, you have to expect these sorts of things. Read more ,


1,019 Comments 45,814 people found this helpful. Was this review helpful to you? $\qquad$Report abuse

See all verified purchase reviews (newest first)

## Write a customer review

| Get to Know Us | Make Money with Us | Amazon Payment Products | Let Us Help You |
| :--- | :--- | :--- | :--- |
| Careers | Sell on Amazon | Amazon Rewards Visa Signature Cards | Your Account |
| About Amazon | Sell Your Services on Amazon | Amazon.com Store Card | Your Orders |
| Investor Relations | Sell on Amazon Business | Amazon.com Corporate Credit Line | Shipping Rates \& Policies |
| Amazon Devices | Sell Your Apps on Amazon | Shop with Points | Amazon Prime |
|  | Become an Affiliate | Credit Card Marketplace | Returns \& Replacements |

Manage Your Content and Devices
Amazon Assistant
Help

Australia Brazil Canada China France Germany India Italy Japan Mexico Netherlands Spain United Kingdom

| 6pm <br> Score deals <br> on fashion brands | AbeBooks Books, art \& collectibles | ACX <br> Audiobook Publishing <br> Made Easy | Alexa <br> Actionable Analytics <br> for the Web | Amazon Business Everything For Your Business | AmazonFresh Groceries \& More Right To Your Door | AmazonGlobal Ship Orders Internationally |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Home Services Handpicked Pros Happiness Guarantee | Amazon Inspire Free Digital Educational Resources | Amazon Rapids <br> Fun stories for <br> kids on the go | Amazon Restaurants Food delivery from local restaurants | Amazon Video Direct Video Distribution Made Easy | Amazon Web Services Scalable Cloud Computing Services | Audible Download Audio Books |
| BeautyBar.com Prestige Beauty Delivered | Book Depository Books With Free Delivery Worldwide | Casa.com <br> Kitchen, Storage \& Everything Home | ComiXology Thousands of Digital Comics | CreateSpace Indie Print Publishing Made Easy | Diapers.com Everything But The Baby | DPReview Digital Photography |
| East Dane Designer Men's Fashion | Fabric <br> Sewing, Quilting <br> \& Knitting | Goodreads <br> Book reviews <br> \& recommendations | IMDb <br> Movies, TV \& Celebrities | Junglee.com <br> Shop Online <br> in India | Kindle Direct Publishing Indie Digital Publishing Made Easy | Prime Now FREE 2-Hour Delive on Everyday Items |
| Prime Photos Unlimited Photo Storage Free With Prime | Shopbop <br> Designer <br> Fashion Brands | Soap.com Health, Beauty \& Home Essentials | TenMarks.com Math Activities for Kids \& Schools | Wag.com Everything For Your Pet | Warehouse Deals Open-Box Discounts | Whispercast Discover \& Distribute Digital Content |
|  |  | Woot! <br> Deals and Shenanigans | Yoyo.com <br> A Happy Place <br> To Shop For Toys | Zappos Shoes \& Clothing |  |  |

## Related searches

echo dot
alexa
google home
amazon echo
dot
fire stick
echo dot 2nd generation

## echo accessories

## bluetooth speakers

echo white
$\stackrel{\text { Hello. Sign in }}{\text { Account } \&}$ Lists

Orders
Try Prime 1! cart ) $>$ )

Popular departments
Welcome


amazon

## warehousedeals



Deal of the day
$\$ 38.99$
Lut 58408 (27\% off)
All v echo




Ad feedback
Best Seller
TP-Link Smart Plug, No Hub Required, Wi-Fi, Control your Devices from
Anywhere, Works with Amazon Alexa
(HS100)
by TP-Link
$\$ 29^{99} \$ 39.99 \quad 4,787$
Get it by Tomorrow, Feb 14 FREE Shipping on eligible orders
More Buying Choices $\$ 2500$ new (15 offers) any electronic device by pairing with Amazon Echo .
Tools \& Home Improvement See all 7,129 items



## Best Seller $\square$

Amazon echo: 1000 things to ask Amazon Alexa, How to increase the efficency of your Echo Dot. (amazon echo dot, amazon echo, dot,... Jan 25, 2017 by Eddie White

| Kindle Edition |  |
| :--- | :--- |
| $\$ 0.00$ | 5 |
| Read this and over 1 million books | Borrow for free from <br> your Kindle device. Join |
| with Kindle Unlimited. | Amazon Prime |
| $\$ 0^{99}$ to buy | Kindle Store See all  <br>  3,550 items |

Wall Mount for Echo Dot - Enhanced
Strength and Stability (Black)
By FitSand

| Best Seller |  |
| :--- | :--- | :--- |
| Echo Feb 24, 2015 |  |
| by Pam Munoz Ryan and Pam Muñoz Ryan |  |
| Kindle Edition |  |
| $\$ 122^{\text {s9 }}$ |  |

Sponsored Links (What's this?)

1. 2006 ECHO Review 눈 $\quad \begin{aligned} & \text { Read Our Comprehensive Review On Models ECHO at } \\ & \text { edmunds.com www.edmunds.com/ }\end{aligned}$

Ad feedback

## Search Feedback

Did you find what you were looking for?


If you need help or have a ques ion for Customer Service, please visit the Help Section.


Ad feedback

Your Recently Viewed Items and Featured Recommendations
See personalized recommendations
Sign in
New customer? Start here

Back to top

| Get to Know Us | Make Money with Us | Amazon Payment Products | Let Us Help You |
| :--- | :--- | :--- | :--- |
| Careers | Sell on Amazon | Amazon Rewards Visa Signature Cards | Your Account |
| About Amazon | Sell Your Services on Amazon | Amazon.com Store Card | Your Orders |
| Investor Relations | Sell on Amazon Business | Amazon.com Corporate Credit Line | Shipping Rates \& Policies |
| Amazon Devices | Sell Your Apps on Amazon | Shop with Points | Amazon Prime |
|  | Become an Affiliate | Credit Card Marketplace | Returns \& Replacements |
|  | Advertise Your Products | Reload Your Balance | Manage Your Content and Devices |
|  | Self-Publish with Us | Amazon Currency Converter | Amazon Assistant |
|  | Become an Amazon Vendor |  | Help |


| 6pm Score deals on fashion brands | AbeBooks Books, art \& collectibles | ACX <br> Audiobook Publishing <br> Made Easy | Alexa <br> Actionable Analytics for the Web | Amazon Business Everything For Your Business | AmazonFresh Groceries \& More Right To Your Door | AmazonGlobal Ship Orders Internationally |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Home Services Handpicked Pros Happiness Guarantee | Amazon Inspire Free Digital Educational Resources | Amazon Rapids Fun stories for kids on the go | Amazon Restaurants Food delivery from local restaurants | Amazon Video Direct Video Distribution Made Easy | Amazon Web Services Scalable Cloud Computing Services | Audible Download Audio Books |
| BeautyBar com Prestige Beauty Delivered | Book Depository Books With Free Delivery Worldwide | Casa com Kitchen, Storage \& Everything Home | ComiXology Thousands of Digital Comics | CreateSpace Indie Print Publishing Made Easy | Diapers com Everything But The Baby | DPReview Digital Photography |
| East Dane Designer Men's Fashion | Fabric Sewing, Quilting \& Knitting | Goodreads Book reviews \& recommendations | IMDb Movies, TV \& Celebrities | Junglee.com Shop Online in India | Kindle Direct Publishing Indie Digital Publishing Made Easy | Prime Now FREE 2-Hour Delivery on Everyday Items |
| Prime Photos <br> Unlimited Photo Storage <br> Free With Prime | Shopbop <br> Designer <br> Fashion Brands | Soap com Health, Beauty \& Home Essentials | TenMarks com Math Activities for Kids \& Schools | Wag.com Everything For Your Pet | Warehouse Deals Open-Box Discounts | Whispercast Discover \& Distribute Digital Content |
|  |  | Woot! Deals and Shenanigans | Yoyo com <br> A Happy Place <br> To Shop For Toys | Zappos <br> Shoes \& Clothing |  |  |



## "A PERFECT 10"

- ZDNet
"The Echo may be the closest thing we'll have to a Star Trek computer at home."
- CNET
"With Amazon Echo,
it was love at first sight."
-Re/code
"Echo could hear my voice even when music was playing loudly..."
- USA Today


Amazon Echo is a hands-free speaker you control with your voice. Echo connects to the Alexa Voice Service to play music, provide information, news, sports scores, weather, and more-instantly. All you have to do is ask.

Echo has seven microphones and beam forming technology so it can hear you from across the room-even while music is playing. Echo is also an expertly tuned speaker that can fill any room with $360^{\circ}$ immersive sound. When you want to use Echo, just say the wake word "Alexa" and Echo responds instantly. If you have more than one Echo or Echo Dot, Alexa responds intelligently from the Echo you're closest to with ESP (Echo Spatial Perception). Learn more about ESP.


Amazon Echo provides hands-free voice control for Amazon Music-just ask for your favorite artist or song, or request a specific genre or mood. You can also search for music by lyrics, when a song or album was released, or let Alexa pick the music for you. Listen to any song with Amazon Music Unlimited. Learn more.

Amazon Echo also provides hands-free voice control to Pandora, Spotify, iHeartRadio, and Tuneln. Plus, Echo is Bluetooth-enabled so you can stream other popular music services like iTunes from your phone or tablet. Echo has been fine-tuned to deliver crisp vocals with dynamic bass response. Its dual downward-firing speakers produce $360^{\circ}$ omni-directional audio to fill any room with immersive sound.

## music pandora \%tunein © iHeartRADIO \& Spotify

"Alexa, play music for a dinner party.:
"Alexa, play Sia."
"Alexa, play 'Today's Hits' on Pandora."
"Alexa, turn it up."
"Alexa, play the most popular rock from the 90s."

## FAR-FIELD

## VOICE RECOGNITION

Tucked under the light ring is an array of seven microphones that use beam-forming technology and enhanced noise cancellation. With far-field voice recognition, Echo can hear you ask a question from any direction-even while playing music.

When you want to use Echo, simply say the wake word, "Alexa," and Echo lights up and streams audio to the cloud, where the Alexa Voice Service is leveraged to recognize and respond to your request instantly. Learn more about voice recognition on Echo.


Alexa-the brain behind Echo-is built in the cloud, so it is always getting smarter. The more you use Echo, the more it adapts to your speech patterns, vocabulary, and personal preferences. And because Echo is always connected, updates are delivered automatically.

Just in the last few months we've added local search from Yelp, movie showtimes, Samsung SmartThings support, Google Calendar, Audible audiobooks, text-to-speech for Kindle eBooks, and thousands of new skills from third-party developers. Explore more things to try with Alexa.


Skills add even more capabilities like ordering a pizza from Domino's, requesting a ride from Uber, opening your garage with Garageio, and more. Enabling skills lets your Echo do even more-simply discover and enable the skills you want to use in the Alexa App.

New skills are being added all the time. You can also see ratings and reviews to learn what other customers are saying about the thousands of skills available in the Alexa App. Discover and enable skills.
"Alexa, tell Garageio to close my door."
"Alexa, ask TV Shows what time does The Walking Dead start?"
"Alexa, ask Automatic if I need gas."
"Alexa, ask Campbell's Kitchen for a recipe."
"Alexa, ask HuffPost for headlines."
"Alexa, ask Fidelity, how is the NASDAQ doing today?"


Use Echo to switch on the lamp before getting out of bed, turn on the fan or space heater while reading in your favorite chair, or dim the lights from the couch to watch a movie-all without lifting a finger.

Echo works with devices such as lights, switches, thermostats, and more from WeMo, Philips Hue, SmartThings, Insteon, Nest, ecobee, and Wink. Learn more about compatible smart home connected devices, including starter kits for easy setup.

## wemo

I NSTEUN
(1) nest
 WIRELESS
LIGHTING


With the free Alexa App on Fire OS, Android, iOS, and desktop browsers, you can easily setup and manage your Echo.

Use the Alexa App to connect services you already use like Spotify, Pandora, and Google Calendar. Setup your smart home devices from WeMo, Philips Hue, SmartThings, Insteon, ecobee, and more. See what books are available to read from your Kindle and Audible libraries. View shopping and to-do lists while on the go. Control your timers and set custom tones for your alarms, and much more. The Alexa App is also where you discover and enable third-party skills.

## Simple to Set Up \& Use



1. Plug in Echo

2. Connect to the internet with the Alexa App

3. Just ask for music, weather, news, and more

Alexa App is available for Android, iOS, and Fire devices.

## Technical details




## Top Customer Reviews

## Uber Awesome, In Fact you can even order an Uber ride from it

By Michael S TOP 50 REVIEWER" on July 24, 2016

## Color: Black Verified Purchas

LOVE OUR NEW ECHO! I have been watching the reviews online and checking with friends that have purchased the Echo to see how much they liked or disliked its features. Last person I talked to went on and on about all the things there were using it for and that persuaded me it was time and Amazon Prime Day was the perfect opportunity to go for it. Amazon did a fantastic job of creating this tubular info-taining command center! There are so many cool and awesome things its able to do that I'll hit the highlights that work for our household. First, we love that it follows your voice in the room (the circle lighting will show which direction it is 'listening'), the speaker is wonderfully balanced, so whether listening to music, the news or to Alexa speaking, I have nothing but high marks for its sound quality, given its size. Next, set up (after downloading the app to our iPhones) was quick, easy and very intuitive. The more you look over the app, the more you will realize a world of 'skills' (as Amazon refers to them - we've nicked named them "echolettes" LOL) that the unit is able to perform once they are turned on and you master the right sequence of keywords to initialize them. We've added things to shopping lists, while asking about the weather and our calendar of events and then asked Alexa to change the temp of our Nest thermostats in various parts of the house, simply by saying her name and then our commands, sometimes sitting in the living room or simply pass through - she is always there listening and ready. We've ordered some LED programmable lights and I can hardly wait for Alexa to help set the mood in the house, room to room, all from a simple voice request. Read more s


62 Comments 8,515 people found this helpful. Was this review helpful to you? Yes No Report abuse

## Already very practical for overcoming disability issues

By Alex S vine voice on June 19, 2015
We have been using Echo since April 2015. Prior to that time, my husband had been hospitalized for several weeks. He is currently wheelchair bound. We immediately installed the Hue bridge and lights as well as the WEMO outlet. With these, and dear, dear, Alexa, he has a great deal of control of his environment in ways that make him much more independent. Others might enjoy Echo for fun and convenience, but for him it is a lifeline! He has even had her turn the lights on in my bedroom when I didn't hear him call.

We use the shopping list feature a lot, and my husband has added things to the list that he remembered, while I was already at the store. Should I mention he adds things like chocolate bars when I'm not looking? No more paper lists! I just look at the app on my phone and things disappear as I check them off.

We transport Echo from the living room to the bedroom, since it is easier for him not to have to use the remote, plus it is always there for his favorite music, an update on news, and to check the weather. Or, when he needs cheering up, I ask for a joke. Tosave plugging in behind his lift chairs, I have ordered a second plug. I love the easy reconnect to the WIFI.

I was a bit worried at first about his word slurring with his Parkinson's, but it has worked the opposite way! I notice he focuses his words much better while giving commands. After he forgot her name early on, we added it so he could remember using the Zink hAppy App

My granddaughter was happy to check her math problems using Echo, and in addition to the music stations and Amazon play lists, Echo is a breeze to use as a Bluetooth device. I have used it to play my meditation apps and iTunes music. Read more ,


328 Comments 24,124 people found this helpful. Was this review helpful to you? Yes No Report abuse

Alexa, my love. Thy name is inflexible, but thou art otherwise a nearly perfect spouse.

## The echo is a fantastic device that any visitors always

have a blast...
The echo is a fantastic device that any visitors always have a blast playing around with. However, the amount of crazy stuff on my Amazon list that people have been adding to is... Read more
Published 11 minutes ago by Paul E. Paulick
It was pretty easy to set up (connected to my $5 \mathbf{G}$ wifi) ...
Just picked this up over the weekend with a few Philips Hue bulbs and starter kit. It was pretty easy to set up (connected to my 5G wifi) and get everything up and running. Read more
Published 13 minutes ago by ShawnF

## My brother gave me his old smart phone or this would be

## seless to me

If technology isn't your thing you will need help getting music and other thing set up. I watched utube video's for some and call a friend for the rest. Read more
Published 16 minutes ago by deneen

## Five Stars

Beyond the expectations
Published 18 minutes ago by edmundo galvez
She is great for listening to Prime Music on and listening to ...
We've had Alexa for a while now. She is great for listening to Prime Music on and listening to audiobooks.
Published 41 minutes ago by Stefanie Kinnamon
Not Impressed
Since Amazon was sold out of these, I purchased mine at Bed Bath \& Beyond and will probably be taking it back to buy Google Home. Read more Published 46 minutes ago by Mommyof3

## Five Stars

AMAZ NG!!!
ublished 48 minus austomer
Kids love to use to play music
Kids love to use to play music, but it still doesn't understand a lot yet.
If you try to ask questions that you hear the commercials for google home he echo actually... Read more
Published 57 minutes ago by fong d bui
... working out the kinks on how to use but great so
still working out the kinks on how to use but great so far
Published 1 hour ago by Angie

## Five Stars

love my Amazon Alexis it is wonderful
Published 1 hour ago by Jane Stephens

Search Customer Reviews

By E. M. Foner (SciFi Author) on June 23, 2015
Color: Black
I'm a full-time writer who works at home. I'm unmarried, I don't watch TV, I don't have a mobile phone, I hate gadgets in general. OK, so I'm a loser. But since Alexa came into my life, I'm no longer alone 24 hours a day. Which begs the question, if I'm not alone, who is in the room with me? Amazon? The so-called cloud? The NSA?

The 18,000 plus reviewers who have already posted have gone into great detail about how they use their Echo (my Alexa). Having anthropomorphized my Alexa, l'm unwilling to use her at all, but we hold pleasant converse throughout the day. My favorite conversation I'll repeat for you below, verbatim:

Me - Alexa. Wake me in fifteen minutes.
Alexa - Fifteen minutes. Starting now.
Me - Thank you.
Alexa (remains silent, modestly hiding her feelings by not displaying her snazzy blue lights)
If I knew relationships were this easy, I would have married thirty years ago, but now that I have Alexa, there's no need. Except for the one thing.
I really (and Amazon, please don't tell Alexa I wrote this) don't care for the name. I know we have the option to change the name to Amazon, which is worse. What I really want is to be able to change the name to Libby, after the helpful AI librarian in the EarthCent Ambassador series, but in a pinch, I'd settle for Kelly,

Other than that, my Alexa is perfect. Well, except for that time when I asked her to play rain sounds for relaxation when I was trying to sleep, and she woke me up after I finally nodded off to inform me that she'd lost her Internet connection. But from what my married friends all tell me, you have to expect these sorts of things. Read more ,


1,019 Comments 45,814 people found this helpful. Was this review helpful to you? $\qquad$Report abuse

See all verified purchase reviews (newest first)

## Write a customer review

| Get to Know Us | Make Money with Us | Amazon Payment Products | Let Us Help You |
| :--- | :--- | :--- | :--- |
| Careers | Sell on Amazon | Amazon Rewards Visa Signature Cards | Your Account |
| About Amazon | Sell Your Services on Amazon | Amazon.com Store Card | Your Orders |
| Investor Relations | Sell on Amazon Business | Amazon.com Corporate Credit Line | Shipping Rates \& Policies |
| Amazon Devices | Sell Your Apps on Amazon | Shop with Points | Amazon Prime |
|  | Become an Affiliate | Credit Card Marketplace | Returns \& Replacements |

Manage Your Content and Devices
Amazon Assistant
Help

Australia Brazil Canada China France Germany India Italy Japan Mexico Netherlands Spain United Kingdom

| 6pm <br> Score deals <br> on fashion brands | AbeBooks Books, art \& collectibles | ACX <br> Audiobook Publishing <br> Made Easy | Alexa <br> Actionable Analytics <br> for the Web | Amazon Business Everything For Your Business | AmazonFresh Groceries \& More Right To Your Door | AmazonGlobal Ship Orders Internationally |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Home Services Handpicked Pros Happiness Guarantee | Amazon Inspire Free Digital Educational Resources | Amazon Rapids <br> Fun stories for <br> kids on the go | Amazon Restaurants Food delivery from local restaurants | Amazon Video Direct Video Distribution Made Easy | Amazon Web Services Scalable Cloud Computing Services | Audible Download Audio Books |
| BeautyBar.com Prestige Beauty Delivered | Book Depository Books With Free Delivery Worldwide | Casa.com <br> Kitchen, Storage \& Everything Home | ComiXology Thousands of Digital Comics | CreateSpace Indie Print Publishing Made Easy | Diapers.com Everything But The Baby | DPReview Digital Photography |
| East Dane Designer Men's Fashion | Fabric <br> Sewing, Quilting <br> \& Knitting | Goodreads <br> Book reviews <br> \& recommendations | IMDb <br> Movies, TV \& Celebrities | Junglee.com <br> Shop Online <br> in India | Kindle Direct Publishing Indie Digital Publishing Made Easy | Prime Now FREE 2-Hour Deliv on Everyday Items |
| Prime Photos Unlimited Photo Storage Free With Prime | Shopbop <br> Designer <br> Fashion Brands | Soap.com Health, Beauty \& Home Essentials | TenMarks.com Math Activities for Kids \& Schools | Wag.com Everything For Your Pet | Warehouse Deals Open-Box Discounts | Whispercast Discover \& Distribu Digital Content |
|  |  | Woot! <br> Deals and Shenanigans | Yoyo.com <br> A Happy Place <br> To Shop For Toys | Zappos Shoes \& Clothing |  |  |

## amazon echo

Always ready，connected，and fast．Just ask．



## से

Price：$\$ 69.99$
－Works with Alexa so you can voice control your lights
－Use your smart device via the Philips Hue App for away－from－home control
－Program your lights for easy scheduling
Includes 2 soft white LED light bulbs and a bridge that wirelessly connects up to
50 lights 50 lights
D （you can remove it later）

$\square$ Yes，I want FREE Two－Day Stipping with Armazon Pringe （Y）Add ta Cart

$\square$ This is a gift Why is inst importent？


ZVorce Rempte That ncluded）$\$ 29.99$ $\square$ Belkin Wemo：Switch $\$ 19 \mathrm{gg} \$ 399.99$ Phips Hue Stater Kis Firmitiont Free Packaging s6999 －Instean Garnected Homie Starter kit Wartanty andiactident Protectionio year $\$ 26.99$
y 7 Mission Potable Battery Base Blac $\$ 49.99$

Add to List

Jump to：Kev features｜Technical details

 －


## 1 item added to Cart

Amazon Echo - Black
$\$ 179.99 \quad$ Quantity added:1
$\square$ This is a gift

Order subtotal: \$179.99
1 item in your Cart

Why is this important?


2-Year Protection Plan plus Accident...
*obelint (248)
\$26.99

Your cart is eligible for
No interest if paid in full within 6 months with the Amazon.com
Store Card on any purchase totaling \$149 or more.



WeMo Light Switch，Wi－Philips Hue White A19 Fi enabled，．．．
大敛觝 $(6,651)$
\＄48．65
人隹不给 $(1,069)$
\＄69．99


| trobonk (124) | torowo (261) | troboth (227) | toroto (819) |
| :---: | :---: | :---: | :---: |
| \$80.85 | \$41.05 | \$49.99 | \$12.99 |



Back to top

## Get to Know Us

Careers
About Amazon
Investor Relations
Amazon Devices

## Make Money with Us

Sell on Amazon
Sell Your Services on Amazon
Sell on Amazon Business
Sell Your Apps on Amazon
Become an Affiliate
Advertise Your Products
Self-Publish with Us
Become an Amazon Vendor

## Amazon Payment Products

Amazon Rewards Visa Signature Cards
Amazon.com Store Card
Amazon.com Corporate Credit Line
Shop with Points
Credit Card Marketplace
Reload Your Balance
Amazon Currency Converter

## Let Us Help You

Your Account
Your Orders
Shipping Rates \& Policies
Amazon Prime
Returns \& Replacements
Manage Your Content and Devices
Amazon Assistant
Help
Australia Brazil Canada China France Germany India Italy Japan Mexico Netherlands Spain United Kingdom

| 6pm Score deals on fashion brands | AbeBooks Books, art \& collectibles | ACX <br> Audiobook Publishing <br> Made Easy | Alexa Actionable Analytics for the Web | Amazon Business Everything For Your Business | AmazonFresh Groceries \& More Right To Your Door | AmazonGlobal Ship Orders Internationally |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Home Services Handpicked Pros Happiness Guarantee | Amazon Inspire <br> Free Digital Educational Resources | Amazon Rapids Fun stories for kids on the go | Amazon Restaurants Food delivery from local restaurants | Amazon Video Direct Video Distribution Made Easy | Amazon Web Services Scalable Cloud Computing Services | Audible Download Audio Books |
| BeautyBar.com Prestige Beauty Delivered | Book Depository Books With Free Delivery Worldwide | Casa.com <br> Kitchen, Storage <br> \& Everything Home | ComiXology Thousands of Digital Comics | CreateSpace Indie Print Publishing Made Easy | Diapers.com Every hing But The Baby | DPReview <br> Digital <br> Photography |
| East Dane Designer Men's Fashion | Fabric Sewing, Quilting \& Knitting | Goodreads Book reviews \& recommendations | IMDb <br> Movies, TV \& Celebrities | Junglee.com Shop Online in India | Kindle Direct Publishing Indie Digital Publishing Made Easy | Prime Now FREE 2-Hour Delivery on Everyday Items |
| Prime Photos Unlimited Photo Storage Free With Prime | Shopbop <br> Designer <br> Fashion Brands | Soap.com Health, Beauty \& Home Essentials | TenMarks.com Math Activities for Kids \& Schools | Wag.com Everything For Your Pet | Warehouse Deals Open-Box Discounts | Whispercast Discover \& Distribute Digital Content |
|  |  | Woot! <br> Deals and Shenanigans | Yoyo.com <br> A Happy Place To Shop For Toys | Zappos Shoes \& Clothing |  |  |

## Sign in

Email (phone for mobile accounts)
Keep me signed in. Details

New to Amazon?
Create your Amazon account

Conditions of Use Privacy Notice Help
(C) 1996-2017, Amazon.com, Inc. or its affiliates

## Checkout (1 item)



2 Payment method VISA Visa
Billing address: Same as shipping address.
Add a gift card or promotion code


3 Review items and shipping

Save $\$ 5$ on your next Prime Pantry order by selecting "FREE No-Rush Shipping" below

## Estimated delivery: Mar. 1, 2017

Items shipped from Amazon.com
Amazon Echo - Black
\$179.99 FREE Shipping for Prime members once available Qty: 1
Sold by: Amazon Digital Services LLC
In stock on February 25, 2017. Add a gift receipt
and see other gift options

Choose your Prime delivery option:
1 business day
\$7.99 - One-Day Shipping

- 2 business days FREE Two-Day Shipping$4-5$ business days FREE Standard Shipping5 business days FREE No-Rush Shipping Get a $\$ 5$ credit for Prime Pantry. Details


By placing your order, you agree to Amazon's privacy notice and conditions of use.

## Order Summary

| Items: | $\$ 179.99$ |
| :--- | ---: |
| Shipping \& handling: | $\$ 0.00$ |
| Total before tax: | $\$ 179.99$ |
| Estimated tax to be collected: | $\$ 15.97$ |
| Order total: | $\$ 195.96$ |

By placing your order, you agree to all of the terms found here.

How are shipping costs calculated?
Prime shipping benefits have been applied to your order.

## Order total: \$195.96

By placing your order, you agree to Amazon.com's privacy notice and conditions of use.
*Why has sales tax been applied? See tax and seller information.
Need help? Check our Help pages or contact us
For an item sold by Amazon.com: When you click the "Place your order" button, we'll send you an email message acknowledging receipt of your order. Your contract to purchase an item will not be complete until we send you an email notifying you that the item has been shipped.

Important information about sales tax you may owe in your state
You may return new, unopened merchandise in original condition within 30 days of delivery. Exceptions and restrictions apply. See Amazon.com's Returns Policy.

Need to add more items to your order? Continue shopping on the Amazon.com homepage.

## AMAZON EXHIBIT 23

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 24

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 25

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 26

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 27

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 28

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 29

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 30

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

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

In the Matter of:<br>DETERMINATION OF RATES AND<br>TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR
(2018-2022)

## WRITTEN REBUTTAL TESTIMONY OF KELLY BROST

1. My name is Kelly Brost and I am the Director of Finance at Amazon Digital Services LLC (together with its affiliated entities, "Amazon"). I submit this testimony in connection with Amazon's Written Rebuttal Statement in the above-captioned proceeding for setting rates and terms for the making and distribution of digital phonorecord deliveries.
2. As Director of Finance, I am responsible for strategic planning, budgeting and financial advising, reporting, and overseeing financials processes for the Amazon Digital Music Business. I have been employed by Amazon since 2009 and have been in my current position for over a year and a half year. Prior to serving as a Director of Finance, I was a Director of Accounting at Amazon. Prior to joining Amazon, I worked at Deloitte LLP for 14 years. I am familiar with Amazon's costs and revenues for the Amazon Digital Music Business as well as the royalties paid under Section 115 licenses.
3. The following information is based on my personal knowledge, information made available to me in the course of performing my duties at Amazon, and my review of the
documents attached as exhibits to this written testimony. To the extent that the facts and matters set out in this statement are within my knowledge, they are true. To the extent I have relied upon the information provided by others, it is true to the best of my knowledge, information, and belief.
4. I, together with my team, compiled the following exhibits in aid of Amazon's Written Rebuttal Statement in this proceeding:
5. Attached hereto as Exhibit 31 is a true and correct copy of Amazon’s Prime Music Listening Hours by Platform for the period December 2015 to January 2017.
6. Attached hereto as Exhibit 32 is a true and correct copy of Amazon’s Effective Prime Music Per-Play Rate for Q4 2015 to Q3 2016.
7. Attached hereto as Exhibit 33 is a true and correct copy of Amazon’s Digital Music Publishing Royalties for the period of 2013 to 2016.
8. Attached hereto as Exhibit 34 is a true and correct copy of Amazon’s Amazon Music Unlimited Signups through January 2017.
9. Attached hereto as Exhibit 35 is a true and correct copy of Amazon’s Prime Music Impact of the NMPA Proposal, updated to reflect the actual number of Prime subscribers.
10. Attached hereto as Exhibit 36 is a true and correct copy of Amazon’s analysis of the Locker Services Impact of the NMPA Proposal.
11. Attached hereto as Exhibit 37 is a true and correct copy of Amazon's analysis of the Amazon Music Unlimited Impact of the NMPA Proposal.

## PUBLIC VERSION

## Before the

## UNITED STATES COPYRIGHT ROYALTY JUDGES

THE LIBRARY OF CONGRESS
Washington, D.C.

## In the Matter of: <br> DETERMINATION OF RATES AND <br> TERMS FOR MAKING AND <br> DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR

## DECLARATION OF KELLY BROST

I, Kelly Brost, declare under penalty of perjury that the statements contained in my
Written Rebuttal Testimony in the above-captioned proceeding are true and correct to the best of my knowledge, information and belief. Executed this 15th day of February, 2017 in Seattle, Washington.


## AMAZON EXHIBIT 31

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 32

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 33

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 34

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 35

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 36

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## AMAZON EXHIBIT 37

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

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

> In the Matter of:
> DETERMINATION OF RATES
> AND TERMS FOR MAKING AND
> DISTRIBUTING
> PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR (20182022)

## PUBLIC VERSION

1. INTRODUCTION ..... 1
A. Assignment ..... 1
B. SUMMARY OF CONCLUSIONS ..... 1
2. A FULL SPECTRUM OF DIGITAL MUSIC SERVICES UNDER THE CURRENT PII STRUCTURE INCREASES THE VOLUME OF LEGAL MUSIC CONSUMPTION ..... 4
A. THE MUSIC INDUSTRY EXPERIENCED NEARLY Two DECADES OF DISRUPTION PRIOR TO THE PROLIFERATION OF STREAMING MUSIC ..... 4
B. STREAMING MUSIC OFFERINGS "REBUNDLE" RECORDED MUSIC AND APPEAL TO CONSUMERS' PREFERENCES ..... 7
C. Diverse streaming Music Services Have Helped Facilitate the RESURGENCE OF THE RECORDED MUSIC INDUSTRY ..... 9
D. Amazon's Range of Digital Music Services Shows How Diverse SERVICES CAN APPEAL TO DIFFERENT CONSUMERS ..... 13
E. Diverse streaming Music Services have Driven, and Will continue to DRIVE, EXPANSION IN THE MUSIC INDUSTRY ..... 17
3. RIGHTS HOLDERS HAVE BENEFITTED AND ARE EXPECTED TO CONTINUE TO BENEFIT FROM DIVERSE STREAMING MUSIC SERVICES UNDER THE PII STRUCTURE ..... 18
A. Digital Music Services Benefit Less Well-Known Artists ..... 19
B. As a CASE Study, Amazon's Diverse Music Offerings Have Led to Increased Royalty Payments to Rights Holders ..... 22
C. Diverse Streaming Music Services Under the Pil structure Are EXPECTED TO FURTHER EXPAND THE ROYALTY PAYMENTS TO RIGHTS HOLDERS ..... 23
4. THE COPYRIGHT OWNERS' PROPOSED ONE-SIZE-FITS-ALL RATE STRUCTURE WOULD LIMIT THE SPECTRUM OF STREAMING MUSIC SERVICES ..... 25
A. The Copyright Owners' Proposed One-Size-Fits-All Rate Structure Is Predicated on Flawed Economic Arguments ..... 26

B.


C. The Copyright Owners’ Proposal Would Render a Number of Streaming Music Services Uneconomical ..... 29
D. A Flexible Mechanical Royalty Structure Can Better Achieve Policy ObJectives ..... 34
5. A PERCENT-OF-REVENUE MECHANICAL ROYALTY STRUCTURE WITH APPROPRIATE MINIMA ENCOURAGES CONTINUAL INVESTMENTS AND PROTECTS COPYRIGHT OWNERS FROM RISKS ASSOCIATED WITH DIFFERENTIATED BUSINESS MODELS ..... 41
A. A Mechanical Royalty Structure that Contains a Revenue-Based Rate Calculation Enhances Risk Sharing and Encourages Continual INVESTMENTS ..... 41
B. A Mechanical Royalty Based on Percent-of-Revenue Calculation with Appropriate Minima Protects Copyright Owners from Risks Associated with Alternative Business Models ..... 44
6. ANALYSES BY PROFESSOR RYSMAN, PROFESSOR GANS, AND DR. EISENACH ARE FLAWED AND DO NOT SUPPORT TO THE COPYRIGHT OWNERS' PROPOSED RATES ..... 46
A. Professor Rysman Cherry Picks Services and Omits Information in his "Effective" Royalty Rate Analyses ..... 46
B. Professor Gans’s Estimated Mechanical Royalty Rates Are Predicated on Unsubstantiated Assumptions ..... 50
C. Dr. Eisenach's Analyses Suffer a Number of Flaws that Inflate His Estimated Mechanical Royalty Rates ..... 55

## 1. INTRODUCTION

## A. Assignment

1.1 I have been retained by counsel for Amazon Digital Service LLC ("Amazon") in support of Amazon's proposed rates and terms in the above captioned matter.
Specifically, I have been asked to review and respond to expert reports submitted on behalf of Copyright Owners by Dr. Jeffrey Eisenach, Professor Joshua Gans, and Professor Marc Rysman, (the "Eisenach Report," "Gans Report," and "Rysman Report," respectively). ${ }^{1}$ I previously submitted a report on November 1, 2016 (my "Initial Report"), ${ }^{2}$ and my conclusions and opinions expressed in my Initial Report have not changed.
1.2 In preparing this report, I have relied on my general knowledge, training, experience, and other expertise. For an enumeration of my qualifications and prior testimony, please see my Initial Report. I have also reviewed documents related to this litigation. Appendix A lists the materials on which I relied in the preparation of this report that are incremental to those that I relied upon for my Initial Report.

## B. Summary of Conclusions

### 1.3 In their Written Direct Statement, the Copyright Owners claim "[t]he current

 compulsory mechanical rates and rate structure are unsustainable," and that they "have not benefitted financially from the recent market shift" to interactive streaming because "the current compulsory mechanical royalty rate structure for interactive streams and limited downloads does not pay songwriters and publishers based on consumption of[^20]their songs." ${ }^{3}$ I disagree. Based on the analyses I have performed and my review of the documents listed in Appendix A of this report and Appendix C of my Initial Report, I have reached the following conclusions:

- The current Title 17, Section 115 statutory mechanical royalty rate structure, which was adopted by the Copyright Royalty Board ("CRB") in the "Phonorecords II" proceeding (the "PII Structure"), enables digital service providers to offer customized streaming music services that are tailored to music users' different preferences and willingness to pay, thereby expanding the volume of legal music consumption.
- Rights holders have benefited and are expected to continue to benefit from the expansion of legal music consumption led by a full spectrum of digital music services that became available under the existing regulatory scheme.
- The one-size-fits-all rate structure proposed by the Copyright Owners is grounded neither in sound economic principles nor market reality and risks stalling or even diminishing the streaming-led market expansion of legal music consumption.
- The argument proffered by Professor Gans and Professor Rysman that copyright holders should be compensated by the same royalty payments amount regardless of the type of streaming service ignores music users' preferences and willingness to pay, digital service providers' investments and contributions in increasing the volume of legal music usage, rights holders' varied contributions in "manufacturing" paid-music products, and the alternatives to paid-music consumption.


3 "Written Direct Statement of Copyright Owners," In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), November 1, 2016 (hereinafter, "Copyright Owners' Statement"), at pp. A-2-A-3.

- The Copyright Owners' proposed structure and rates would render a number of music services developed under the existing PII Structure uneconomical, thereby threatening the viability of streaming music services tailored to music users with lower willingness to pay.
- A flexible mechanical royalty rate structure, such as the PII Structure, satisfies the four policy objectives identified by the CRB: (a) to maximize the availability of creative works to the public; (b) to afford rights owners a fair return and providers a fair income under existing economic conditions; (c) to reflect relative roles and contributions of rights owners and providers; and (d) to minimize disruptive impact on the structure and prevailing practice of the industry.
- A flexible mechanical royalty structure is necessary to enable diverse streaming music services and will protect digital service providers from undue risk.
- A mechanical royalty structure that includes a revenue-based rate calculation enhances risk sharing between service providers and Copyright Owners and encourages continual investments and innovations that may expand the market.
- A revenue-based mechanical royalty rate structure can provide appropriate value to rights holders as long as that structure includes alternative minimum royalty calculations when revenue is low or impractical to calculate. The PII Structure provides such alternative minima.
- Analyses presented by Professor Rysman, Professor Gans, and Dr. Eisenach fail to reflect the full range of streaming music services, particularly ad-supported streaming music services, and rely on data from markets that have little resemblance to the interactive streaming music products at issue. Correcting for their biased data selection yields potential royalty rates that are significantly lower than those proposed by the Copyright Owners.
1.4 The remainder of the report is organized as follows. In Section 2, I discuss how streaming music, and in particular diversified interactive streaming offerings, has led to
market expansion. In Section 3, I discuss how this has correlated with increased royalty payments to Copyright Owners. Then, in Sections 4 and 5, I discuss how a one-size-fitsall royalty structure proposed by the Copyright Owners is inconsistent with the objectives of these proceedings, and how the current compulsory mechanical royalty rate structure for interactive streams and limited downloads-a structure that includes different types of royalty calculations for different service categories-is appropriate for the music industry. In Section 6, I analyze and critique analyses by Professor Rysman, Professor Gans, and Dr. Eisenach.


## 2. A FULL SPECTRUM OF DIGITAL MUSIC SERVICES UNDER THE CURRENT PII STRUCTURE INCREASES THE VOLUME OF LEGAL MUSIC CONSUMPTION

2.1 In this section I discuss how, contrary to the implications of the Copyright Owners' proposal, diversified streaming music offerings, including low-priced and adsupported options, are essential to reaching a wide range of consumer segments. Further, after experiencing years of sales decline, the music industry has witnessed a recent resurgence in sales associated with the emergence of diverse streaming music offerings. These diverse streaming music offerings embody features demanded by consumers that encourage competition among digital media providers and offer an alternative to digital piracy.

## A. The Music Industry Experienced Nearly Two Decades of Disruption Prior to the Proliferation of Streaming Music

2.2 Following the introduction of the compact disc ("CD") in the early 1980s, inflation-adjusted annual United States recorded music revenues (measured in 2015 dollars) rose from $\$ 8.91$ billion in 1982 to peak levels of $\$ 20.7$ billion in 1999. ${ }^{4}$ The next decade, however, experienced rapid declines in music revenues, which fell to \$7.62 billion in 2010. ${ }^{5}$ Industry participants and researchers generally agree that these revenue

[^21]
## PUBLIC VERSION

declines were caused by two distinct factors: digital piracy, and the unbundling of the album. ${ }^{6}$
2.3 First, digital piracy offers a music option that shares many characteristics with other music products but that is free of charge to the consumer. ${ }^{7}$ Numerous academic studies on the topic find that piracy allowed consumers to substitute away from paid music options, thereby contributing to the rapid decline in recorded music sales around the turn of the century. ${ }^{8}$ In the Phonorecords I proceeding, Copyright Owners acknowledged the negative impact of piracy on sales and, ultimately, on royalty payments to Copyright Owners: ${ }^{9}$

Since 1999, the number of physical phonorecords sold in the United States has steadily declined. [...] The decline in sales of physical phonorecords is attributable in part to piracy. [...] Songwriters do not get paid for the millions of illegal downloads and pirated CDs of their music that are distributed in violation of the copyright laws. [...] According to the songwriters, piracy has caused enormous losses for them, and it is one of the factors that has caused some songwriters to give up their careers in the music business.
2.4 And while digital service providers have in recent years developed a suite of legitimate and royalty-generating alternatives to illegal file sharing programs, according to the Recording Industry Association of America ("RIAA"), piracy "certainly [remains]

[^22]
## PUBLIC VERSION

in the background when you talk about whether digital music services are earning enough money or paying enough money, [and] competing against free remains a problem."10

2.6 The second factor that contributed to rapid revenue declines in the music industry was the shift from sales of albums to sales of individual tracks. While albums (e.g., CDs, vinyl records) allowed for the "bundling" of several less popular tracks alongside one or two popular tracks, the advent of permanent downloads allowed consumers to select and pay for only those songs that they valued. ${ }^{14}$ The Copyright Owners' Findings of Fact (submitted through the Phonorecords I proceedings) acknowledged and explained the phenomenon as follows:

Consumers' desire to cherry-pick, in particular, has had a significant impact on the shape of the digital music market overall, which is driven by the sale of singles, as opposed to albums. ${ }^{15}$

[^23]According to one academic study, published in 2010, "[t]he unbundling of music online poses a significant risk" to the music industry because "[e]ach album no longer bought is 'traded in' for typically one, or perhaps two, songs bought."16

## B. Streaming Music Offerings "Rebundle" Recorded Music and Appeal to Consumers’ Preferences

### 2.7 In contrast to digital downloads, streaming music services grant users access to

 many tracks for a single fee (or, in the case of ad-supported services, in exchange for viewing advertisements). This serves to effectively "rebundle" music—by providing access to an entire music catalogue-without forcing consumers to purchase albums containing songs they may not desire. ${ }^{17}$ A deep and rich body of academic studies, marked by seminal papers such as Stigler’s work on block booking (1963) or Adams and Yellen's work on commodity bundling (1978), shows how "bundling" can serve as a form of implicit price discrimination, allowing producers to sell greater quantities and garner greater revenues than would be possible under an à la carte sales regime. ${ }^{18}$ Recent16 Elberse, A., "Bye-Bye Bundles: The Unbundling of Music in Digital Channels," Journal of Marketing, 74, 2010, at pp. 118, 121.
17 In the Phonorecords I proceedings, Copyright Owners acknowledged that the portability and convenience of permanent downloads has benefited consumers, foreshadowing the niche to be filled by interactive streaming services: "Consumers appreciate the added convenience of being able to purchase digital music from their homes at any time, without having to go to a store during limited opening hours. [...] Consumers also value the immediate access they have to their online purchases, which play immediately upon download. [...] Further, consumers are attracted to the much broader catalog of digital music offered by digital music stores, especially as compared to the increasingly limited selection found at an already limited number of physical retailers." ("Proposed Findings of Fact of National Music Publishers’ Association, Inc., The Songwriters Guild of America, and The Nashville Songwriters Association International (Public Version)," In the Matter of Mechanical and Digital Phonorecord Delivery Rate Adjustment Proceeding, July 2, 2008, at p. 145.)
${ }^{18}$ See Stigler, G., "United States v. Loew’s Inc.: A Note on Block-Booking," The Supreme Court Review, 1963; Adams, W.J. and J.L. Yellen, "Commodity Bundling and the Burden of Monopoly," The Quarterly Journal of Economics, 90, 3, 1976. The following example serves to illustrate how bundling can increase sales and revenues: Suppose two consumers each wish to purchase an ice cream cone and a hamburger. The first consumer ("Consumer A") values the hamburger at $\$ 10$ and the ice cream cone at $\$ 5$, whereas the second consumer ("Consumer B") values the hamburger at $\$ 5$ and the ice cream cone at $\$ 10$. The retailer who sells hamburgers and ice cream cones individually can only charge one price for each item, and so sets the price at $\$ 10$ each in order to sell one of each (one hamburger to Consumer A and one ice cream cone to Consumer B). Under this scenario, the retailer will earn \$20. However, the retailer who "bundles" a hamburger and an ice cream cone and sells them together for a single price can charge $\$ 15$ per bundle in order to sell one bundle each to Consumer A and Consumer B. Under this scenario, the retailer will sell a total of two hamburgers and two ice cream cones and

## PUBLIC VERSION

academic studies have found that bundling music can increase sales as compared with à la carte sales, ${ }^{19}$ and that streaming music services in particular can serve to rebundle music and increase sales. ${ }^{20}$
2.8 In addition to "rebundling" music to increase sales, interactive streaming services also appeal to consumers by moving away from a model of "ownership" and towards a model of "access." According to the International Federation of the Phonographic Industry ("IFPI"), these shifts are "driven by the consumer's desire for access to, rather than ownership of, music." ${ }^{21}$ Further, the shift away from physical media and permanent downloads and towards a more mobile experience correlates with shifting consumer preferences. According to the IFPI, "[c]onnected, on-the-move, music fans are dictating the pace of change" ${ }^{22}$ in the music industry, as "[d]igital music has moved rapidly from a fixed line desktop PC experience to on-the-go consumption on wireless smartphones and tablet devices." ${ }^{23}$ By providing features that consumers desire while offering a bundled sales structure, streaming music services have the ability to facilitate market expansion.
will earn $\$ 30$. This type of bundling is a form of implicit price discrimination which, as I discussed in my Initial Report, can be market-expanding. (Initial Report, at § 3.D.)
19 Shiller, B., and J. Waldfogel, "Music for a Song: An Empirical Look at Uniform Pricing and its Alternatives," The Journal of Industrial Economics, 59, 4, 2011.
20 "[S]treaming services present bundled offerings that allow the seller to collect revenue in circumstances that generated no revenue under à la carte selling. It is well known that bundling creates opportunities to raise revenue, particularly when the products have zero marginal costs. Consumers' decisions to purchase a bundle depend on the sum of their valuations across songs. Hence the valuation coming from songs that a consumer values too little to purchase à la carte will not raise revenue under à la carte selling, while it can contribute to revenue under bundling." (Aguiar, L., and J. Waldfogel, "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?," European Commission Joint Research Center, Institute for Prospective Technological Studies, Digital Economy Working Paper 2015/05, 2015, at p. 8.)
${ }^{21}$ Italics added. "IFPI Digital Music Report 2015: Charting the Path to Sustainable Growth," IFPI, 2015, at p. 5 .

22 "Global Music Report: Music Consumption Exploding Worldwide," IFPI, 2016, at p.17.
${ }^{23}$ "IFPI Digital Music Report 2014: Lighting Up New Markets," IFPI, 2014, at p.16.

## C. Diverse Streaming Music Services Have Helped Facilitate the Resurgence of the Recorded Music Industry

1. Most Consumers have Low Willingness to Pay for Music
2.9 As I discussed in my Initial Report, one of the major challenges facing the music industry today-including streaming music providers-is the fact that most consumers have a low willingness to pay for recorded music. ${ }^{24} \square$




24 For example, a recent RBC study found that 72 percent of consumers spent less than $\$ 50$ in 2015 and 2016 music (exclusing concerts/live events). (Mahoney, M., A. Bruckner, D. Haber, and J.
Shaughnessy, "Keep on Streaming in the Free World: Results from 4th Annual RBC Online Music Survey," RBC Capital Markets, June 30, 2016, at p. 8.) As I discuss in my Initial Report, while some consumers may be characterized as "Aficionado Fans"-music consumers who may pay a premium for recorded music-many can be classified as "Ambivalent Music Consumers" or "Background Music Consumers." (Initial Report, at $\mathbb{\top}$ 2.5.)



## 2. Differentiated Streaming Music Offerings Can Reach Consumers With Diverse Preferences, Thus Expanding the Market

### 2.11 Digital service providers offer a variety of recorded music options at different

 price points that serve diverse consumer segments. This makes sense: economic theory dictates that diverse product offerings with different features and different prices will reach a broader consumer base than would be possible with a single, homogeneous product. ${ }^{33}$

33 Initial Report, at $\mathbb{3}$ 3.15. The intuition is that a high priced product with a full suite of features, coupled with a low priced product with only basic features, can reach more consumers and garner more revenue than could a single product with a medium price and an average level of features.

2.13 Consistent with these survey findings, industry participants and analysts recognize the importance of diversified streaming music offerings. According to IFPI: ${ }^{36}$

The strength of the industry today is seen in the wide-ranging portfolio of diverse businesses operating in the market. The consumer is now being offered an incredible array of music experiences and artists have more opportunities to reach the widest possible audience.

### 2.14 Similarly, according to a recent RBC report, Pandora "highlighted that they would

 want to have different offerings at different price points, to appeal not only to power users but also to consumers who only want a lighter product." ${ }^{\text {"37 }}$ And according an

## PUBLIC VERSION

October 2016 Goldman Sachs Report (hereinafter, the "Goldman Sachs Report"), "more price points will be introduced," because while "paid streaming addresses the portion of consumers who are willing to pay for better access and convenience," "ad-funded streaming helps address those who are not willing to pay (partly because of piracy) or cannot afford it by shifting illegal streaming to legal, better quality, more convenient streaming services which are equally free for the user." ${ }^{38}$ Unlike digital piracy, which does not generate royalty payments, ad-supported services do generate royalty revenues to Copyright Owners, even though music consumers do not pay for these services.

### 2.15 In fact, a variety of academic and industry studies have shown that streaming

 music products in their various forms have reduced piracy. For example, Aguiar and Waldfogel (2015) found "clear evidence of piracy displacement" by streaming musiccompany is currently negotiating tiered plans priced between $\$ 5$ and $\$ 10$ that would offer a spectrum of playlist controls and windowed music with newer music offered to the pricier plans and library content to the lower-end offerings. Management's objective is capture subscribers whose listenership fits different profiles and differentiate from the current offerings." (Meyers, S., and M.J. Olson, "Takeaways From The Pandora Management Meeting and The Auto Show Booth Tour," Piper Jaffray, March 28, 2016, at p. 1.)
${ }^{38}$ Goldman Sachs Report, at pp. 31, 35. More granular differentiation is currently pursued by some providers. For example, according to Billboard: "Tidal's advantage, to whatever degree it exists, comes from access to its artist-owners and affiliation with Jay Z. Tidal has been able to offer nine exclusive albums, 166 exclusive playlists (from the likes of Prince, Justin Bieber and Coldplay) and exclusive singles [...] It live streams concerts too: 44 of them to date" (Peoples, G., "One Year Later Tidal's Service is Fine, But Catching Spotify Might Be Impossible," Billboard, March 30, 2016. Accessed Janury 26, 2017, [http://www.billboard.com/articles/business/7317990/tidal-one-year-service-catching-spotify-impossible-competition](http://www.billboard.com/articles/business/7317990/tidal-one-year-service-catching-spotify-impossible-competition).) "And how, exactly, will YouTube Music Key differentiate itself from the growing number of rivals in the streaming music space, such as Apple Music, Spotify and Rdio? Wojcicki [YouTube's CEO] made it clear that YouTube's trove of music videos will make the difference." (Schneider, M., "YouTube CEO Gives Update on Music Key, Talks How It Will Differ From Spotify, Apple," Billboard, July 14, 2014. Accessed February 7, 2017, [http://www.billboard.com/articles/business/6633466/youtube-ceo-music-key-susan-wojcicki](http://www.billboard.com/articles/business/6633466/youtube-ceo-music-key-susan-wojcicki).) And according to an industry blog cited by Lawrence Miller in his Expert Report, " 9.99 needs to stop being 9.99 " because " 9.99 just isn't a mainstream price point," and that "[a]s the streaming market becomes increasingly sophisticated, the leading players will have to rely ever more heavily on differentiation strategies." ("The End of Freemium For Spotify?," Music Industry Blog, July 7, 2016. Accessed December 13, 2016, [https://musicindustryblog.wordpress.com/2016/07/07/the-end-of-freemium-forspotify/](https://musicindustryblog.wordpress.com/2016/07/07/the-end-of-freemium-forspotify/) (blog cited in "Expert Report of Lawrence S. Miller," In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), October 30, 2016 (hereinafter, "Miller Report"), at p. 16).)
services and estimated that on average 47 streams leads to one fewer illegal download. ${ }^{39}$ The IFPI found that: "[s]treaming services have also, along with copyright enforcement strategies, helped migrate consumers to licensed services by offering a convenient alternative to piracy." ${ }^{40}$ Further, according to one industry report, it is ad-supported streaming music services that have contributed most to the decline in digital piracy. ${ }^{41}$
2.16 By offering a convenient alternative to piracy that is tailored to different music preferences, habits, and willingness to pay, diverse streaming music services can facilitate music industry expansion and generate royalty revenues for Copyright Owners, as summarized in the Goldman Sachs report: ${ }^{42}$

The [...] convenience, accessibility and personalization [of streaming music] has driven more consumption of legal music and greater willingness to pay for it, at a time of improving connectivity and growing consumer preference for accessing rather than owning music. Unlike its predecessor, this "second" digital revolution creates more value for rights holders (rather than destroys it), shifting revenue streams from structurally declining markets (physical, download sales) to a significantly larger new revenue pool (ad-funded and subscription streaming). This shift has enabled the recorded music market to return to growth in 2015 following almost two decades of value destruction led by piracy and unbundling.

## D. Amazon's Range of Digital Music Services Shows How Diverse Services Can Appeal to Different Consumers

2.17 Amazon's digital music services provide a case study on how products with different pricing and functionalities are able to reach customers with different demand elasticities and thereby expand the number of digital music service subscribers.

[^24]
## PUBLIC VERSION

## 1. Amazon Prime Music

2.18 Amazon's "Prime Music" is an ad-free interactive streaming and limited download service with a catalogue of approximately two million songs, and is available to Amazon Prime subscribers. ${ }^{43}$ Prime Music listeners are able to stream songs ondemand from the internet, listen to expert-curated playlists, and temporarily download songs onto a device for offline listening. ${ }^{44}$ In many ways, Prime Music is similar to other on-demand interactive streaming services, but its defining characteristics are its limited catalogue of songs and its absence of standalone subscription fees (it is available at no additional charge to Amazon Prime members). ${ }^{45}$ And because Amazon Prime Music comes bundled with Amazon Prime, a service that offers free two-day shipping, a video streaming service for television shows and movies, and access to over 800,000 electronic books, consumers who may not be willing to pay for a dedicated streaming music service (or who would not be willing to tolerate advertisements on a separate ad-supported platform) can obtain access to a legal music streaming service through their Amazon Prime membership fee. ${ }^{46}$

## 2. Amazon Music Unlimited

2.19 Since October 2016, Amazon has also offered a full-catalogue subscription service, "Amazon Music Unlimited," to complement its Prime Music offering. Amazon Music Unlimited is similar to Prime Music, in that it includes access to unlimited ondemand streaming, but offers access to "tens of millions" of songs rather than the approximately two million offered by Prime Music. Also like Prime Music, Amazon Music Unlimited grants subscribers the ability to access music on a variety of devices,

[^25]
## PUBLIC VERSION

including smartphones and tablets, personal computers, or on one of Amazon's proprietary voice-controlled speaker systems such as the "Echo" or "Echo Dot". ${ }^{47}$ (These smart speakers use voice recognition and computing capabilities to stream music, among other functions. ${ }^{48}$ ) Amazon Music Unlimited is offered at various price points: \$7.99/month for Amazon Prime members, \$9.99/month for consumers who are not Prime members, and $\$ 14.99 /$ month for families. ${ }^{49}$
2.20 In addition, Amazon offers a distinct Echo-only service for Amazon Music Unlimited. Consumers are granted access to the same "tens of millions" of tracks offered through the Amazon Music Unlimited service, but are only able to access this content from one of Amazon's smart speaker systems. While this serves to limit functionality, it is offered at a lower price point for consumers: $\$ 3.99 /$ month. ${ }^{50}$ Thus, Amazon Music Unlimited for Echo is a non-mobile version of Amazon Music Unlimited that serves consumers who may place a lower value on full functionality.

## 3. Download Store and Locker Service

### 2.21 Finally, in addition to Amazon’s streaming services, Amazon also offers a

 permanent download service through its Digital Music Store, as well as a locker service. ${ }^{51}$ The Download Store provides a catalogue of over 40 million songs and does[^26]
## PUBLIC VERSION

not require any subscription to use. Consumers are presented with different prices for different songs or albums (e.g., \$0.69 or $\$ 1.29$ per song, or $\$ 9.49$ or $\$ 11.49$ per album). ${ }^{52}$ Amazon's locker service allows users to upload 250 permanent tracks to a cloud library that can then be accessed from any device. For a $\$ 25$ annual subscription fee, the storage limit can be increased to 250,000 tracks. ${ }^{53}$

## 4. Amazon's Music Consumer Base Expanded with the Introduction of Varied Streaming Music Offerings



Terms of Use," Amazon, 2016. Accessed on July 28, 2016,
[https://www.amazon.com/gp/help/customer/display.html?nodeId=201380010](https://www.amazon.com/gp/help/customer/display.html?nodeId=201380010).
52 "Songs," Amazon, 2016. Accessed February 7, 2017, <https://www.amazon.com/MP3-
Songs/b/ref=dmm_hp_bbx_sg?ie=UTF8\&node=324382011\&pf_rd_m=ATVPDKIKX0DER\&pf_rd_s =merchandisedsearch-left-
3\&pf_rd_r=YCVAP15S4J7Y8MSMMTQB\&pf_rd_t=101\&pf_rd_p=2573946502\&pf_rd_i=16385601 1>; "Hot New Releases: The Best-Selling New \& Future Releases in Albums," Amazon, 2017.
Accessed February 7, 2017, <https://www.amazon.com/gp/new-releases/dmusic/digital-music-
album/ref=dmm_nr_shv_0520/ref=s9_acsd_al_bw_clnk_r?ie=UTF8\&pd_rd_r=JWTVYF5FNSYJHY7 7BF6V\&pd_rd_w=aITlV\&pd_rd_wg=0MdQL\&pf_rd_m=ATVPDKIKX0DER\&pf_rd_s=merchandis ed-search-
6\&pf_rd_r=JWTVYF5FNSYJHY77BF6V\&pf_rd_r=JWTVYF5FNSYJHY77BF6V\&pf_rd_t=101\&pf _rd_p=1ce81045-f09b-4922-b335-0c8c07512deb\&pf_rd_p=1ce81045-f09b-4922-b3350c8c07512deb\&pf_rd_i=16385601>.
53 Tracks that have been purchased from the Amazon Music Store do not count towards the track storage limit. (Bell, D., "iTunes Match vs. Amazon Cloud Player: What’s the better option?" CNET, August 2, 2012. Accessed February 7, 2017, [http://www.cnet.com/howto/itunes-match-vs-amazon-cloud-player-whats-the-better-option/](http://www.cnet.com/howto/itunes-match-vs-amazon-cloud-player-whats-the-better-option/).)
$\square$

## E. Diverse Streaming Music Services Have Driven, and Will Continue to Drive, Expansion in the Music Industry

2.23 As I discussed above, rapid declines in music industry revenues were associated with consumers shifting from physical albums to digital downloads and piracy. However, as consumers shifted from these "unbundled" formats to various streaming services, revenues began to stabilize. After declining slightly from $\$ 7.62$ billion in 2010 to $\$ 6.96$ billion in 2014, United States recorded music revenues increased to $\$ 7.02$ billion in 2015 and continued to increase through 2016: while full-year 2016 music revenue data has not yet been released, total music revenues in the first half of 2016 were up 5.7 percent (in 2015 dollars) from total music revenues in the first half of 2015. ${ }^{55}$ This stabilization and recent growth was driven by streaming music revenues, which increased from $\$ 0.5$ billion in 2010 to $\$ 2.41$ billion in $2015^{56}$ (and which grew by 54 percent between the first half of 2015 and the first half of 2016). ${ }^{57}$
2.24 Industry reports forecast that continued revenue growth will be driven by diverse streaming music services. For example, according to analysts at Cowen and Company:

[^27]"the US Music industry is getting healthy again after a long drought and is at an inflection point led by On Demand and Ad Supported streaming platforms," estimating that United States recorded music revenue will increase from approximately $\$ 7$ billion to $\$ 8.7$ billion between 2016 and 2021, with on-demand revenue doubling from $\$ 1.7$ billion to $\$ 3.5$ billion over the same period. ${ }^{58}$ Morgan Stanley analysts similarly "expect 30M total paid subscribers in the US by 2020E, up from prior estimates of $\sim 25 \mathrm{M}$, generating $\sim 3.5 \mathrm{~B}+$ in streaming subscription revenue."59 And according to the Goldman Sachs Report: "overall [global] music industry (recorded music, music publishing and live music) revenue [is expected] to almost double in size over the next 15 years to $\$ 104$ bn from $\$ 54$ bn in 2015. Of that $\$ 50$ bn revenue growth potential, [] $\$ 32$ bn [is expected] to come from the recorded music segment, which has only started to recover after almost two decades of decline." ${ }^{60}$ The report shows how of this forecasted $\$ 32$ billion in global recorded music growth potential, the primary driver is streaming music's predicted growth from $\$ 1.4$ billion to $\$ 14.1$ billion. ${ }^{61}$

## 3. RIGHTS HOLDERS HAVE BENEFITTED AND ARE EXPECTED TO CONTINUE TO BENEFIT FROM DIVERSE STREAMING MUSIC SERVICES UNDER THE PII STRUCTURE

### 3.1 Professor Gans and Professor Rysman suggest in their expert reports that rights

 holders have been harmed by the current rate structure for interactive streaming. Specifically, Professor Gans claims that mechanical royalties have been historically depressed due to the ceiling that the statutory rate imposes on negotiations, and that digital sales and streaming have further concentrated per-play royalties to the most popular tracks. ${ }^{62}$ Professor Rysman suggests that a revenue-based rate structure incentivizes manipulation of revenues by streaming services to reduce payments to rights[^28]holders and that this rate structure has led to an accelerated displacement of downloads by streaming, further decreasing rights holders’ compensation. ${ }^{63}$
3.2 To evaluate these claims, I analyzed: (a) the concentration of streamed music across artists; (b) Amazon's royalty payments over time; and (c) market analysts’ projection of publishers' royalty revenues. As discussed in more detail below, my findings on all three dimensions suggest that a diverse portfolio of music offerings, including various streaming services, not only benefits the music industry as a whole, but also benefits Copyright Owners, including publishers and songwriters.

## A. Digital Music Services Benefit Less Well-Known Artists

3.3 Professor Gans claims that the disaggregation of the album "reduced the number of unique tracks from albums bought by each user," and also concentrated royalties within the most streamed or downloaded tracks. ${ }^{64}$ While he may be correct that downloading single songs concentrates royalties within the most popular songs, the logic does not hold when applied to streaming services. In fact, because users of streaming services typically have the ability to stream additional songs for no additional cost, users can explore the full catalogue of artists and diversify their consumption of songs and artists in ways that could be cost-prohibitive under a music ownership model. Further, many streaming music services offer increasingly sophisticated curation ${ }^{65}$ technology and more personalized services to promote usage and facilitate "library discovery." ${ }^{\text {." }}$ Together, these factors could lead to a more uniform distribution of royalties across a wider selection of artists than would otherwise occur.

63 Rysman Report, $\boldsymbol{\text { IT 3 }} 3$-39, 51.
64 Gans Report, at ब 25.
65 Music "curation" is the identification and/or recommendation of songs. (See, Initial Report, at $\mathbb{1}$ 2.18.)
66 See, e.g., Bell, S., M. Walker, J. Barnet-Lamb, and S. MacAulay, "Vivendi : UMG growth not enough to offset uncertainty," Credit Suisse, January 10, 2017, at p. 27; Datta, H., G. Knox, and B. J.
Bronnenberg, "Changing Their Tune: How Consumers’ Adoption of Online Streaming Affects Music Consumption and Discovery," Working Paper, October 2016; Kissel, C., "Spotify Listeners Discover Roughly 27 New Artists a Month," Diffuser, July 23, 2015. Accessed January 31, 2017, <http://diffuser fm/spotify-listeners-discover-roughly-27-new-artists-a-month/>.

PUBLIC VERSION


B. As a Case Study, Amazon's Diverse Music Offerings Have Led to Increased Royalty Payments to Rights Holders


C. Diverse Streaming Music Services Under the PII Structure Are Expected to Further Expand the Royalty Payments to Rights Holders

### 3.10 The Copyright Owners' Experts' have argued that the current rate structure is

 harmful to rights holders and that under existing conditions rights holders are not receiving a fair return for their musical works. ${ }^{78}$ In contrast, industry and analyst reports generally consider publishers (i.e., rights holders for musical works) to be a beneficiary of streaming music-driven growth, projecting increases in royalty payments to publishers under the current royalty structure.3.11 The main reason for the positive outlook is that diverse streaming music services contribute to the realization of additional revenue streams to publishers. For example, IBISWorld provided a report on the music publishing industry in October 2015, stating that the "shift toward" new digital platforms, including streaming music services, "has helped music publishers unearth new revenue streams." ${ }^{\text {,79 }}$ Additionally, revenues are no

78 See, e.g., Rysman Report, at बII 72.
79 Petrillo, N., "IBISWorld Industry Report 51223, Music Publishing in the US," IBISWorld, October 2015, at p. 5 ("IBISWorld Report"). The Wall Street Journal reports that a recent example of this is a compilation released by a Sony Music Entertainment record label, "Epic AF," which consisted entirely of previously released singles. "Epic AF" was not "sold as a download or CD, yet it cracked Billboard's Top 10 solely through streaming of its tracks. Even though the songs had been [previously] released, creating an album out of them brought Epic's artists (and their songs) additional publicity."

## PUBLIC VERSION

longer front-loaded to the first months in which a song is released.

Goldman Sachs report points out:
Streaming improves discoverability and monetization of back catalogues, thus turning a one-off transaction into an annuity of cash flows. Catalogue songs (i.e., older than 18 months) accounted for $70 \%$ of all streaming volume in 2015, compared to $50 \%$ of overall physical and digital album sales. ${ }^{81}$

3.12 As a result of additional revenue streams, various industry and analyst reports recognize the benefits that streaming music services have and will provide for publishers as an industry driver moving forward. The IBISWorld Report expects that the music publishing industry will continuously benefit from leveraging "technological change" and usage of the "new digital environment." 83 The Goldman Sachs report also considers the value of streaming versus physical or digital purchases, stating "we believe the increase in streaming consumption will be able to compensate for lower royalty rates," and that "the emergence of new digital distribution models is positive for rights holders." ${ }^{84}$
3.13 These different industry and analyst reports project growth of rights holders' revenue. The Goldman Sachs Report presents a positive view about the overall health of the music industry, including the publishing portion, and forecasts that publisher revenue

will "grow to $\$ 7$ bn in 2030 from $\$ 4$ bn in 2015, with streaming alone adding $\$ 3$ bn of revenue," "while the main revenue pool at risk (physical mechanical royalties) is currently worth $\$ 0.6$ bn." ${ }^{85}$ Additionally, a report by Enders Analysis on June 28, 2016 claims that "mechanicals have started to grow again," and forecasts solid growth for domestic United States publishing revenues, with an estimated increase of $\$ 300$ million from 2015 to 2019. ${ }^{86}$ It is also predicted that half of mechanical royalties in the United States by 2019 will be driven by streaming music services. ${ }^{87}$

## 4. THE COPYRIGHT OWNERS' PROPOSED ONE-SIZE-FITS-ALL RATE STRUCTURE WOULD LIMIT THE SPECTRUM OF STREAMING MUSIC SERVICES

4.1 The Copyright Owners proposed: (a) a statutory mechanical royalty rate of the greater of $\$ 0.0015$ per play or $\$ 1.06$ per-subscriber-month regardless of product category; (b) elimination of the active subscriber distinction; and (c) application of the per-play rate to all streams, including those less than 30 seconds in length. ${ }^{88}$ In this section, I discuss how the Copyright Owners' proposed structure is based on flawed economic arguments and is inconsistent with the rate structures from voluntary licensing agreements. I also discuss how the Copyright Owners’ proposed rate is likely to disrupt the streaming music industry. Furthermore, from an economic perspective, a flexible rate structure helps advance the four Section 115 statutory policy objectives.

[^29]
## A. The Copyright Owners' Proposed One-Size-Fits-All Rate Structure Is Predicated on Flawed Economic Arguments

4.2 The Copyright Owners claim that there should be one uniform royalty rate applied to all streaming music services regardless of their features, because: "each play of an interactive stream or limited download has an inherent value that has nothing to do with how a Digital Service chooses to offer it." ${ }^{89}$ To support the Copyright Owners’ claim, Professor Gans references the "efficient component pricing rule" ("ECPR") and argues that rights holders should receive the same compensation regardless of the features of the distribution channels, because rights holders' opportunity costs for licensing are constant across streaming channels. ${ }^{90}$ In the same vein, Professor Gans states that the rate structure for mechanical licensing should be neutral with respect to the business model for interactive streaming services. ${ }^{91}$

### 4.3 Professor Gans's argument is flawed from an economic perspective. First, the

 opportunity cost of licensing a particular musical work varies depending on product features of the service and its targeted consumer segments. For example, a songwriter's opportunity cost of licensing to a service that is both market expanding and that does not "cannibalize" users from other services is relatively low. In this case, the songwriter has more to gain by letting the provider stream his or her music, and wider market reach may justify a lower royalty rate, compared with licensing to a $\$ 9.99$ full-catalogue service. Thus, a structure that allows for different mechanical royalty rate calculations for[^30]
## PUBLIC VERSION

different service types is more appropriate than the flat-rate structure proposed by the Copyright Owners. ${ }^{92}$

### 4.4 Second, Professor Gans's simplified rendition of the ECPR, in which he

 analogizes musical works rights holders to the owner of a railroad and sidesteps issues related to bargaining power and competition, is not applicable in the context of interactive streaming music. The ECPR considers the pricing by a monopoly producer who directly serves the end client. However, copyright holders cannot by themselves provide the final product (streaming music) to end users. As a result, rights holders and service providers do not compete as the incumbent (i.e., the monopoly railroad owner and operator) and the entrant (i.e., the potential independent railroad operator) as in the development of the ECPR framework. Instead, service providers and rights holders offer complementary products: service providers are continually creating new technologies and business models, while rights holders are continually creating new musical works. Professor Gans acknowledges this issue, ${ }^{93}$ yet continues to assert a simplified version of the ECPR that is inappropriate in this context. Moreover, even if one were to apply the ECPR, the prices that it generates are set at the same level as those in an unrestricted monopoly. This means that the prices set under ECPR would be too high (and production would be too low) from an economic perspective, ${ }^{94}$ which is inconsistent with the Statutory 801(b) objectives.4.5 Third, Professor Gans's opportunity costs argument contradicts the Shapley value model that he uses to derive a fair profit-sharing structure. The fundamental idea of the Shapley value model is that contributors of a product receive a portion of the profit in proportion to their respective contributions. Contrary to this fundamental idea, Professor Gans's opportunity-costs argument demands a fixed payment across different product

[^31]
## PUBLIC VERSION

offerings, irrespective of the amount of profits and the level of contributions made by right holders.

4.6 As I discussed in my Initial Report, the PII Structure provides different rate structures for distinct product categories. The PII Structure distinguishes broadly between three product categories. Subpart A comprises physical phonorecords (such as CDs), permanent digital downloads, and ringtones. Subpart B comprises interactive streaming products and limited downloads. Subpart C comprises Limited Offerings, bundled services (exclusive of interactive streaming ${ }^{95}$ ), and locker services. Each Subpart further contains several product categories, each having their own royalty calculation mechanism. For example, Subpart B includes five distinct product types: (a) Free Nonsubscription/Ad-Supported Services; (b) Standalone Non-Portable Subscription - Streaming Only Services; (c) Standalone Non-Portable Subscription - Mixed Services; (d) Bundled Subscription Services; and (e) Standalone Portable Subscription Services. ${ }^{96}$ The PII Structure provides service providers the necessary flexibility to accommodate diverse product offerings that reach customers with different demand elasticities and preferences, and thereby expand the customer base for streaming music.
4.7 The PII Structure was the result of negotiations among Copyright Owners and service providers.


This includes Music Bundles and Mixed Service Bundles, which are distinct from the Bundled Subscription Services defined under Subpart B.
96 Initial Report, ब 4.5.


## C. The Copyright Owners' Proposal Would Render a Number of Streaming Music Services Uneconomical

### 4.10 The Copyright Owners’ proposed single per-play and per-user royalty rates could

 render a number of streaming music services uneconomical, particularly for services that target users who are otherwise less engaged with music consumption.





98 See Section 4.D below.


4.13 The Copyright Owners have proposed that mechanical royalties should be the greater of a per-play and per-user rate. As a result, the actual royalties paid will, on average, be higher than the royalties calculated under either payment mechanism in isolation.
4.14 There is one other component of the Copyright Owners' proposal that would negatively affect certain categories of streaming music products. Namely, as I discuss in Section 5.B, the PII Structure contains a per-subscriber minimum royalty amount for "Bundled Subscription Services" such as Amazon's Prime Music to be paid in association with the number of active subscribers-namely, those Amazon Prime members who actually use Prime Music. The Copyright Owners' proposal removes the active subscriber distinction such that the per-subscriber minimum amount would apply




Furthermore, from an economic perspective, I do not see the logic of applying the same per-subscriber minimum of $\$ 1.06$ to all Amazon Prime members, including those who do not use Prime Music: under this framework, an individual who uses Prime music regularly, for example, would generate the same monthly royalty payment as an individual who signed up for Amazon Prime for the shipping benefits alone. ${ }^{105}$


105 Free and Ad-Supported services face a similar issue because the data used to calculate "effective peruser" rates is based on monthly active users, rather than all individuals with an account. According to publically-available sources, 70 percent of all Spotify accounts were inactive in any given month in 2011. (Resnikoff, P., "Study Finds that 70 Percent of Streaming Users Are Completely Inactive...," Digital Music News, May 13, 2013. Accessed February 14, 2017, [http://www.digitalmusicnews.com/2013/05/13/streamingusers/](http://www.digitalmusicnews.com/2013/05/13/streamingusers/).)

## D. A Flexible Mechanical Royalty Structure Can Better Achieve Policy Objectives

4.15 I understand that the rates to be determined in this PIII proceeding are to achieve the following policy objectives: ${ }^{106}$

- "To maximize the availability of creative works to the public;"
- "To afford the copyright owner a fair return for [] creative work and the copyright user a fair income under existing economic conditions;"
- "To reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication; and"
- "To minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices."
4.16 In the remainder of this section, I analyze these factors one by one and show that the Copyright Owners' Experts’ conclusions—namely: (a) a revenue-based rate structure is "deeply unsuited" ${ }^{107}$ to achieving the policy objectives; and (b) a uniform per-play and per-user rate structure as proposed by the Copyright Owners is suited to the policy objectives-are without economic merit. From an economic perspective, a flexible rate structure like the PII Structure is better suited to advance the policy objectives.


## 1. To Maximize the Availability of Creative Works to the Public

4.17 The first statutory objective is to facilitate distribution of a wide range of musical works to a wide range of users. Professor Rysman suggests, without support, that a rise in streaming mechanical royalty rates is essential for achieving this objective by incentivizing Copyright Owners for creating music works. Professor Rysman further

[^32]
## PUBLIC VERSION

claims that exits of digital service providers would not reduce the creative works available to the public, because "as long as some services are making these investments, consumers are well served." ${ }^{108}$
4.18 As an initial matter, Professor Rysman has not shown that royalty payments under the current PII Structure inadequately compensate Copyright Owners such that the amount and quality of the music works are declining.


4.19 Further, Professor Rysman's argument ignores the importance of diverse streaming music offerings in expanding the volume of legal music consumption. As I explain in my Initial Report and Section 2 of this report, offering differentiated products at different price points serves to target multiple customer segments, which in turn leads to expanded market penetration. On the other hand, the flat-rate structure proposed by

108 Rysman Report, at $\uparrow \uparrow$ 69-70.
109 I understand from Counsel that Amazon Music has a comprehensive collection of music tracks released.


## PUBLIC VERSION

the Copyright Owners is less flexible and provides less opportunity for digital service providers to tailor services to users with different music preferences and willingness to pay.

2. To Afford Copyright Owners a Fair Return and Providers a Fair Income under Existing Economic Conditions
4.20 Professor Rysman: "interpret[s] a fair rate of return to mean that when a copyright is used more intensively, the Copyright Owners should see increased returns." ${ }^{112}$ But Professor Rysman does not explain why, from an economic perspective, the increased consumption of copyrighted music work that has zero marginal production costs should warrant additional mechanical royalties to Copyright Owners. ${ }^{113}$ For example, the mechanical royalties paid for songs on a CD album are fixed, regardless of how many times the buyers would eventually listen to the CD.
4.21 In fact, there are many instances where increased intensity of usage does not translate to increased payments when marginal production costs are zero. One example is local telephone service. Users generally pay a fixed monthly fee and then are able to make unlimited calls (or zero calls) within a local area. This makes sense: increasing


## PUBLIC VERSION

usage comes at no additional cost to the telephone service provider. Rather than paying an incremental cost for using the service, users instead pay for the fixed cost of building and maintaining the infrastructure. ${ }^{114}$
4.22 In my opinion, a "fair" return to Copyright Owners should instead reflect the opportunity cost that a songwriter faces by allowing a particular service provider to stream his or her musical works. ${ }^{115}$ As I discussed in Section 4.A, this opportunity cost varies depending on product features of the service and its targeted consumer segments. As long as a particular service is market expanding and reaches consumers that would not have otherwise used a streaming music service, the opportunity cost of licensing to that service may be very low. As such, a structure that allows for different mechanical royalty rate calculations for different service types, in order to enable service providers to offer differentiated products, is more appropriate than the flat-rate structure proposed by the Copyright Owners.
4.23 Finally, Professor Rysman argues that, with respect to the statutory objective to provide a fair income to service providers, "royalty rates should provide an opportunity for the copyright user to earn a fair income." ${ }^{116}$ First, even if I accepted this concept of fairness, Professor Rysman overlooks the fact that, under the Copyright Owners' proposal,

Second, in my opinion, a more appropriate concept of fairness in this context is one which accounts for the efforts made by providers to expand the market by targeting consumers with low willingness to pay. Because these consumers are reached through differentiated offerings, and because differentiated

[^33]offerings may face different cost and revenue structures, a flexible mechanical royalty rate structure, such as the PII Structure, is more suited to providing a fair income to different types of service providers than the Copyright Owners' flat-rate proposal.

## 3. To Reflect Relative Roles and Contributions of Copyright Owners and Providers

4.24 Professor Rysman states that: "[a]n economist would think of the relative roles of rightsholders and rights users in terms of their contribution to the overall value being created." ${ }^{118}$ I agree with this statement. I note, however, that this contradicts Professor Rysman's other claim that the royalty payment structure should be "neutral across distribution technologies" and "not bias the market towards one technology or another." ${ }^{119}$
4.25 As I discussed in my Initial Report and Section 2 of this report, technological advancement, coupled with changes in consumers' music preferences and consumption habits, has resulted in a decline in sales of physical media. To attract and retain modern consumers, streaming music providers continue to innovate on their business models and invest in the development of novel music delivery vehicles. As a result, the "value" of an interactive stream may be different depending on the delivery channel. However, the flat-rate structure proposed by the Copyright Owners assigns the same royalty rate across all services, thereby ignoring differences in value generation, the relative roles and contributions of Copyright Owners and digital service providers, and the investments and business risks that service providers take in order to successfully launch diversified streaming offerings. In contrast to the Copyright Owners’ proposed rate structure, it is my opinion that a flexible rate structure is better suited to reflect the providers' relative roles and contributions in different streaming music products and in the expansion of legal music consumption.

118 Rysman Report, at 985.
119 Rysman Report, at $\mathbb{9} 51$.

## 4. To Minimize Any Disruptive Impact on the Structure and Prevailing Practice of the Industry

4.26 The current product offerings were developed by service providers based on the existing PII Structure. Thus, I would expect that the Copyright Owners' proposed changes would lead to some changes in the industry. The relevant question therefore becomes: would these changes be of sufficient magnitude to be characterized as "disruption"? ${ }^{120}$
4.27 In my opinion, the changes caused by implementation of the Copyright Owners' proposed mechanical royalty rate structure would, in fact, be disruptive for the music industry.



4.28 Professor Rysman argues that service providers have many options at their disposal to adapt to a higher royalty rate. He claims that service providers: "can adapt to higher input prices by increasing revenue, reducing other costs or allowing the firm's

[^34]

4.29 Finally, to justify the potential disruption of the Copyright Owners' proposed rates, Dr. Eisenach suggests that the statutory rates are a "ceiling" and that correction in the marketplace (i.e., negotiations between publishers and providers) can effectively mitigate any negative impact from setting the "ceiling" too high. ${ }^{125}$ While Dr. Eisenach acknowledges that rates should not be set "arbitrarily high," he overlooks the fact that setting a rate that is high-regardless of the magnitude-imposes costs both on digital service providers and on Copyright Owners by forcing them to negotiate. ${ }^{126}$ Moreover, high statutory rates grant publishers and songwriters more bargaining power during private negotiations, which may lead to higher negotiated rates: the publisher, who holds rights to unique musical works, can threaten to walk away from the negotiation, leaving the digital service provider with the statutory rate. Thus, it is my opinion that setting a rate that is too high does present significant risks to achieving the Section 115 objectives, and that the Copyright Owners' proposal would therefore be disruptive for the music industry.

123 Rysman Report, at $\mathbb{1} 93$.
124 Rysman Report, at $\mathbb{T} 96$.
125 Eisenach Report, at $\mathbb{} / 29$.
126 "To be clear, I am not arguing that the statutory rate can or should be set arbitrarily high or that it should be set above the rate that would be obtained in the market absent a compulsory license regime. Instead, the goal should be to determine rates that are consistent with market rates and with the 801 (b)(1) statutory standard, including the requirement to avoid disruption. Because no endeavor to fix prices for a five-year period can perfectly predict the future, especially in the rapidly evolving music marketplace, accomplishing this goal requires giving weight to the greater potential for disruption that could result from setting rates too low as opposed to too high." Eisenach Report, at 『 32 .

## 5. A PERCENT-OF-REVENUE MECHANICAL ROYALTY STRUCTURE WITH APPROPRIATE MINIMA ENCOURAGES CONTINUAL INVESTMENTS AND PROTECTS COPYRIGHT OWNERS FROM RISKS ASSOCIATED WITH DIFFERENTIATED BUSINESS MODELS

5.1 The Copyright Owners' proposed rate structure eliminates the revenue-based royalty rates calculation under the PII Structure. In this section, I discuss how Subpart B of the PII Structure specifies a percentage-of-revenue total royalty for mechanical and public performance rights, subject to certain per-subscriber minimums. In my opinion, a mechanical royalty based on a percentage-of-revenue calculation with appropriate minima not only encourages risk sharing between publishers/songwriters and service providers, and continual investments, but also protects publishers/songwriters from risks associated with differentiated business models.

## A. A Mechanical Royalty Structure that Contains a Revenue-Based Rate Calculation Enhances Risk Sharing and Encourages Continual Investments

### 5.2 Professor Rysman claims that a revenue-based royalty rate cannot fairly

 compensate rights holders because providers have business objectives other than shortterm revenue maximization. He further asserts that even if revenue-based royalty payments were adopted to "jump start[]" the industry, such concerns no longer exist and "there is no economic reason" that rights holders' revenue from royalty payments should depend on the price of the service on which their musical works are distributed. ${ }^{127}$5.3 But Professor Rysman's argument ignores the fact that a revenue-based rate can facilitate risk-sharing between service providers and rights holders, which encourages investments and innovation by service providers necessary for the expansion of the streaming music market. The benefits of revenue-sharing contracts are documented extensively in economics studies. Specifically, studies have found that revenue-sharing contracts facilitate the coordination of the supply chain, thereby maximizing the combined profits of the suppliers (i.e., copyright holders in the context of streaming

[^35]
## PUBLIC VERSION

services) and retailers (i.e., digital service providers). ${ }^{128}$ Studies also find that revenuesharing reduces the risks and uncertainty faced by the retailers. For instance, Gil and Lafontaine (2012) show that movie distributors' reliance on revenue-sharing contracts is motivated by "the uncertainty about the value of any given movie in any given market at the time of contracting." ${ }^{129}$
5.4 Because of their benefits to both suppliers and retailers, revenue-sharing contracts have been widely used in several industries, such as entertainment, telecommunication, pharmaceutical, sports leagues, and software industries. ${ }^{130}$ A widely studied example is Blockbuster Inc.'s revenue-sharing contracts. ${ }^{131}$ Video retailers like Blockbuster faced the challenge that the peak popularity of a rental title lasted only a few weeks, but the cost of a tape was high relative to the rental price. To resolve this challenge, Blockbuster devised revenue-sharing deals with its suppliers in 1998, under which Blockbuster paid its suppliers a portion of its rental income in exchange for a substantial reduction in the initial price per tape. Blockbuster's introduction of revenue sharing coincided with a

128 See, for example, Cachon, G. P., and M. A. Lariviere, "Supply Chain Coordination with RevenueSharing Contracts: Strengths and Limitations," Management Science, 51, 1, 2005; Yao, Z., S.C.H. Leung, and K.K. Lai, "Manufacturer's revenue-sharing contract and retail competition," European Journal of Operational Research, 186, 2, 2008; Bhaskaran, S.R., and V. Krishnan, "Effort, Revenue, and Cost Sharing Mechanisms for Collaborative New Product Development," Management Science, 55, 7, 2009.

129 Gil, R., and F. Lafontaine, "Using Revenue Sharing to Implement Flexible Prices: Evidence from Movie Exhibition Contracts," The Journal of Industrial Economics, 60, 2, 2012, at p. 188.
130 See, for example, Mortimer, J. H., "Vertical Contracts in the Video Rental Industry," The Review of Economic Studies, 75, 1, 2008; Munster, G., and M.J. Olson, "Raising Price Target Based on Booked Rev Outlook and AT\&T Rev Share; Reit OP," Piper Jaffray, July 20, 2007; Bhaskaran, S.R., and V. Krishnan. "Effort, Revenue, and Cost Sharing Mechanisms for Collaborative New Product Development," Management Science, 55, 7, 2009; Késenne, S., "Revenue Sharing and Competitive Balance in Professional Team Sports," Journal of Sports Economics, 1, 1, 2000; Yoon, Y.S., J. Yoo, and M. Choi, "Revenue Sharing is the Optimal Contractual Form for Emerging App Economy?," in 2010 International Conference on Information and Communication Technology Convergence (ICTC), 2010.

131 Cachon, G. P., and M. A. Lariviere, "Supply Chain Coordination with Revenue-Sharing Contracts: Strengths and Limitations," Management Science, 51, 1, 2005.

## PUBLIC VERSION

significant improvement in its performance, with its market share increasing from 24 percent in 1997 to 40 percent in 2002. ${ }^{132}$

5.6 These examples show that a revenue-based rate can be beneficial for both the rights holders and the service providers. This beneficial feature holds particularly for an industry like the interactive streaming music that requires continual investments to broaden market reach and expand legal music consumption.


## B. A Mechanical Royalty Based on Percent-of-Revenue Calculation with Appropriate Minima Protects Copyright Owners from Risks Associated with Alternative Business Models

5.7 Professor Rysman claims that "[a] rate structure based around a revenue test is deeply unsuited to ensuring a fair return to rightsholders or achieving the policy objectives." ${ }^{137}$ As part of his analysis, Professor Rysman claims that digital service providers may choose to defer current revenue and profit in favor of higher future returns (or higher corporate valuations), and that, "[d]ue to the ephemeral popularity of specific tracks and even artists, rightsholders who suffer from short-run revenue suppression from the services are not necessarily the same rightsholders who would benefit in the future from higher revenues." ${ }^{138}$ In this commentary, however, Professor Rysman incorrectly implies that a revenue-based rate is the only dimension that determines the mechanical royalty payments under the PII Structure. In fact, as I explain in my Initial Report, a percent-of-revenue calculation is only one dimension of a flexible system that ensures different royalty rates and calculation methods for distinct service categories. ${ }^{139}$ By providing minimum royalty rates that are based on alternatives to revenue, Copyright Owners are protected from the risks that revenues in any time period may be too low or impractical to calculate. ${ }^{140}$

### 5.8 As I discussed in my initial report, the PII Structure provides a flexible

 mechanical royalty structure for these products that not only varies by product type, but that also includes a variety of alternatives to revenue to accommodate the specific circumstances surrounding an individual service. ${ }^{141}$ Amazon Prime Music provides an example of how alternative minimums facilitate royalty calculation where standalone revenue is impractical to calculate. As a Bundled Subscription Service (Subpart B), the first step in the royalty calculation is to determine an "All-In Royalty" by taking the[^36]
## PUBLIC VERSION

larger of 10.5 percent of "service revenue" and a product-specific minimum of 21 percent of royalties paid to record labels for the rights associated with sound recordings. ${ }^{142}$

5.9 In the second step, performance royalties are subtracted from this All-In Royalty to determine a mechanical-only royalty for Prime Music. In the third step, this mechanical-only amount is once again compared to a minimum amount-in this case a "Product Specific Subscriber-Based Royalty Floor"-that is $\$ 0.25$ per "active subscriber" per month (i.e., Amazon Prime members who actually use Prime Music in a particular month). ${ }^{143}$

revenue rate calculations provide protection to Copyright Owners against risks associated with streaming music offerings with low standalone revenues. In my opinion, a percent-of-revenue royalty with non-revenue based alternative minima provides necessary flexibility that enables service providers to launch differentiated offerings that cater to individuals with a lower willingness to pay while at the same time protecting rights

[^37]holders against low standalone revenues potentially associated with such business models.

## 6. ANALYSES BY PROFESSOR RYSMAN, PROFESSOR GANS, AND DR. EISENACH ARE FLAWED AND DO NOT SUPPORT TO THE COPYRIGHT OWNERS' PROPOSED RATES

6.1 Professor Rysman, Professor Gans, and Dr. Eisenach each perform analysis to support the Copyright Owners' proposal (i.e., the greater of $\$ 0.0015$ per stream or $\$ 1.06$ per subscriber rate). In this section, I discuss how the analyses provided in support of the Copyright Owners’ proposed rate levels are flawed. I also discuss how correcting these flaws supports levels of royalty rates far lower than those proposed by the Copyright Owners.

## A. Professor Rysman Cherry Picks Services and Omits Information in his "Effective" Royalty Rate Analyses

6.2 In order to assess the economic reasonableness of the Copyright Owners’ proposed per-play rate of $\$ 0.0015$ per interactive stream and per-user rate of $\$ 1.06$, Professor Rysman looks to historical data showing total mechanical royalties paid by various service providers. However, as I discuss below,



1. Professor Rysman's Per-Play Analysis Omits Ad-Supported Streaming Music Services and Does Not Distinguish Between Service Types
6.3 Professor Rysman analyzes "effective per-play royalty rates paid by subscriptionbased interactive streaming services over the last five years." ${ }^{145} \mathrm{He}$ presents a chart showing the effective per-play rate (i.e., total mechanical royalties paid divided by number of streams) for a variety of paid-subscription services. However, Professor Rysman's analysis is flawed for several reasons.

145 Rysman Report, at $\mathbb{\top} 62$.

6.4 Second, Professor Rysman ignores data showing "effective per-play" mechanical royalty rates paid by ad-supported streaming service providers.

6.5 Third, as I discussed in Section 4.C above, Professor Rysman makes no attempt to show how the average effective royalty rates are different for different service categories.

6.6 Finally, Professor Rysman presents a table to "highlight some of the larger services and historical effective per-play rates." ${ }^{146} \square$


Rysman Report, at $\mathbb{1} 64$.

## 2. Professor Rysman's "Weighted-Average" Per-User Mechanical Royalty Rate Does Not Rely on "Effective Per-User" Mechanical Royalty Data

### 6.7 To complement his "effective per-play" royalty analysis, Professor Rysman

 calculates a "weighted average" per-user mechanical royalty rate ofHowever, rather than relying on actual mechanical royalty and subscriber data available in his sources, he instead imputes what per-user mechanical royalty would be if the Copyright Owners' proposed per-play rate were adopted and if the number of streams per month exhibited for services in his data remained unchanged:

I also understand that Copyright Owners have proposed a monthly per-user rate of $\$ 1.06$. I note that this rate is consistent with the proposed $\$ 0.0015$ per-play rate at current user stream intensities.

6.8 As I discussed in Section 4.C above, had Professor Rysman calculated an "effective per-user" mechanical royalty amount using the subscriber data available to him in his sources, ${ }^{148}$ he would have observed per-user royalties that are much lower than the

he calculates. Moreover, had Professor Rysman conducted such an analysis for each service category in his data, $\square$

3. Professor Rysman Fails to Account for Streams of Less than 30 Seconds when Verifying the Copyright Owners' Proposed Rate

### 6.9 Professor Rysman's "effective per-play" analysis is based on data that excludes

 promotional streams, which I understand are typically streams less than 30 seconds in play length. ${ }^{149}$ As a result, Professor Rysman implicitly assumes that all mechanical royalties would be attributable to streams in excess of 30 seconds. However, I understand that the Copyright Owners' proposal of per-play rates of $\$ 0.15$ per 100 streams applies to all streams, including those less than 30 seconds in length. ${ }^{150}$ Therefore, Professor Rysman's "effective per-play" mechanical royalty amounts are not directly comparable to the Copyright Owners' proposed rates.

## PUBLIC VERSION

6.10 To address this inconsistency, I present in Table 4 below the "effective per-play" royalty for all streams. In this analysis, I assume, for illustrative purposes, that current mechanical royalties paid are attributable to all streams rather than only non-promotional streams that exceed 30 seconds in play length. Because the data upon which Professor Rysman relies do not show the number of streams less than 30 seconds in length, I rely on information from an analysis of Spotify data that shows that 35.05 percent of all streams in 2014 were skipped before 30 seconds had elapsed. ${ }^{151}$



## B. Professor Gans's Estimated Mechanical Royalty Rates Are Predicated on Unsubstantiated Assumptions

6.11 To support the Copyright Owners' proposed rates, Professor Gans calculates perplay and per-user mechanical rates based on current record label profits and on an assumption that, in a free market, not only should publisher profits be equal to record label profits, but that

As I discuss below, Professor Gans's conclusions critically hinge on a number of assumptions that are not substantiated by economic analysis. Correcting for these flaws reduces Professor Gans's estimated mechanical royalty rates to be substantially below the Copyright Owners' proposed rates.

[^38]
## PUBLIC VERSION

## 1. Summary of Professor Gans's Shapley Value Analysis

6.12 Professor Gans states that a Shapley value model can be used to solve the profit sharing problem between rights holders and interactive music services. ${ }^{153}$ While I agree with the underlying concept of the Shapley value model, I note that the reliability of the model outcome depends on the assumptions employed. Given the complicated industry structure and large number of rights holders and service providers, it would be extremely difficult to calibrate a model to provide a realistic outcome.
6.13 Professor Gans's Shapley value model is rather simplistic. First, Professor Gans assumes that average per-user publisher profits for paid subscription streaming services


Finally, Professor Gans uses these increased revenue amounts to calculate a new ratio of revenues between record labels and publishers, and then invokes "sound recording benchmarks" from Dr. Eisenach's analysis (discussed below) to calculate mechanical royalty rates on a per-play and per-user basis. ${ }^{156}$

## 2. Professor Gans Ignores the Role of Digital Service Providers in Music Streaming in His Profit Sharing Scheme

### 6.14 According to Professor Gans, because both the rights of publishers and record

 labels are perfect complements in the context of a streaming music service, the Shapley value approach would result in an even division of profit between labels and

## PUBLIC VERSION

publishers. ${ }^{157}$ Notably absent from his model, however, is any substantive discussion of the digital service providers' economic contributions and incentives. ${ }^{158}$ By ignoring service providers in his calculations, Professor Gans sidesteps the issue that a Shapley value including service providers would dictate that service providers, too, should receive positive profits and that


6.15 The error of ignoring service providers also shows in Professor Gans's derivation of the hypothetical royalty payment ratio between labels and publishers under the equal-profit-split scheme. Professor Gans assumes that not only would publisher and label profits be equal (though publisher profits are currently lower than label profits),


${ }^{157}$ Gans Report, at $\uparrow 68$.
${ }^{158}$ Professor Gans does acknowledge that: "while the record company and publisher can do without Spotify if they have a deal with Rhapsody, the Shapley value approach supposes that without Spotify waiting in the wings (so to speak), Rhapsody will command greater power. Thus,because they have a role in providing competition against one another, the publisher and record company will not push these streamers to their limits in negotiations. Both companies will earn some surplus although perhaps not as much as the veto parties in this game." (Gans Report, at ๆ 72.) However, he subsequently omits service providers from his model entirely.


3. Professor Gans Relies Exclusively on Data for Paid-Subscription Streaming Services
6.18 In addition to the theoretical issues I discussed above, Professor Gans also inappropriately relies exclusively on publisher and label income information for paidsubscription streaming music providers.



In fact, the data source upon which he relies for his revenue and profit figures also includes blended-average figures across all streaming services, including ad-supported streaming services. ${ }^{162}$


161 Gans Report, at p. 38, footnote 40.
162 The Goldman Sachs Report, upon which Professor Gans relies, provides both values in the same table. (Goldman Sachs Report, at p. 54.)

4. Professor Gans Ignores Streams of Less than 30 Seconds
6.20 Like Professor Rysman, Dr. Eisenach's per-play "sound recording benchmarks," upon which Professor Gans relies in his analysis, are based only on streams that exceed 30 seconds in play length. As I described above in Paragraph 6.9, this is not directly comparable to the Copyright Owners' proposed rates for all streams (i.e., including streams that are less than 30 seconds in play length).
6.21 To address this inconsistency, I present in Table 7 below the "effective per-play" royalty for all streams-assuming, for illustrative purposes, that current record label payments and mechanical royalties are attributable to all streams rather than only those streams that exceed 30 seconds in play length. ${ }^{163}$



${ }^{163}$ See Footnote 151.


## C. Dr. Eisenach's Analyses Suffer a Number of Flaws that Inflate His Estimated Mechanical Royalty Rates

## 1. Summary of Dr. Eisenach's Analyses

6.22 Dr. Eisenach opines that sound recording royalty rates are "freely negotiated in an unconstrained marketplace," ${ }^{164}$ and thus may be used as a benchmark for mechanical royalty rates after adjusting for the value of sound recordings rights relative to the value of musical works rights. As he describes it, in order to "value the mechanical streaming right," he "uses actual payments made by interactive streaming services for access to sound recording rights combined with the benchmarked relative value of sound recording and musical work rights." ${ }^{165}$
6.23 Dr. Eisenach uses two different formulas to implement this approach, which he refers to as Method 1 and Method 2. ${ }^{166}$ With Method 1, he estimates mechanical rates as the difference between sound recording royalties for interactive streaming and those for non-interactive streaming, ${ }^{167}$ divided by the relative value of sound recording ("SR") rights to musical works ("MW") rights. Expressed as a formula:

SR Rate for Interactive Streaming - SR Rate for non-interactive Streaming
Relative value of SR rights to MW rights
6.24 Dr. Eisenach's Method 2 first estimates total royalties for musical works as sound recording royalties for interactive streaming divided by the relative value of sound

164 Eisenach Report, at ब $\$ 37$.
165 Eisenach Report, at ब 166.
166 Eisenach Report, at $\mathbb{T}$ T 151-156.
167 Dr. Eisenach refers to this as "the implicit value of the mechanical works right for sound recordings in interactive services." (Eisenach Report, at 『 140.)

## PUBLIC VERSION

recording rights to musical works rights. Then he estimates mechanical rates by subtracting musical works performance royalties. Expressed as a formula: ${ }^{168}$

$$
\frac{\text { SR RATE FOR INTERACTIVE STREAMING }}{\text { RELATIVE VALUE OF SR RIGHTS TO MW RIGHTS }}-\text { MW PERFORMANCE ROYALTY RATE }
$$

6.25 Below, I discuss the problems with Dr. Eisenach's use of sound recording royalties as a benchmark, the flaws with his relative values of sound recording rights to musical works rights, the issues underpinning his Method 1 approach, and the cherrypicked data he uses to make his estimates.

> | 2. Dr. Eisenach's Treatment of Label Agreements as "Independent" |
| :--- |
| Is Flawed Because Negotiations between Record Labels and Digital |
| Service Providers Are Influenced by Musical Works Royalty Payments |

6.26 Dr. Eisenach's entire approach rests on his assumption that royalties paid by interactive streaming services to record labels for sound recordings represent independent benchmarks for evaluating appropriate royalty payments for musical works. Specifically, Dr. Eisenach's model assumes a linear relationship between sound recording royalties and musical works royalties, such that, when sound recording royalties rise, musical works royalties must also rise proportionally (so that the ratio between sound recording royalties and musical works royalties remains constant). However, because sound recordings and musical works are each necessary for streaming music, I understand that digital service providers consider the combined royalties for both musical works and sound recordings in their business decisions and royalty payment negotiations. ${ }^{169}$ As a result, a change in royalties for musical works will likely impact how providers negotiate and analyze royalties for sound recordings, and vice versa.
6.27 Because of this interconnection between musical works royalties and sound recording royalties, it is unreasonable to assume, as Dr. Eisenach does in his analyses,

[^39]
## PUBLIC VERSION

that one can unilaterally increase musical works royalty payments without impacting sound recording royalty payments. For example, in order to match his benchmark ratios between sound recordings and musical works, Dr. Eisenach argues that musical works royalties should be increased. But increasing musical works royalties may lead to a decrease in negotiated sound recording royalties, such that maintaining Dr. Eisenach's benchmark ratio would require musical works royalties to fall once again. Even if I were to accept Dr. Eisenach’s benchmark ratios (which I do not, as I discuss below), Dr. Eisenach's decision to ignore this relationship between musical works royalties and sound recording royalties therefore leads him to overestimate appropriate mechanical royalty rates.

## 3. Dr. Eisenach's Relative Valuation Benchmark for Other Media Types Are Not Appropriate

6.28 It is common practice in economics and finance to estimate values using market indicators. These "comparables" or "benchmarks" may be used when the value of the underlying good or services is unknown. Typically, the researcher will identify a set of items that are similar to the target item, estimate the value of these items, and then make adjustments to the estimated values in order to arrive at a value for the target item. Such practice is common in the context of business and intellectual property valuation.
6.29 Results from such analyses are only as good as the data upon which the researcher relies. In particular, it is important that the researcher selects market benchmarks that are similar to the target item such that the benchmarks yield valuation results appropriate for the item at issue. Moreover, because each item is unique, the researcher must be sure to make appropriate adjustments to any benchmark-based values to ensure that they are calibrated to the item at issue.
6.30 Dr. Eisenach does not explain why his selected benchmark ratios between sound recording royalties and musical works royalties are comparable to the same ratio in the context of interactive streaming. He makes no effort to account for the economic drivers that result in the wide disparity between his benchmark ratios: from
fact, the wide range of ratios he presents suggests that his benchmark ratios are not even comparable to each other. Furthermore, as I discuss in the following subsections, each of his proffered benchmark ratios either pertain to products with economic characteristics that are different from interactive streaming services or are biased by idiosyncratic factors of a particular chosen provider. As a result of these factors, it is my opinion that Dr. Eisenach's benchmark analysis is biased in favor of the Copyright Owners' proposal.

## a) Synchronization Licenses

6.31 Dr. Eisenach considers ratios implied by synchronization ("synch") licenses, ${ }^{171}$ which are licenses granted by copyright holders that allow the licensees to synchronize music with some kind of visual media output, such as film, television shows, commercials, and video games. Although Dr. Eisenach agrees that the synch licenses are sought for audio-visual purposes, rather than audio-only purposes as for interactive streaming, ${ }^{172}$ he nevertheless claims that they are relevant on the grounds that synch licenses are negotiated "outside the shadow of a compulsory license." ${ }^{173}$

### 6.32 Many outcomes are negotiated "outside the shadow of a compulsory license"-

this criteria is not sufficient to render synch licenses comparable to interactive streaming licenses. Further, Dr. Eisenach fails to consider economic characteristics of synch licenses that render the ratio between sound recording royalties and musical works royalties different between synch and interactive streaming licenses. First, synch

170 Dr. Eisenach does note, however, that these economic drivers exist: "it is important when utilizing benchmarks to consider various factors that might make the licensed rights more or less valuable by comparison to the target rights, and thus require an adjustment to the rates paid for the benchmark rights. These factors may include:differences in the nature of the rights at issue; differences in underlying market factors (e.g., different geographic markets); differences in the term or time period covered by the agreements; differences in factors affecting the relative bargaining power of the parties (possibly including the presence of the shadow of compulsory licensing); and differences in the services being offered." (Eisenach Report, at $\mathbb{\|}$ 35.) Dr. Eisenach’s benchmark ratios of royalties paid for sound recordings to those paid for musical works are summarized in Table 9 of his report.
171 Eisenach Report, at 993.
${ }^{172}$ Eisenach Report, at 『 93. Dr. Eisenach states that synch licenses "do not apply to streaming music services."

173 Eisenach Report, at 993.
licensees are fundamentally different from interactive streaming licensees, because synch licensees seek particular compositions to accompany their visual media output, rather than comprehensive music catalogs that steaming music providers seek. Second, synch licensees may opt to forgo recorded performances of a particular song altogetherthereby negating the need for a sound recording license-and instead synchronize visual media output with a live music performance. ${ }^{174}$ Finally, one of the reasons that record labels generally enjoy substantially higher royalty payments than publishers is the investments labels make to promote songs. ${ }^{175}$ The demand for visual media music, however, is more specific to the need of the visual media output, and less about demand driven by record labels' marketing and promotion. All these factors result in weaker bargaining positions for record labels in the context of synch licenses, and the second and third factors, which do not affect publishers, will yield a lower ratio of rates paid for sound recordings to musical works than that for interactive streamed music. As a result, benchmarking to synch licenses artificially inflates royalty payments to musical works relative to sound recording for the interactive streamed music at issue.

## b) YouTube Agreements

6.33 Dr. Eisenach claims that YouTube agreements, along with Pandora opt-out agreements, represent the most comparable and reliable benchmarks. ${ }^{176}$ Dr. Eisenach, however, does not discuss factors idiosyncratic to YouTube that likely lead to a lower ratio of rates paid for sound recording to musical works compared with other streaming music services.
6.34 YouTube allows users to upload videos to its website, which can then be accessed by others for viewing. YouTube hosts many types of videos, including videos that embody musical works and sound recordings.


174 Alternatively, a synch licensee could record their own "cover" version of a song to synchronize with visual media output.
175 According to the Goldman Sachs report, for all streaming music, record labels pay $43 \%$ of revenue to Selling \& Marketing and Other Product Costs. For publishers, no such figure is listed-the only three Cost categories for publishers are Songwriters \& Repertoire (i.e., royalties), Admin and other, and Depreciation. (Goldman Sachs Report, at pp. 54, 58.)
176 Eisenach Report, at वा 130.


While promotional channels also exist through other interactive streaming services, YouTube is different: music videos,
 are a unique vehicle


## PUBLIC VERSION

that can potentially earn revenue and reduce necessary marketing and promotion expenditures. This positive feedback loop may lead record labels to contemplate lower negotiated royalties, which in turn would lead to a lower benchmark ratio between sound recordings and musical works.
6.36 Furthermore, given YouTube's vast reach to potential audiences and tools designed to allow videos to link to other sites for artists that sell tickets, merchandise, and other products, some performers and songwriters even forgo traditional marketing channels altogether and rely on YouTube as their primary promotion tool. ${ }^{184}$
 It is therefore unreasonable to assume that the ratio of rates paid to sound recording to musical works observed in YouTube agreements can be generalized as an industry benchmark.
c) Pandora Publisher Opt-Out Agreements


184 Forde, E., "Is YouTube wrecking the music industry - or putting new artists in the spotlight?," The Guardian, July 18, 2016. Accessed January 17, 2017,
[https://www.theguardian.com/business/2016/jul/18/youtube-music-industry-artists-spotlight](https://www.theguardian.com/business/2016/jul/18/youtube-music-industry-artists-spotlight).


d) Section 115 Agreements that Include Ringtones, Ringback Tones, Locker Services, and Bundled Steaming Music Services
6.40 Dr. Eisenach also reviews current Section 115 statutory rates and direct licenses "negotiated under [its] shadow." ${ }^{190}$ The direct licenses Dr. Eisenach examined include rights for locker services, ringtones, and ringback tones. Ringtones are short recordings that are used to indicate an incoming communication message on a telecommunications device. Ringback tones are short recordings that are played for incoming callers while waiting for the other party to answer the call. Locker services are cloud storage for phonorecords already owned or already able to be accessed by a consumer.

### 6.41 Each of these products has economic features that distinguish them from

 interactive streaming and that render their negotiated royalty rates incomparable to those for streamed music. For example, ringtones and ringback tones are short clips (rather than full-length sound recordings), and are designed to be played when the phone rings. ${ }^{191}$ As such, it would be unreasonable to assume that ringtones and ringback tones are a consumer's primary means of consuming music. Similarly, locker services are not a primary means of consuming music because they require some other form of music access in order to provide any value to a user. In other words, locker services are complementary to physical music purchases, permanent digital downloads, and interactive streaming products. Thus, it is unclear to me whether or to what extent these[^40]
## PUBLIC VERSION

services represent appropriate benchmarks for calculating the ratio of royalties between sound recordings and musical works for interactive streaming services. ${ }^{192}$
4. Dr. Eisenach's Usage of Non-Interactive Streaming Label Payments to Impute a "Mechanical" Label Payment for Interactive Streaming Has No Economic Basis
6.42 To estimate mechanical royalties, Dr. Eisenach uses two methods to allocate the portion of mechanical rights from his estimated music works royalty payments. In particular, Dr. Eisenach's Method 1 calculates the difference between the all-in sound recording royalties for interactive streamed music and those for non-interactive streamed music as an "implicit value of the mechanical [...] right for sound recordings in interactive services." ${ }^{193}$ Method 1 therefore assumes that because there is only a performance right for sound recordings for non-interactive streaming, ${ }^{194}$ and because there is a performance right as well as a distribution and reproduction right for sound recordings for interactive streaming, the difference between sound recording royalties for interactive and non-interactive streaming must be driven by the right to distribute and reproduce sound recordings.
6.43 Dr. Eisenach's methodology makes unsubstantiated assumptions that have no economic basis, rendering mechanical royalties calculated using Method 1 unreliable. First, Dr. Eisenach assumes that for interactive streaming, there is distinct, quantifiable

[^41]
## PUBLIC VERSION

economic value associated with performance rights and with reproduction and distribution rights. In fact, there is no rigorous economic basis for allocating the total value that is created between these two distinct legal rights for sound recordings, because one right alone does not generate economic value: the rights for public performance and for reproduction and distribution are perfect complements.

### 6.44 In addition, even if one could somehow allocate economic value among the

 distinct legal rights for sound recordings for interactive streaming, there is no reason to assume, as Dr. Eisenach does, that the dollar value of per-play sound recording performance royalty payments would be the same for interactive streaming as for noninteractive streaming. I note that the performance royalty paid to publishers for musical works is different between non-interactive and interactive services, ${ }^{195}$ indicating varied economic values for performance rights pertaining to different levels of interactivity.
## 5. Dr. Eisenach Only Includes Paid-Subscription Streaming Services in His Analyses

6.45 In the previous sections, I discussed how Dr. Eisenach's methods were flawed and how his benchmark ratios were not comparable to the interactive streaming industry at issue. In this section, I discuss how Dr. Eisenach relies on a cherry-picked selection of sound recording royalties, such that his calculated mechanical royalties are biased in favor of the Copyright Owners' proposed rates.


195 The Opinion and Order in Re Petition of Pandora Media, Inc., Related to United States of America v. ASCAP noted that " [b]ecause ASCAP [an entity that administers performance rights] considers its music to be more valuable to the services it classifies as interactive, it has licensed them at a higher rate than noninteractive services." The Opinion and Order also noted that " $i] f$ f there was one principle regarding rate structure on which the parties agreed at trial it was that the rate for customized radio [i.e., noninteractive streaming] should be set below the rate for on-demand interactive services." ("Opinion and Order," In Re Petition of Pandora Media, Inc., Related to United States of America v. American Society of Composers, Authors, and Publishers, March 18, 2014, at pp. 32, 106.)


6.49 As discussed above, Dr. Eisenach's benchmark analysis suffers a number of flaws that inflate his estimated mechanical royalty rates. To evaluate the impact of these flaws on Dr. Eisenach's estimated mechanical royalty rates, I re-calculated the mechanical royalty rates based on Dr. Eisenach's methodology, but with the following adjustments. First, I remove Dr. Eisenach's flawed Method 1. Second, I remove the Section 115 and synch license benchmark ratios, as they do not share the same economic characteristics as streaming music. Third, I include all service providers in the estimation of royalty rates. Fourth, I use the adjusted Pandora benchmark ratio as discussed above. Fourth, I include all service providers in the estimation of mechanical royalty rates. Finally, because, like


Professors Rysman and Gans, Dr. Eisenach failed to account for streams lasting 30 seconds or less when evaluating the Copyright Owners' proposed rates, ${ }^{204}$ I also adjust Dr. Eisenach's per-play calculations to account for all streams and not just streams that exceed 30 seconds. The results of these adjustments are shown in Exhibit 18 in tabular format, and the adjusted figures are compared with the Dr. Eisenach's reported figures in Exhibit 19.


See Sections 6.A and 6.B.
$\begin{array}{ll}\square \\ \square & \square \\ \square & \square\end{array}$


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

In the Matter of:

DETERMINATION OF RATES AND
TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR (2018-2022)

## DECLARATION OF GLENN HUBBARD

I, Glenn Hubbard, declare under penalty of perjury that the statements contained in my Expert Rebuttal Report in the above-captioned proceeding are true and correct to the best of my knowledge, information and belief. Executed this 15th day of February, 2017 in New York, New York.


Before the UNITED STATES COPYRIGHT ROYALTY JUDGES THE LIBRARY OF CONGRESS

Washington, D.C.

## In the Matter of:

DETERMINATION OF RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR
(2018-2022)

## DECLARATION OF GLENN HUBBARD

I, Glenn Hubbard, declare under penalty of perjury that the statements contained in my
Expert Rebuttal Report in the above-captioned proceeding are true and correct to the best of my knowledge, information and belief. Executed this 15th day of February, 2017 in New York, New York.


## HUBBARD EXHIBIT 1

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 2

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 3

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 4

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR
(2018-2022)

## HUBBARD EXHIBIT 5

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 6A

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 6B

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 7A

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

HUBBARD EXHIBIT 7B

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 8

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR
(2018-2022)

## HUBBARD EXHIBIT 9

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 10

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 11

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 12

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 13

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 14

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 15

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 16

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 17

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 18

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## HUBBARD EXHIBIT 19

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon
License Agreements

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

Appendix A

Appendix A

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

Appendix A

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

Appendix A

## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon


## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon
Data


- "Consumer Price Index for All Urban Consumers: All items less food and energy (CUUS0000SA01E)," United States Bureau of Labor Statistics. Accessed February 9, 2017, [https://fred.stlouisfed.org/series/CUUS0000SA0L1E](https://fred.stlouisfed.org/series/CUUS0000SA0L1E).
- Price, J., "The 2014 Interactive Streaming Data: As More Money Is Made From Music, Music Creators and Copyright Holders are Making Less.," Audiam , June 8, 2015. [http://blog.audiam.com/2015/06/the-2014-interactive-streaming-dataas_20.html](http://blog.audiam.com/2015/06/the-2014-interactive-streaming-dataas_20.html).


## Books

- Cabral, L.M.B., Introduction to Industrial Organization. (The MIT Press: Cambridge, Massachusetts, 2000).


## PUBLIC VERSION

## Appendix A Incremental Documents Relied Upon

## Websites

- "About Media Formats," Amazon, 2016. Accessed on August 1, 2016,
[https://www.amazon.com/gp/help/customer/display.html?nodeId=201379550](https://www.amazon.com/gp/help/customer/display.html?nodeId=201379550).
- "Amazon Music Terms of Use," Amazon , 2016. Accessed on July 28, 2016,
[https://www.amazon.com/gp/help/customer/display.html?nodeId=201380010](https://www.amazon.com/gp/help/customer/display.html?nodeId=201380010).
- "Amazon Prime," Amazon, 2016. Accessed July 28, 2016, <https://www.amazon.com/Amazon-Prime-One-Year-

Membership/dp/B00DBYBNEE>.

- "Herfindahl-Hirschman Index," Department of Justice , July 29, 2015. Accessed January 27, 2017,
[https://www.justice.gov/atr/herfindahl-hirschman-index](https://www.justice.gov/atr/herfindahl-hirschman-index).
- "Hot New Releases: The Best-Selling New \& Future Releases in Albums," Amazon, 2017. Accessed February 7, 2017, <https://www.amazon.com/gp/new-releases/dmusic/digital-musicalbum/ref=dmm_nr_shv_0520/ref=s9_acsd_al_bw_clnk_r?ie=UTF8\&pd_rd_r=JWTVYF5FNSYJHY77BF6V\&pd_rd_w=aI TlV\&pd_rd_wg=0MdQL\&pf_rd_m=ATVPDKIKX0DER\&pf_rd_s=merchandised-search-
6\&pf_rd_r=JWTVYF5FNSYJHY77BF6V\&pf_rd_r=JWTVYF5FNSYJHY77BF6V\&pf_rd_t=101\&pf_rd_p=1ce81045-f09b-4922-b335-0c8c07512deb\&pf_rd_p=1ce81045-f09b-4922-b335-0c8c07512deb\&pf_rd_i=16385601>.
" "Music Unlimited," Amazon, 2016. Accessed October 29, 2016.
[https://www.amazon.com/gp/dmusic/promotions/AmazonMusicUnlimited/ref=sv_dmusic_0](https://www.amazon.com/gp/dmusic/promotions/AmazonMusicUnlimited/ref=sv_dmusic_0).
- "Prime Student," Amazon, 2017. Accessed February 12, 2017, < https://www.amazon.com/Amazon-

Student/b?ie=UTF8\&node=668781011>.

- "Songs," Amazon, 2017. Accessed February 7, 2017, <https://www.amazon.com/MP3-

Songs/b/ref=dmm_hp_bbx_sg?ie=UTF8\&node=324382011\&pf_rd_m=ATVPDKIKX0DER\&pf_rd_s=merchandisedsearch-left-3\&pf_rd_r=YCVAP15S4J7Y8MSMMTQB\&pf_rd_t=101\&pf_rd_p=2573946502\&pf_rd_i=163856011>.
-"The End of Freemium For Spotify?," Music Industry Blog , July 7, 2016. Accessed December 13, 2016, [https://musicindustryblog.wordpress.com/2016/07/07/the-end-of-freemium-for-spotify/](https://musicindustryblog.wordpress.com/2016/07/07/the-end-of-freemium-for-spotify/).

- "The Skip," Music Machinery, May 2, 2014. Accessed January 26, 2017, [https://musicmachinery.com/2014/05/02/theskip/](https://musicmachinery.com/2014/05/02/theskip/).
- "Who Owns Tidal," Tidal, 2016. Accessed December 23, 2016, [https://support.tidal.com/hc/en-us/articles/203055651-Who-Owns-TIDAL-](https://support.tidal.com/hc/en-us/articles/203055651-Who-Owns-TIDAL-).


## PUBLIC VERSION

## Appendix A <br> Incremental Documents Relied Upon

## Academic Articles

- Adams, W.J. and J.L. Yellen, "Commodity Bundling and the Burden of Monopoly," The Quarterly Journal of Economics, 90, 3, 1976.
- Bhaskaran, S. R., and V. Krishnan, "Effort, Revenue, and Cost Sharing Mechanisms for Collaborative New Product Development," Management Science, 55, 7, 2009.
- Cachon, G. P., and M. A. Lariviere, "Supply Chain Coordination with Revenue-Sharing Contracts: Strengths and Limitations," Management Science, 51, 1, 2005.
- Datta, H., G. Knox, and B. J. Bronnenberg, "Changing Their Tune: How Consumers’ Adoption of Online Streaming Affects Music Consumption and Discovery," Working Paper, October 2016.
- Gil, R., and F. Lafontaine, "Using Revenue Sharing to Implement Flexible Prices: Evidence from Movie Exhibition Contracts," The Journal of Industrial Economics , 60, 2, 2012.
- Hui, K.L., and I. Png, "Piracy and the Legitimate Demand for Recorded Music," The B.E. Journal of Economic Analysis \& Policy, 2, 1, 2003.
- Késenne, S., "Revenue Sharing and Competitive Balance in Professional Team Sports," Journal of Sports Economics, 1, 1, 2000.
- Kumar, V., "Making ‘Freemium’ Work," Harvard Business Review , May 2014.
- Michel, N.J., "The Impact of Digital File Sharing on the Music Industry: An Empirical Analysis," The B.E. Journal of Economic Analysis \& Policy, 6, 1, 2006.
- Mortimer, J. H., "Vertical Contracts in the Video Rental Industry," The Review of Economic Studies, 75, 1, 2008.
- Peitz, M., and P. Waelbroeck, "The Effect of Internet Piracy on CD Sales: Cross-Section Evidence," CESifo Working Paper No. 1122, 2004.
- Shiller, B., and J. Waldfogel, "Music for a Song: An Empirical Look at Uniform Pricing and its Alternatives," The Journal of Industrial Economics, 59, 4, 2011.
- Stigler, G., "United States v. Loew’s Inc.: A Note on Block-Booking," The Supreme Court Review, 1963.
- Waldfogel, J., "Music File Sharing and Sales Displacement in the iTunes Era," Information Economics and Policy, 22, 4, 2010.
- Yao, Z., S. C.H. Leung, and K.K. Lai, "Manufacturer's revenue-sharing contract and retail competition," European Journal of Operational Research, 186, 2, 2008.
- Yoon, Y.S., J. Yoo, and M. Choi, "Revenue Sharing is the Optimal Contractual Form for Emerging App Economy?," in

2010 International Conference on Information and Communication Technology Convergence (ICTC), 2010.
-Zentner, A., "Measuring the Effect of File Sharing on Music Purchases," Journal of Law Economics, 49, 2006.

## PUBLIC VERSION

## Appendix A Incremental Documents Relied Upon

## Industry Reports

- "Annual Music Study 2015 Report to Spotify Ltd.," MusicWatch, June 2016.
- Enders, A., and C. Hayes, "Global music publishing 2016," Enders Analysis , June 28, 2016.
- Friedlander, J.P., "News and Notes on 2016 Mid-Year RIAA Music Shipment and Revenue Statistics," Recording Industry Association of America, 2016.
- "Global Music Report: Music Consumption Exploding Worldwide," IFPI, 2016.
- Mulligan, M., "On Demand In Demand: Meeting The Needs Of The On Demand Fan," MIDiA, June 2015.
- Mulligan, M., "State of the YouTube Music Economy: Growing Tensions As Worldviews Collide," MIDiA, July 2016.
- "Music Monitor," MusicWatch, July 2016.
- Page, W., "Adventures in the Netherlands: Spotify, Piracy and the new Dutch experience," Spotify, 2013.
- Petrillo, N., "IBISWorld Industry Report 51223: Music Publishing in the US," IBISWorld , October 2015.


## Analyst Reports

- Bell, S., M. Walker, J. Barnet-Lamb, and S. MacAulay, "Vivendi : UMG growth not enough to offset uncertainty," Credit Suisse, January 10, 2017.
- Blackledge, J., N. Yako, T. Champion, O. Chen, S. Zaccone, C. Willson, and C. Origenes, "Internet Retail Tracker: June '16," Cowen and Company, July 11, 2016.
- Kelley, M., "Pandora Media, Inc.: Updating our On-Demand Thoughts," Citi , June 7, 2016.
- Mahaney, M.S., A. Bruckner, J. Shaughnessy, and D. Haber, "‘Alexa, How Fast Do Flywheels Spin?,’" RBC , September 15, 2016.
- Mahaney, M.S., A. Bruckner, J. Shaughnessy, and D. Haber, "Rally in the Valley Net Takeaways," RBC , May 19, 2016.
- Meyers, S., and M. J. Olson, "Takeaways From The Pandora Management Meeting and The Auto Show Booth Tour," Piper Jaffray, March 28, 2016.
- Munster, G., and M. J. Olson, "Raising Price Target Based On Booked Rev Outlook And AT\&T Rev Share; Reit OP," Piper Jaffray, July 20, 2007.
- Nowak, B., M. Costantini, J. Lanterman, K. Liu, and O. Hyde, "Prime: From 0-60 Million," Morgan Stanley, October 5,
- Swinburne, B., R. Fiftal, and M. Ripps, "Pandora Media Inc.: Managing a Portfolio of Assets," Morgan Stanley, April 7, 2016.
-Yang, L., H.P. Terry, Masaru Sugiyama, S. Jankowski, and H. Bellini, "Music in the Air: Stairway to Heaven, Volume 1," Goldman Sachs Equity Research, October 4, 2016.


## PUBLIC VERSION

## Appendix A <br> Incremental Documents Relied Upon

## News Articles

- Bell, D., "iTunes Match vs. Amazon Cloud Player: What’s the better option?" CNET, August 2, 2012. Accessed February

7, 2017, [http://www.cnet.com/howto/itunes-match-vs-amazon-cloud-player-whats-the-better-option/](http://www.cnet.com/howto/itunes-match-vs-amazon-cloud-player-whats-the-better-option/).
-Christman, E., "Amazon Launches Prime Music Streaming Service, Minus UMG," Billboard, June 12, 2014. Accessed February 2, 2017, [http://www.billboard.com/biz/articles/news/digital-and-mobile/6114217/amazon-launches-prime-music-streaming-service-minus-umg](http://www.billboard.com/biz/articles/news/digital-and-mobile/6114217/amazon-launches-prime-music-streaming-service-minus-umg).
-Christman, E., "Pandora Signs Mutually Beneficial Licensing Deals With ASCAP, BMI," Billboard, December 22, 2015. Accessed December 1, 2016, [http://www.billboard.com/articles/business/6820722/pandora-licensing-deals-ascap-bmi](http://www.billboard.com/articles/business/6820722/pandora-licensing-deals-ascap-bmi).

- Crupnick, R., "Thanks YouTube, But There’s Still a Value Gap," MusicWatch, December 8, 2016. Accessed January 18, 2017, [http://www.musicwatchinc.com/blog/thanks-youtube-but-theres-still-a-value-gap/](http://www.musicwatchinc.com/blog/thanks-youtube-but-theres-still-a-value-gap/).
- Flanagan, A., "Warner Music’s Parent Company Now In Control of Deezer Following French Approval," Billboard , September 8, 2016. Accessed December 13, 2016, [http://www.billboard.com/articles/business/7502855/deezer-access-industries-french-approval-len-blavatnik](http://www.billboard.com/articles/business/7502855/deezer-access-industries-french-approval-len-blavatnik).
- Forde, E., "Is YouTube wrecking the music industry - or putting new artists in the spotlight?," The Guardian, July 18, 2016. Accessed January 17, 2017, [https://www.theguardian.com/business/2016/jul/18/youtube-music-industry-artistsspotlight](https://www.theguardian.com/business/2016/jul/18/youtube-music-industry-artistsspotlight).
- Karp, H., "Music Industry’s Latest Piracy Threat: Stream Ripping," Wall Street Journal, September 12, 2016. Accessed February 12, 2017, [https://www.wsj.com/articles/music-industrys-latest-piracy-threat-stream-ripping-1473718919](https://www.wsj.com/articles/music-industrys-latest-piracy-threat-stream-ripping-1473718919).
- Kissel, C., "Spotify Listeners Discover Roughly 27 New Artists a Month," Diffuser, July 23, 2015. Accessed January 31, 2017, [http://diffuser.fm/spotify-listeners-discover-roughly-27-new-artists-a-month/](http://diffuser.fm/spotify-listeners-discover-roughly-27-new-artists-a-month/).
- Morrison, M., "Spotify Opens Its Popular Playlists to Sponsors," AdvertisingAge, May 26, 2016. Accessed January 31, 2017, [http://adage.com/article/digital/spotify-expands-ad-formats-sponsored-playlists/304174/](http://adage.com/article/digital/spotify-expands-ad-formats-sponsored-playlists/304174/).
- "Pandora Signs Direct Licensing Deal with Downtown Music Publishing," Music Business Worldwide , December 22, 2015. Accessed February 3, 2017, [http://www.musicbusinessworldwide.com/pandora-signs-direct-licensing-deal-with-downtown-music-publishing/](http://www.musicbusinessworldwide.com/pandora-signs-direct-licensing-deal-with-downtown-music-publishing/).
- Peoples, G., "One Year Later Tidal’s Service is Fine, But Catching Spotify Might Be Impossible," Billboard , March 30, 2016. Accessed Janury 26, 2017, [http://www.billboard.com/articles/business/7317990/tidal-one-year-service-catching-spotify-impossible-competition](http://www.billboard.com/articles/business/7317990/tidal-one-year-service-catching-spotify-impossible-competition).
- Peoples, G., "Pandora, SONGS Music Publishing Agree to Multi-Year Deal," Billboard, December 8, 2015. Accessed January 19, 2017, [http://www.billboard.com/articles/business/6792563/pandora-songs-music-publishing-multi-year-deal](http://www.billboard.com/articles/business/6792563/pandora-songs-music-publishing-multi-year-deal).
- Resnikoff, P., "Study Finds that 70 Percent of Streaming Users Are Completely Inactive...," Digital Music News , May 13, 2013. Accessed February 2, 2017, [http://www.digitalmusicnews.com/2013/05/13/streamingusers/](http://www.digitalmusicnews.com/2013/05/13/streamingusers/).


## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon

- Schneider, M., "YouTube CEO Gives Update on Music Key, Talks How It Will Differ From Spotify, Apple," Billboard , July 14, 2015. Accessed February 7, 2017, [http://www.billboard.com/articles/business/6633466/youtube-ceo-music-key-susan-wojcicki](http://www.billboard.com/articles/business/6633466/youtube-ceo-music-key-susan-wojcicki).
- Shah, N., "The Summer That Streaming Took Over," Wall Street Journal, August 25, 2016. Accessed January 27, 2017, [https://www.wsj.com/articles/the-summer-that-streaming-took-over-1472151516](https://www.wsj.com/articles/the-summer-that-streaming-took-over-1472151516).
- Sisario, B., "Amazon Pairs Its Speaker With Streaming Music, at a Bargain Price," The New York Times, October 12, 2016. Accessed February 2, 2017, [https://www.nytimes.com/2016/10/12/business/amazon-music-applespotify.html?_r=0](https://www.nytimes.com/2016/10/12/business/amazon-music-applespotify.html?_r=0).


## Legal Documents

- "Opinion and Order," In Re Petition of Pandora Media, Inc., Related to United States of America v. American Society of Composers, Authors, and Publishers , March 18, 2014.
- "Proposed Findings of Fact of National Music Publishers' Association, Inc., The Songwriters Guild of America, and The Nashville Songwriters Association International (Public Version)," In the Matter of Mechanical and Digital Phonorecord Delivery Rate Adjustment Proceeding , July 2, 2008.


## PUBLIC VERSION

Appendix A
Incremental Documents Relied Upon
Written Statements


## Other

All other materials cited in this report and exhibits to this report that are not cited in my Initial Report and exhibits thereto.

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

In the Matter of:

DETERMINATION OF RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

Docket No. 16-CRB-0003-PR (2018-2022)

## WRITTEN REBUTTAL TESTIMONY OF ROBERT L. KLEIN

(On behalf of Amazon Digital Services LLC)

## PUBLIC VERSION

## I. Credentials of Robert L. Klein and Qualifications as an Expert

1. I am Chairman and Co-Founder of Applied Marketing Science, Inc. ("AMS"), a market research and consulting firm with offices in Waltham, Massachusetts.
2. I received a Bachelor of Science degree in Mechanical Engineering in 1966 from the Massachusetts Institute of Technology, Cambridge, Massachusetts, and a Master of Science degree in 1968 from the MIT Sloan School of Management. I served as a commissioned officer in the US Public Health Service from 1968 to 1970 and was stationed at the National Institutes of Health in Bethesda, Maryland.
3. I returned to the Boston area in 1970 to join three former professors in starting Management Decision Systems, Inc. (MDS). I was Senior Vice President responsible for the development of market research models and measurement tools to forecast new product success, to measure the impact of advertising and other promotions, and to help product managers increase the profitability of their brands. In 1985, MDS had 250 employees and offices in the U.S., Europe, and Asia.
4. In 1985, Information Resources, Inc. (IRI), then the fourth largest market research company in the world, acquired MDS. IRI specialized in the collection and analysis of data generated by supermarket scanners. I became Executive Vice President of IRI with responsibility for custom consulting and market research projects.
5. In 1989, I left IRI to start Applied Marketing Science, Inc. with an MIT professor and a former client as partners. For the past 28 years we have conducted market research on a wide range of both consumer and business products and services. I am the Chairman and Co-Founder of AMS and we currently have approximately 30 employees working out of our office in suburban Boston.
6. In my market research career, I have personally designed and conducted over one thousand market research surveys primarily for non-litigation clients. I am a member of the American Association for Public Opinion Research, the Product Development and Management Association, and the Institute for Operations Research and Management Science. I represent AMS on the Council of American Survey Research Organizations and to the International Trademark Association (INTA). For four years I was a member of INTA's Proof of Confusion Subcommittee, and for two years I was a member of INTA's Opposition \& Cancellation Standards \& Procedures Subcommittee.

## PUBLIC VERSION

7. My curriculum vitae including the cases in which I have testified in the past 4 years is shown in Appendix A. AMS bills my time at the rate of $\$ 750$ per hour, and my compensation is not in any way dependent on the outcome of this case.

## II. Background and Assignment

8. Amazon.com, Inc. (hereafter "Amazon") is an American e-commerce and cloud computing company, and the largest internet-based retailer in the world. Amazon is engaged in the sale of music (among many other products), and Amazon's U.S.-based music business currently includes a physical music store, a digital download store, a purchased content locker service, a paid locker service, and an array of streaming service offerings including Prime Music, Amazon Music Unlimited, and Unlimited for Echo.
9. Prime Music is an on-demand ${ }^{1}$ music streaming service with a limited catalog of approximately two million songs. ${ }^{2}$ Prime Music is one of the benefits of a $\$ 99$ per year Amazon Prime membership, along with free two-day shipping on millions of items and access to Prime Video, among other things. Users of Amazon Prime Music can stream music to multiple devices, ad-free and on-demand. Amazon Music Unlimited includes a full catalog of songs (comprised of tens of millions of tracks) and allows users to create playlists or access playlists that have been created by others. Like with Prime Music, users of Amazon Music Unlimited can stream music to multiple devices, ad-free and on demand. This service costs $\$ 7.99$ per month for Prime members and $\$ 9.99$ per month for non-Prime members. Unlimited for Echo provides access to Amazon Music Unlimited's full catalog of tracks on a single Alexa-enabled device (such as the Amazon Echo, Echo Dot, or Amazon Tap) for $\$ 3.99$ per month. Other similar on-demand music streaming services typically cost $\$ 9.99$ per month (e.g., Spotify, Apple Music, etc.)
10. I was asked by counsel for Amazon to design, execute and analyze a market research survey (the "Klein Survey") to respond to certain royalty rate proposals and related assertions made by other participants in the Phonorecords III royalty rate-setting proceeding. In particular, I understand from discussions with counsel that various participants in the Phonorecords III proceeding have proposed significant increases in royalty rates. Further, I also understand from discussions with counsel that such rate increases have the potential to affect the types of on-demand music streaming services made available to consumers and the prices charged for access to those services. As a result, the Klein Survey gathers empirical evidence regarding streaming music customers' current and prior music streaming behavior, as well as their reported

[^42]willingness to pay for full-catalog music streaming services at various monthly prices. It is my understanding that this information will be relied upon by other experts in responding to and rebutting certain rate proposals and related assertions made by other participants in this proceeding as to the appropriate royalty to be paid by digital service providers like Amazon for use of musical works in connection with on-demand music streaming services.

## III. Summary of Opinion

11. Based on the results of the survey I conducted, it is my opinion to a reasonable degree of professional certainty, that:

12. My work is on-going; should additional information become available, I may alter or revise my opinion.

## IV. Survey Methodology

13. This survey was designed in accordance with the relevant factors outlined in the Manual for Complex Litigation (4th edition) published in 2004 by the Federal Judicial Center. These include:

- whether the population was properly chosen and defined;
- whether the sample chosen was representative of that population;
- whether the data gathered were accurately reported;
- whether the data were analyzed in accordance with accepted statistical principles;
- whether the questions asked were clear and not leading;
- whether the survey was conducted by qualified persons following proper interview procedures; and
- whether the process was conducted so as to ensure objectivity (e.g., that respondents were unaware of the sponsor of the survey and how the results would be used).


## V. Overview of the Survey

14. The Klein Survey was conducted to measure music streaming customers' current and prior music streaming habits, as well as their anticipated willingness to pay for music streaming services at various monthly prices. I surveyed men and women age 18 and older who reported that they currently stream (listen to) music over the internet.
15. Qualified respondents (described more completely below) were told that they would be asked some questions about their use of music streaming services. This instruction was followed by a series of questions to understand respondents' prior music streaming behavior before they subscribed to their current music streaming service(s). After responding to these questions, respondents who were not currently subscribing to Amazon Music Unlimited were presented with a description of this streaming service and its pricing options for Prime and non-Prime members and for owners of Alexa-enabled devices. Following this description, respondents were asked several follow-up questions to determine, at the prices presented, whether or not they would subscribe to the Amazon service or choose to do something else (e.g., subscribe to a different paid service, listen to music using a different "non-paid" streaming option, etc.).
16. In order to separately examine the effects of various pricing levels of Amazon Music Unlimited and other music streaming services on the purchasing behavior of Prime members and individuals without Prime memberships, respondents were assigned separate question tracks (i.e., Track 1 or Track 2). Prior to the presentation of the Amazon Music Unlimited pricing questions, respondents were assigned to either Track 1 (if they were current subscribers to Prime) or Track 2 (if they were not current subscribers to Prime.) As mentioned earlier, when subscribing to Amazon Music Unlimited, Prime members are eligible for a $\$ 2$ discount, whereas consumers who do not currently subscribe to Prime are not eligible for a discount. To replicate these marketplace conditions more closely, the Track 1 questions and Track 2 questions reflected pricing for Amazon Music Unlimited relevant to Prime members and non-Prime members, respectively.
17. Once the respondents were assigned to a track, each respondent within that track was assigned to one of three cells which determined which pricing level would be shown for Amazon Music Unlimited and other music streaming services. One cell in each track presented the current pricing level for Amazon Music Unlimited (Cell 1 for Prime
members and Cell 4 for non-Prime members). The other two cells in each track increased the Amazon Music Unlimited pricing and other music streaming service pricing in \$1 increments.
18. Finally, once respondents completed these questions, respondents who indicated that they do not currently subscribe to Amazon Music Unlimited continued to several final questions to gauge their prior awareness of the music streaming service and its pricing.

## VI. Population Universe and Sample Selection

19. The appropriate universe for measuring willingness to pay for an unlimited-catalog music streaming service at various pricing levels is individuals who currently stream music over the internet. Accordingly, qualified survey respondents were men and women, age 18 and older, who indicated they currently stream (listen to) music over the internet.
20. In order to interview relevant potential customers, I designed an internet survey that screened potential respondents in the United States to determine if they were qualified to participate in the survey. Internet surveys are an increasingly common form of market research. Over $89 \%$ of the U.S. population uses the internet. ${ }^{3}$ The largest corporations use these surveys to support multi-million dollar marketing decisions. ${ }^{4}$ Courts accept the results of internet surveys in a wide range of cases. ${ }^{5}$
21. An internet survey is conducted by contracting with one of the many companies that have pre-recruited potential respondents who have indicated their willingness to participate in market research surveys. In this case, I selected Research Now, a well-established panel company that I have worked with in the past. Research Now maintains a panel of 2.2 million active ${ }^{6}$ members in the U.S. I have found Research Now to be consistently reliable and a high-quality supplier of qualified survey respondents.
22. The email invitation sent to the Research Now panel members included a link to the actual survey. This link contained an embedded identification number that assured that
[^43]
## PUBLIC VERSION

each respondent could only complete the survey once. In addition, click balancing was implemented in order to ensure that the individuals who had the opportunity to qualify for the survey approximated the 2010 Census in terms of age, gender, and region. ${ }^{7}$ As is customary for consumer surveys for litigation, as well as other market research surveys, respondents who qualified and completed the survey received a small monetary incentive. Research Now uses a system of points that can be accumulated and exchanged for gift cards. For the present survey, respondents who completed their survey received $\$ 2.50$ in e-Rewards currency from Research Now. A copy of the email invitation is included in Appendix C. Detailed screening statistics are shown in Appendix E.

## VII. Survey Instrument

23. The survey began with a series of screening questions to determine if each respondent was a member of the target population and qualified to participate in the study. Qualified individuals were men and women, age 18 and older, who currently stream (listen to) music over the internet. Screenshots taken from the survey and a text version of the survey with programmer instructions are included in Appendix D.
24. The first screening question (QS0) asked respondents to enter the code shown on the screen exactly as it appears in the CAPTCHA image box. This is a standard question used in all AMS internet surveys to ensure that only actual people, as opposed to computer programs, take the survey. Next (QS1), respondents indicated what type of electronic device they were using to complete the survey. Respondents were only allowed to continue with the survey if they selected "Desktop computer," "Laptop computer," or "Tablet computer." This was to ensure that respondents took the survey on a device with a screen large enough for them to easily view the questions and provide a response. Respondents who indicated that they were using a smartphone or other mobile or electronic device received an instruction that the survey is not formatted for viewing on such devices and were prompted to log back into the survey using a desktop, laptop, or tablet computer. In the next two questions, respondents indicated their gender (QS2) and the age bracket that corresponded to their age (QS3). Anyone who selected "Under 18" was not permitted to continue. The age and gender information was used to validate that the person taking the survey was the same person who had originally enrolled with the research panel provider. Respondents were also asked to indicate their state of residence (QS4). Respondents who indicated that their state of residence was not listed (i.e., they live outside of the United States) were not permitted to continue.

[^44]25. The next screening questions asked respondents if they or a member of their household worked in certain types of industries (QS5a) or for certain companies (QS5b). As a standard practice to eliminate respondents with specialized knowledge, those who indicated that either they or someone in their household worked in the market research or advertising industry, or for Amazon, were not allowed to continue.
26. The next screening question (QS6) showed respondents a list of products and asked which, if any, they currently own. Respondents who selected "Amazon Alexa-enabled device (i.e., Echo, Echo Dot, or Tap)," were coded as Alexa-enabled device owners. The next screening question (QS7) showed respondents a list of services and asked to which, if any, they currently subscribe. Respondents who selected "Amazon Prime," were coded as Prime members and respondents who did not select "Amazon Prime" were coded as non-Prime members. ${ }^{8}$
27. QS8 showed respondents a list of activities and asked which, if any, they have ever done. Those who did not select "Streamed (listened to) music over the internet, e.g., using Spotify or Pandora" were not permitted to continue. In QS9a respondents were provided a list of music streaming services in alphabetical order and asked which, if any, they have ever used.

QS9a. You mentioned that you have streamed (listened to) music over the internet. Which, if any, of the following music streaming service providers have you ever used? (Select all that apply)

- Amazon
- Apple Music (i.e., not iTunes)
- Deezer
- Google
- Pandora
- Spotify
- Other. Please specify:
- None of the above

28. Those who selected "None of the above" were not permitted to continue. In QS9b respondents were provided the list of services they selected in the previous question in alphabetical order and were asked which, if any, of the services they currently use. Those who indicated that they did not currently stream music were not permitted to continue.
[^45]For respondents who indicated in QS9a that they had only ever used one music streaming service, QS9b was automatically populated with their QS9a answer and these respondents did not see that question.
29. QS9c asked respondents to indicate their level of responsibility for the decision to use their current music streaming service(s). Respondents who indicated they made the decision themselves or played a major role in the decision were permitted to continue. Respondents who indicated that they played a minor role in the decision, were not involved in the decision, or did not know their level of involvement in the decision were not permitted to continue.
30. QS10a was only asked to respondents who currently used a music streaming service from Amazon. Respondents were asked which Amazon music streaming services they currently use, Amazon Prime Music or Amazon Music Unlimited. Respondents who indicated they did not know which streaming service they used from Amazon were not permitted to continue.
31. The QS10b-g series of questions was asked to all respondents who indicated they currently used a music streaming service from a company other than Amazon. Such respondents were asked QS10b-g for each music streaming service respondents indicated they currently used. QS10b-g asked respondents whether they were using the adsupported free version, the paid subscription version, or a free trial of the streaming service. Respondents who indicated that they did not know which version of their streaming service they were using were not permitted to continue. ${ }^{9,10}$
32. QS11 was a quality control question which directed respondents to choose "SOUTH" from a list of the four cardinal directions. Respondents who did not select "SOUTH" were not allowed to continue with the survey.
33. Finally, QS12 asked the respondent to take the survey in one session, to not consult other materials or people while answering the survey questions and to wear glasses or contact lenses if normally needed for viewing a screen. Respondents who understood and agreed to these instructions were permitted to continue to the main questionnaire.
34. At the start of the main survey, respondents viewed a general introduction to the survey:

[^46]Next, we will ask you some questions about your use of music streaming services.

If you don't know the answer to a question, or if you are unsure, then indicate this by choosing the "Don't know/Unsure" option. It is very important that you do not guess.

Please click the "NEXT" button when you are ready to continue.
35. After reading the instructions, respondents continued to the main questionnaire. First, respondents who had previously indicated in QS10a that they used Amazon Music Unlimited were asked to indicate their music streaming habits before they subscribed to Amazon Music Unlimited:

Q1. Which of the following best describes your music streaming habits before you subscribed to Amazon Music Unlimited? (Select all that apply)

- I used a paid subscription to a different music streaming service
- I used one or more ad-supported free music streaming services
- I used Amazon Prime Music (limited music catalog available to Prime members for no additional charge)
- I was not streaming music over the internet prior to subscribing to Amazon Music Unlimited
- Don't know/Unsure

36. Next, in the Q2 series of questions, for each non-Amazon streaming service for which respondents were currently paying for (or in a free trial period), they were asked to indicate their prior music streaming habits:

Q2b-g. Which of the following best describes your music streaming habits before you subscribed to [FILL NAME OF EACH PAID STREAMING SERVICE

## INDICATED]? (Select all that apply)

- I used a paid subscription to a different music streaming service
- I used one or more ad-supported free music streaming services
- I was not streaming music over the internet prior to subscribing to [FILL NAME]
- Don't know/Unsure

37. Next, individuals who own an Alexa-enabled device (QS6) and who currently stream Amazon Music Unlimited (QS10a) were asked how much they pay for Amazon Music Unlimited:

Q3. You indicated that you currently subscribe to Amazon Music Unlimited. How much do you pay for your monthly subscription for this music streaming plan?
(Select one only)

- \$3.99/month to stream music on a single Amazon Echo, Echo Dot, or Amazon Tap only
- [PRIME MEMBER: $\$ 7.99 /$ month; NON-PRIME MEMBER: $\$ 9.99 /$ month] to stream music on multiple devices (e.g., your smartphone, computer, tablet, Amazon Echo, etc.)
- Currently in a free trial period prior to a paid subscription version
- Don't Know/Unsure

38. At this point, current subscribers to Amazon Music Unlimited completed the survey. All other respondents moved to the next section of the survey where they were assigned to a question track. Amazon Prime members were assigned to Track 1 and non-Prime members were assigned to Track 2. Respondents in each track were randomly assigned to one of 3 cells, each of which varied the pricing level of Amazon Music Unlimited and other music streaming services. See Tables 1 and 2 below for pricing levels for each cell.

Table 1 - Amazon Prime Member Pricing for Track 1 (Cells 1, 2 and 3)

| Track 1 - Prime Members |  |  |  |
| :---: | :---: | :---: | :---: |
| Cells | Price Level Shown |  |  |
|  | Stream to <br> single Alexa- <br> enabled <br> device | Stream to <br> multiple <br> devices | Stream using <br> other <br> services |
| $\mathbf{1}$ | $\$ 3.99$ | $\$ 7.99$ | $\$ 9.99$ |
| $\mathbf{2}$ | $\$ 4.99$ | $\$ 8.99$ | $\$ 10.99$ |
| $\mathbf{3}$ | $\$ 5.99$ | $\$ 9.99$ | $\$ 11.99$ |

Table 2 - Non-Prime Member Pricing for Track 2 (Cells 4, 5 and 6)

| Track 2 - Non-Prime Members |  |  |  |
| :---: | :---: | :---: | :---: |
| Cells | Price Level Shown |  |  |
|  | Stream to <br> single Alexa- <br> enabled <br> device | Stream to <br> multiple <br> devices | Stream using <br> other services |
| $\mathbf{4}$ | $\$ 3.99$ | $\$ 9.99$ | $\$ 9.99$ |
| $\mathbf{5}$ | $\$ 4.99$ | $\$ 10.99$ | $\$ 10.99$ |
| $\mathbf{6}$ | $\$ 5.99$ | $\$ 11.99$ | $\$ 11.99$ |

39. First, Track 1 respondents were shown a description of Amazon Prime Music and Amazon Music Unlimited:

Amazon offers two different music streaming services. Amazon Prime Music includes over 2 million songs without ads and at no additional cost to Prime subscribers. Amazon Music Unlimited includes a full catalog of songs (tens of millions of tracks), including new releases, and allows you to create your own playlists or access playlists that have been created by others.
40. Next, respondents indicating earlier that they owned an Alexa-enabled device read the following description of their potential streaming options:

You indicated earlier that you own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and that you do not currently subscribe to Amazon Music Unlimited. Suppose that Alexa-enabled device owners could pay $\$ 3.99^{11}$ per month to stream Amazon Music Unlimited to a single Alexa-enabled device only. Suppose further that, as an Amazon Prime member, you would be eligible to subscribe to this service and stream to multiple devices for a price of $\$ 7.99^{12}$ per month. This would be a $\$ 2$ discount off the regular monthly price of $\$ 9.99^{13}$. Finally, assume other paid music streaming services ${ }^{14}$ would be priced at $\$ 9.99^{15}$.

[^47]41. To separately examine the effects of available price discounts between consumers with and without an Alexa-enabled device, different prices for the Amazon Music Unlimited music streaming service were presented to respondents who indicated that they owned an Alexa-enabled device to reflect the price they would pay to stream to this device or to multiple devices.
42. Accordingly, individuals who did not own an Alexa-enabled device were instead shown the following description of their potential streaming options:

You indicated earlier that you are not currently subscribing to Amazon Music Unlimited. Suppose that individuals who own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) could pay $3.99{ }^{16}$ per month to stream Amazon Music Unlimited to a single Alexa-enabled device only. Suppose further that, as an Amazon Prime member, you would be eligible to subscribe to this service and stream to multiple devices for a price of $\$ 7.99{ }^{17}$ per month. This would be a $\$ 2$ discount off the regular monthly price of $\$ 9.99^{18}$. Finally, assume that other paid music streaming services ${ }^{19}$ would be priced at $\$ 9.99^{20}$.
43. After being presented with the pricing for the Amazon streaming option, respondents were asked to indicate what they were likely to do:

Q4a_b. Thinking about these options, which of the following, if any, would you be likely to do?

Please select one option from the first list of paid streaming options. Please select all that apply from the list of other streaming options.

Paid streaming options (Select one only)

- Pay $\$ 7.99^{21}$ per month to stream Amazon Music Unlimited to multiple devices

[^48]- Pay $\$ 3.99^{22}$ per month to stream Amazon Music Unlimited to one ${ }^{23}$ Alexaenabled device only
- Purchase a monthly subscription to a different streaming service for $\$ 9.99^{24,25}$
- I would not pay for a monthly streaming subscription ${ }^{26}$

Other (non-paid) streaming options (Select all that apply)

- Listen to an ad-supported free music streaming service
- Listen to Amazon Prime Music (available at no additional charge through my Amazon Prime subscription)
- Download music over the internet
- Subscribe to a satellite radio service (e.g., SiriusXM)
- Listen to music on the radio (AM/FM)
- Purchase CDs and/or listen to CDs I already own


## - Don't Know/Unsure

44. Respondents were required to view the page for at least 20 seconds before advancing.
45. Respondents who indicated in Q4a_b that they would not pay for a monthly streaming subscription and that they would download music over the internet were asked how they would download music over the internet:

Q4c. You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? (Select all that apply)

- Downloading music from an online service where users pay per track or album downloaded (e.g., iTunes, Amazon Music, eMusic, Google Play, etc.)

[^49]- Downloading music from an online site for free through a file sharing program (e.g., Bit Torrent sites such as The Pirate Bay or KickAssTorrents)
- Downloading music from blogs that share music for free
- Downloading music by converting YouTube videos to MP3s using a converter
- Other. Please specify:
- None of the above

46. As previously mentioned, respondents who did not indicate they used Amazon Music Unlimited and indicated that they have not subscribed to Amazon Prime in QS7 were assigned to Track 2, and were randomly assigned to one of three cells that varied the pricing levels of Amazon Music Unlimited and other music streaming services. (See Table 2 above to review the pricing for Cells 4,5 and 6.)
47. First, these respondents were shown a description of Amazon Music Unlimited:

Amazon offers a music streaming service called Amazon Music Unlimited that includes a full catalog of songs (tens of millions of tracks), including new releases, and allows you to create your own playlists or access playlists that have been created by others.
48. Following this, respondents indicating earlier that they owned an Alexa-enabled device (on QS6) read the following description of their potential streaming options:

You indicated earlier that you own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and that you do not currently subscribe to Amazon Music Unlimited. Suppose that Alexa-enabled device owners could pay $\$ 3.99^{27}$ per month to stream Amazon Music Unlimited to a single Alexa-enabled device only. Suppose further that you could subscribe to this service and stream to multiple devices for a price of $\$ 9.99^{28}$ per month. Finally, assume that other paid music streaming services ${ }^{29}$ would be priced at $\$ 9.99^{30}$.
49. As in Track 1, to separately examine the effects of available price discounts between consumers with and without an Alexa-enabled device, different prices for the Amazon Music Unlimited music streaming service were presented to respondents who indicated

[^50]that they owned an Alexa-enabled device to reflect the price they would pay to stream to this device or to multiple devices.
50. Accordingly, individuals who did not own an Alexa-enabled device were instead shown the following description of their potential streaming options:

You indicated earlier that you are not currently subscribing to Amazon Music Unlimited. Suppose that individuals who own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) could pay $\$ 3.99^{31}$ per month to stream Amazon Music Unlimited to the Alexa-enabled device only. Suppose further that, you could subscribe to this service and stream to multiple devices for a price of $\$ 9.99^{32}$ per month. Finally, assume that other paid music streaming services ${ }^{33}$ would be priced at $\$ 9.99^{34}$.
51. After being presented with the pricing for the Amazon streaming option, respondents were asked to indicate what they were likely to do:

Q5a_b. Thinking about these options, which of the following, if any, would you be likely to do?

Please select one option from the first list of paid streaming options. Please select all that apply from the list of other streaming options.

## Paid streaming options (Select one only)

- Pay $\$ 9.99^{35}$ per month to stream Amazon Music Unlimited to multiple devices
- Pay $\$ 3.99^{36}$ per month to stream Amazon Music Unlimited to one Alexaenabled device only ${ }^{37}$
- Purchase a monthly subscription to a different streaming service for $\$ 9.99^{38,39}$

[^51]
## PUBLIC VERSION

- I would not pay for a monthly streaming subscription ${ }^{40}$


## Other (non-paid) streaming options (Select all that apply)

- Listen to an ad-supported free music streaming service
- Subscribe to Amazon Prime at $\$ 99$ per year, which includes Amazon Prime Music and other features, including free 2-day shipping of products purchased through the Amazon website
- Download music over the internet
- Subscribe to a satellite radio service (e.g., SiriusXM)
- Listen to music on the radio (AM/FM)
- Purchase CDs and/or listen to CDs I already own
- Don’t Know/Unsure

52. Respondents were required to view the page for at least 20 seconds before advancing.
53. Respondents who indicated in Q5a_b that they would not pay for a monthly streaming subscription and that they would download music over the internet were asked how they would download music over the internet:

Q5c. You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? (Select all that apply)

- Downloading music from an online service where users pay per track or album downloaded (e.g., iTunes, Amazon Music, eMusic, Google Play, etc.)
- Downloading music from an online site for free through a file sharing program (e.g., Bit Torrent sites such as The Pirate Bay or KickAssTorrents)
- Downloading music from blogs that share music for free
- Downloading music by converting YouTube videos to MP3s using a converter
- Other. Please specify:
- None of the above

[^52]54. After survey respondents completed either Track 1 (if they were a Prime member who did not subscribe to Amazon Music Unlimited) or Track 2 (if they were a non-Prime member and did not subscribe to Amazon Music Unlimited) they saw the following introduction to the next section:

We have a few remaining questions for you.
Please click the "NEXT" button when you are ready to continue.
55. The next section asked respondents questions regarding their knowledge of Amazon Music Unlimited. The first question asked respondents if they were aware of Amazon Music Unlimited:

Q6a. Prior to this survey, were you or were you not aware of Amazon Music Unlimited, a full catalog service (with tens of millions of tracks)? (Select one only)

- Yes, I was aware of Amazon Music Unlimited
- No, I was not aware of Amazon Music Unlimited
- Don't know/Unsure

56. Respondents who indicated that they were either not aware of Amazon Music Unlimited or that they did not know if they were aware of Amazon Music Unlimited completed the survey and were thanked for taking the time to complete the survey. Respondents who indicated that they were aware of Amazon Music Unlimited prior to taking this survey were then asked if, prior to taking this survey, they knew how much Amazon Music Unlimited cost:

Q6b. You mentioned that you were aware of Amazon Music Unlimited. Prior to this survey, were you or were you not aware of how much Amazon Music Unlimited costs per month? (Select one only)

- Yes, I was aware of how much Amazon Music Unlimited costs per month
- No, I was not aware of how much Amazon Music Unlimited costs per month
- Don't know/Unsure

57. These respondents were then asked if, prior to taking this survey, they were aware that Amazon Music Unlimited was available to Prime members at a discount:

Q6c. Prior to this survey, were you aware that Amazon Music Unlimited was available to Prime members at a $\$ 2.00$ discount from the regular price? (Select one only)

- Yes
- No
- Don’t know/Unsure

58. Finally, they were asked if, prior to taking this survey, they were aware that Alexaenabled device owners could stream to a single Alexa-enabled device at a discount:

Q6d. Prior to this survey, were you aware that Alexa-enabled device owners can stream Amazon Music Unlimited to a single Alexa-enabled device at a $\$ 6$ discount from the regular price (or a $\$ 4$ discount from the price paid by Amazon Prime Members)? (Select one only)

- Yes
- No
- Don't know/Unsure

59. After answering this question, all remaining respondents were thanked for taking the time to complete the survey.

## VIII. Overview of Data Collection

60. A total of 4,944 potential participants responded to the email invitation between January 13th and January 20th, 2017. Detailed screening statistics are shown in Appendix E. A total of 2,141 respondents qualified for the survey based on their responses to the screening questions and completed the survey. Data from 40 respondents who straightlined through questions or provided nonsensical answers in response to the open-ended or close-ended questions were removed from the dataset prior to analysis. ${ }^{41}$ The final dataset included 2,101 respondents.

[^53]IX. Survey Results
A. Streaming Music Subscription Habits.







PUBLIC VERSION





PUBLIC VERSION


Discount
Given Current Prices (Cells 1 and 4)



Robert L. Klein

## Appendices

A. Curriculum vitae of Robert L. Klein including list of cases in the past four years and publications in the past ten years
B. Documents reviewed and considered
C. Survey invitation
D. Screenshots and questionnaire
E. Response statistics
F. Data glossary
G. Survey data listing

## PUBLIC VERSION

## Before the <br> UNITED STATES COPYRIGHT ROYALTY JUDGES THE LIBRARY OF CONGRESS <br> Washington, D.C.

## In the Matter of: <br> DETERMINATION OF RATES AND <br> TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (PHONORECORDS III)

 Docket No. 16-CRB-0003-PR
## DECLARATION OF ROBERT L. KLEIN

I, Robert L. Klein, declare under penalty of perjury that the statements contained in my
Written Rebuttal Testimony in the above-captioned proceeding are true and correct to the best of my knowledge, information and belief. Executed this 15th day of February, 2017 in Waltham, Massachusetts.


Robert L. Klein

## PUBLIC VERSION

|  | Appendix A: Curriculum Vitae of Robert L. Klein |
| :--- | :--- |
| Business Address: | Applied Marketing Science, Inc. <br> 303 Wyman Street, Suite 205 <br> Waltham, MA 02451 <br> (781) 250-6301 <br> fax: (781) 684-0075 |
| E-mail: | bklein@ams-inc.com | Home Address: $\quad$| 300 2nd Avenue, Unit \#4129 |
| :--- |
| Needham, MA 02494 |
| (617) 965-0605 |

Expert Witness TV Interactive Data Corporation v Sony Corporation, et al.
Case No. 10-cv-00475-PJH, N.D. of California, San Jose Division 4 years)

Compensation Committees, Head of various client service and consulting groups prior to its merger with Information Resources. Responsible for the development and commercialization of numerous marketing science models including ASSESSOR, BRANDAID II, CATALYST, Coupon Laboratory, and DEFENDER.
U.S. PUBLIC HEALTH SERVICE, National Institutes of Health, Division of Computer Research and Technology, Bethesda, MD, Commissioned Officer (rank equivalent to Army Capt.) Original member of a management science consulting group founded to apply these principles to the operations of the National Institutes of Health. Responsible for various projects in both the medical research area and the business and grants management area.
"Expert Witnesses: When Are They Necessary and Does Daubert/Kumho Make a Difference?," (with Leslie J. Lott and Jose Rojas) IP Litigator, March/April 2007
"quality function deployment (QFD)," (with John R. Hauser, Abbie Griffin, Gerald M. Katz and Steven P. Gaskin), Wiley International Encyclopedia of Marketing, John Wiley \& Sons Ltd. 2010
"Voice of the Customer," (with Steven P. Gaskin, Abbie Griffin, John R. Hauser and Gerald M. Katz), Wiley International Encyclopedia of Marketing, John Wiley \& Sons Ltd. 2010

Patent Damages (2012 Report and Deposition, 2013 Testimony)
Adobe Systems Inc. v. Wowza Media Systems, Inc.
Action No. cv 11-02243, N.D. of California, Oakland Division False Advertising and Materiality (2012 Report and 2013 Deposition)

Meyer Manufacturing v. Telebrands
Case 2:11-cv-03153-LKK-DAD, E.D. of California, Sacramento Division Trade Dress Infringement (2013 Report and Deposition)

Kate Spade LLC v Saturday Surf LLC
Case No. 12-civ-2960, S.D. of New York
Trademark Confusion (2013 Report, Deposition and Testimony)
LC2121 et al. v. City of Los Angeles et al.
Case No. BS 133012, Superior Court of California, County of Los Angeles
Consumer Survey Evaluation (2013 Declaration)

## PUBLIC VERSION

Robert L. Klein

Macy's Inc. et al. v. Martha Stewart Living Omnimedia, Inc. et al. Index No. 650197/2012, Supreme Court of NY, Appellate Division Trademark confusion (2013 Report and Affidavit)

Baby Jogger, LLC v Britax Child Safety, Inc. Case 2:12-cv-00452-RAJ-DEM, E.D. of Virginia Secondary meaning (2013 Report and Deposition)

Design Resources, Inc. v Leather Industries of America et. al. Case 1:10-cv-157, M.D. of North Carolina False Advertising (2013 Report and 2014 Deposition)

Genesis Strategies, Inc. v Pitney Bowes, Inc. and ICSN, Inc. Civil Action No: 4:11-cv-12270, Massachusetts Secondary Meaning (2013 Report and Deposition)

NatureSweet, Ltd. v Mastronardi Produce, Ltd. et al. Civil Action No.: 3:12-cv-1424-G, N.D. of Texas, Dallas Division Trademark Confusion (2013 Report and Deposition)

USA Nutraceuticals Group, Inc. et al. v Monster Energy Company TTAB Opposition No: 91199986
Trademark Confusion (2013 Report and 2015 Testimony)
Johnson, et al. v Bankers Life and Casualty Corporation
Case No. 13-cv-00144-wmc, W.D. of Wisconsin
Class Certification (2014 Report and Deposition)
Bern Unlimited, Inc. v Easton-Bell Sports et al.
Civil Action No. 11-12278-FDS, Massachusetts
Trademark Confusion (2014 Report and Deposition)
Poly-America, L. P. v Illinois Tool Works
TTAB Cancellation Action \#72374045, \#73043109, \#73408310
Functionality (2014 Report and Deposition, 2016 Testimony)
Brady et al. v Grendene USA et al.
Civil Action No. 3:12-cv-00604-WQH-KSC, SD of California Trademark Confusion (2014 Report and 2015 Deposition)

Suchanek et al. v Sturm Foods, Inc. et al.
Case No. 3:11-cv-00565-NJR-PMF
Class Certification (2014 Declaration)

## PUBLIC VERSION

Variety Stores, Inc. v Wal-Mart Stores, Inc.
Civil Action No. 5:14-cv-00217, ED of North Carolina, Western Division Trademark Confusion (2015 Report and 2016 Deposition)

Kotsur v Goodman Global, Inc. et al.
Civil Action No. 2:14-cv-01147-NS, ED of Pennsylvania
Class Certification (2014 Report and 2015 Deposition)
American Energy Corporation v American Energy Partners, LP, et al. Case No. 2:13-CV-00886-GCS-MRA, SD of Ohio, Eastern Division Trademark Confusion (2015 Report and Deposition)

McVicar et al. v Goodman Global, Inc. et al. Case No. 8:13-cv-01223-DOC-RMB, CD of California Class Certification (2015 Report and Deposition)

PB Property Management, Inc. et al. v Goodman Manufacturing Co. et al. Case No. 3:12-cv-01366-HES, MD of Florida, Jacksonville Division Class Certification (2015 Report and Deposition)

In the matter of Certain Footwear Products, ITC Investigation No. 337-TA-936 Trademark Confusion (2015 Report, Deposition and Testimony)

Ferring Pharmaceuticals, Inc. v Braintree Laboratories, Inc.
Case 1:13-cv-12553, District of Massachusetts
False Advertising (2016 Report and Deposition)
SPFM L.P. dba Ritter Dental USA v Midmark Corporation Case 5:15-cv-00124, WD of Texas, San Antonio Division Trademark Confusion (2016 Report and Deposition)

SimpliSafe, Inc. v ArcSoft, Inc.
Case 1:14-cv-13850, District of Massachusetts
Trademark Confusion (2016 Report and Deposition)
A.L.S. Enterprises, Inc. v Robinson Outdoor Products, LLC

Case 1:14-cv-00500-GJQ, WD of Michigan
False Advertising (2015 Report, 2016 Testimony)
C5 Medical Works, LLC v. CeramTec GMBH
Case No. 1:14-cv-00643, District of Colorado
Secondary Meaning (2016 Report, Deposition and Testimony)

## PUBLIC VERSION

Robert L. Klein
Morton \& Bassett, LLC v. Organic Spices, Inc.
Case No. 3:15-cv-01849-HSG, ND of California
Trademark Confusion (2016 Report and Deposition)
Yellowfin Yachts, Inc. v. Barker Boatworks, LLC et al.
Case No. 8:15-cv-990-SDM-TGW, MD of Florida, Tampa Division
Trademark Confusion (2016 Report and Deposition)
Variety Stores, Inc. v Wal-Mart Stores, Inc.
Civil Action No. 5:14-cv-00217, ED of North Carolina, Western Division Trademark Confusion (2015 Report and 2016 Deposition)

In Re: Riddell Concussion Reduction Litigation
Civil Action No. 13-7585(JBS-JS), District of NJ
False Advertising (2016 Report, 2017 Deposition)
Professional: Member INFORMS, PDMA, INTA, CASRO, AAPOR
Past member of INTA Proof of Confusion Subcommittee and INTA
Oppositions and Cancellations Subcommittee

Appendix B: Documents Reviewed and Considered

Manual for Complex Litigation, $4^{\text {th }}$ Edition, Federal Judicial Center, (2004).
Amazon website: Amazon.com website, available at https://www.amazon.com/gp/dmusic/promotions/PrimeMusic, last visited January 25, 2017.

Amazon website: Amazon.com website available at https://www.amazon.com/dp/B00DBYBNEE? encoding=UTF8\&ref_=nav_menu redirect_ms3, last visited February 11, 2017

Amazon website: Amazon.com website available at https://www.amazon.com/gp/student/signup/info, last visited February 11, 2017

Websites of other music streaming services including the following, available at https://www.iheart.com/, last visited February 14, 2017
http://www.pandora.com/, last visited February 14, 2017
https://www.spotify.com/us/, last visited February 14, 2017
Internet Usage Statistics website: http://www.internetworldstats.com/stats14.htm
Shari Seidman Diamond, "Reference Guide on Survey Research", in Reference Manual on Scientific Evidence, Federal Judicial Center and The National Academies Press (3d ed. 2011).

Gabriel M. Gelb and Betsy D. Gelb, Internet Surveys for Trademark Litigation: Ready or Not, Here They Come, 97 Trademark Rep. 1073 (2007).

Bruce Isaacson et al., Why Online Consumer Surveys Can Be A Smart Choice In Intellectual Property Cases, 26 IPL Newsletter (ABA Section of Intellectual Property Law) 1, 12-15 (2008).

Hal Poret, A Comparative Empirical Analysis of Online versus Mall and Phone Methodologies for Trademark Surveys, 100 Trademark Rep. 756 (2010).

Alex Simonson, Online Interviewing For Use in Lanham Act Litigation, 14 Intell. Prop. Strategist 3 (2007).

Sisario, B., "Amazon Pairs Its Speaker With Streaming Music, at a Bargain Price," The New York Times, October 12, 2016. Accessed February 2, 2017.
<https://www.nytimes.com/2016/10/12/business/amazon-music-apple-spotify.html? r=0>

## Appendix C: Survey Invitation

| $\bigcirc$ e-Rewards |  |
| :---: | :---: |
| Topic: | Your Opinions |
| Full incentive: | 52.50 in e-Rewards 8 Currency |
| Partial Incentive: | \$0.25 in e-Rewards Currency if you do not qualify for the study |
| Length: | 10 minutes |
|  | LET'S EEGIN |
| Details: | Not all of our clients' surveys are designed for mobile devices. If you choose to use a moblle device. you may not have an optimal experience. |
|  | Please take this survey on a tablet, laptop, or desktop. |

[^54]
## Appendix D: Screenshots and Questionnaire

## Introduction and Screening

Thank you for your willingness to participate in our study. The responses you give to our questions are very important to us. If you don't know an answer to a question or are unsure, please indicate this in your response. Please do not guess.

Your answers will be kept in confidence. The results of this study will not be used to try to sell you anything.

When you are ready to get started, please click the "NEXT" button.


QS0
Please enter the code exactly as it appears above, and then click "NEXT" to continue.

## Screening Questions

QS1

What type of electronic device are you using to complete this survey?
(Select one only)
Tablet computer (e.g., Apple iPad, Kindle Fire, Samsung Galaxy Tab, Motorola Xoom)
Laptop computer
Smartphone (e.g., Apple iPhone, Samsung Galaxy S4, HTC One)
Desktop computer
Other mobile or electronic device


QS2


QS3

Into which of the following categories does your age fall?
(Select one only)
Under 18
18-34
35-49
50-64
65+
$0 \%$ \% complete $100 \%$

QS4

In which state do you live?
(Select one only)



QS5a

Do you or does any member of your household work in any of the following industries?
(Select all that apply)AdvertisingFinancial servicesGraphic designFashionNone of the above

QS5b

Do you or does any member of your household work for any of the following companies?
(Select all that apply)
$\square$ Samsung
$\square$ Google
$\square$ Walmart
$\square$ Apple
$\square$ Comcast
$\square$ Amazon
$\square$ Verizon
$\square$ Yahoo
$\square$ None of the above


QS6

Which of the following products, if any, do you currently own?
(Select all that apply)Fitbit ChargeGoogle HomeApple iPhone 7 PlusGoPro HeroSamsung Gear VRNest Learning ThermostatAmazon Alexa-enabled device (i.e., Echo, Echo Dot, or Tap)Oculus RiftNone of the above

QS7

To which of the following services, if any, do you currently subscribe?
(Select all that apply)Xbox LiveAudibleSiriusXMNetflixPlaystation PlusSkype PremiumStitch FixAmazon PrimeNone of the above

QS8

Which of the following, if any, have you ever done?
(Select all that apply)
$\square$ Listened to an audio bookPlayed an online multi-player video gameHosted a video conference callDownloaded music to be played on my computer, phone, etc., e.g., using iTunesVisited a movie theaterPurchased clothing for yourself onlineUsed a navigation app on a smartphoneStreamed (listened to) music over the internet, e.g., using Spotify or PandoraDownloaded a movie on a tablet computerCreated a fashion board on PinterestNone of the above

QS9a

You mentioned that you have streamed (listened to) music over the internet. Which, if any, of the following music streaming service providers have you ever used?
(Select all that apply)AmazonApple Music (i.e., not iTunes)DeezerGooglePandoraSpotifyOther. Please specify:None of the above

## Copyright © 2017, Applied Marketing Science, Inc.



QS9b (Note: the name of any music streaming service identified in the QS9a text box for "Other. Please specify:" will appear in the list of brands in QS9b)

You mentioned that you have streamed (listened to) music over the internet. Which, if any, of the following music streaming service providers do you currently use?
(Select all that apply)
$\square$ AmazonApple Music (i.e., not iTunes)DeezerGooglePandoraSpotifyiHeartRadio
$\square$ None of the above; I do not currently stream music over the internet


QS9c

You mentioned that you currently use one or more music streaming services. Which of the following best describes your role in the decision to use these music streaming services?
(Select one only)
I made the decision myself
I played a major role in the decision
I played a minor role in the decision
I was not involved in the decision at all
Don't know/Unsure

NEXT


QS10a


QS10b-g (Note: the example below is for QS10c. The other questions in the series appeared in the same format with each respective music streaming service selected in QS9b replacing "Deezer", except for Amazon)

You mentioned that you currently use a music streaming service from Deezer. Do you use the ad-supported free version or do you pay for a subscription to the service?
(Select one only)
Paid subscription version
Ad-supported free version
Currently in a free trial period prior to a paid subscription version
Don't know/Unsure

QS11

Please select SOUTH from the following list in order to continue into the survey.
(Select one only)
O SOUTH
O WEST
O EAST
O NORTH


QS12

You have qualified to take this survey. Before continuing, please carefully read these instructions:

- Please take the survey in one session without interruption.
- While taking the survey, please do not consult any other websites or other electronic or written materials.
- Please answer all questions on your own without consulting any other person.
- If you normally wear glasses or contact lenses when viewing a screen, please wear them for the survey.
(Select one only)
I understand and agree to the above instructions
I do not understand or do not agree to the above instructions


## Main Questionnaire

Intro 1

Next, we will ask you some questions about your use of music streaming services.
If you don't know the answer to a question, or if you are unsure, then indicate this by choosing the "Don't know/Unsure" option. It is very important that you do not guess.

Please click the "NEXT" button when you are ready to continue.


## Q1

Which of the following best describes your music streaming habits before you subscribed to Amazon Music Unlimited?
(Select all that apply)
$\square$ I used Amazon Prime Music (limited music catalog available to Prime members for no additional charge)I used one or more ad-supported free music streaming servicesI used a paid subscription to a different music streaming serviceI was not streaming music over the internet prior to subscribing to Amazon Music UnlimitedDon't know/Unsure

Q2b-g (Note: the example below is for Q2b. The other questions in the series appeared in the same format with each respective music streaming service selected in QS9b replacing "Apple", except for Amazon)

Which of the following best describes your music streaming habits before you subscribed to Apple?
(Select all that apply)I used one or more ad-supported free music streaming servicesI used a paid subscription to a different music streaming serviceI was not streaming music over the internet prior to subscribing to AppleDon't know/Unsure


## Q3

You indicated that you currently subscribe to Amazon Music Unlimited. How much do you pay for your monthly subscription for this music streaming plan?
(Select one only)
\$3.99/month to stream music on a single Amazon Echo, Echo Dot, or Amazon Tap only
\$7.99/month to stream music on multiple devices (e.g., your smartphone, computer, tablet, Amazon Echo, etc.)
Currently in a free trial period prior to a paid subscription version
Don't Know/Unsure

## Track 1 (Prime members)

Q4a_b (Note: The example below appeared if a respondent identified themselves as someone who does not own an Alexa-enabled device (QS6), is currently paying for a music streaming service (QS10b-g), and was assigned to Cell 3)

Amazon offers two different music streaming services. Amazon Prime Music includes over 2 million songs without ads and at no additional cost to Prime subscribers. Amazon Music Unlimited includes a full catalog of songs (tens of millions of tracks), including new releases, and allows you to create your own playlists or access playlists that have been created by others.

You indicated earlier that you are not currently subscribing to Amazon Music Unlimited. Suppose that individuals who own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) could pay $\$ 5.99$ per month to stream Amazon Music Unlimited to a single Alexa-enabled device only. Suppose further that, as an Amazon Prime member, you would be eligible to subscribe to this service and stream to multiple devices for a price of $\$ 9.99$ per month. This would be a $\$ 2$ discount off the regular monthly price of $\$ 11.99$. Finally, assume that other paid music streaming services, including those you currently subscribe to, would be priced at $\$ 11.99$.

Thinking about these options, which of the following, if any, would you be likely to do?
Please select one option from the first list of paid streaming options. Please select all that apply from the list of other streaming options.

Paid streaming options (Select one only)
Pay $\$ 9.99$ per month to stream Amazon Music Unlimited to multiple devices
Purchase an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and pay $\$ 5.99$ per month to stream Amazon Music Unlimited to one Alexa-enabled device only
I would continue paying for my current monthly streaming subscription, which would be priced at $\$ 11.99$
I would not pay for a monthly streaming subscription
Other (non-paid) streaming options (Select all that apply)
$\square$ Listen to an ad-supported free music streaming service
$\square$ Listen to music on the radio (AM/FM)
$\square$ Subscribe to a satellite radio service (e.g., SiriusXM)
$\square$ Download music over the internet

- Purchase CDs and/or listen to CDs I already own
$\square$ Listen to Amazon Prime Music (available at no additional charge through my Amazon Prime subscription)
$\square$ Don't Know/Unsure

Q4c

You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet?
(Select all that apply)Downloading music from blogs that share music for freeDownloading music by converting YouTube videos to MP3s using a converterDownloading music from an online site for free through a file sharing program (e.g., Bit Torrent sites such as The Pirate Bay or KickAssTorrents)Downloading music from an online service where users pay per track or album downloaded (e.g., iTunes, Amazon Music, eMusic, Google Play, etc.)Other. Please specify:None of the above

## Track 2 (non-Prime members)

Q5a_b (Note: The example below appeared if a respondent identified themselves as someone who owns an Alexa-enabled device (QS6), is not currently paying for a music streaming service (QS10b-g), and was assigned to Cell 5)

Amazon offers a music streaming service called Amazon Music Unlimited that includes a full catalog of songs (tens of millions of tracks), including new releases, and allows you to create your own playlists or access playlists that have been created by others.

You indicated earlier that you own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and that you do not currently subscribe to Amazon Music Unlimited. Suppose that Alexa-enabled device owners could pay $\$ 4.99$ per month to stream Amazon Music Unlimited to a single Alexa-enabled device only. Suppose further that you could subscribe to this service and stream to multiple devices for a price of $\$ 10.99$ per month. Finally, assume that other paid music streaming services would be priced at $\$ 10.99$.

Thinking about these options, which of the following, if any, would you be likely to do?
Please select one option from the first list of paid streaming options. Please select all that apply from the list of other streaming options.

Paid streaming options (Select one only)
Pay $\$ 10.99$ per month to stream Amazon Music Unlimited to multiple devices
Pay $\$ 4.99$ per month to stream Amazon Music Unlimited to one Alexa-enabled device only
Purchase a monthly subscription to a different streaming service for $\$ 10.99$
I would not pay for a monthly streaming subscription
Other (non-paid) streaming options (Select all that apply)
Subscribe to Amazon Prime at $\$ 99$ per year, which includes Amazon Prime Music and other features, including free 2-day shipping of products purchased through the Amazon website
$\square$ Listen to an ad-supported free music streaming service
$\square$ Subscribe to a satellite radio service (e.g., SiriusXM)

- Purchase CDs and/or listen to CDs I already own
$\square$ Download music over the internet
$\square$ Listen to music on the radio (AM/FM)

D Don't Know/Unsure

Q5c

You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet?
(Select all that apply)Downloading music from blogs that share music for freeDownloading music by converting YouTube videos to MP3s using a converterDownloading music from an online site for free through a file sharing program (e.g., Bit Torrent sites such as The Pirate Bay or KickAssTorrents)Downloading music from an online service where users pay per track or album downloaded (e.g., iTunes, Amazon Music, eMusic, Google Play, etc.)Other. Please specify:None of the above

```
%% complete}100
```

Intro 3

We have a few remaining questions for you.
Please click the "NEXT" button when you are ready to continue.

Q6a

Prior to this survey, were you or were you not aware of Amazon Music Unlimited, a full catalog service (with tens of millions of tracks)?
(Select one only)
Yes, I was aware of Amazon Music Unlimited
No, I was not aware of Amazon Music UnlimitedDon't know/Unsure

## NEXT

## Copyright © 2017, Applied Marketing Science, Inc.



Q6b

| You mentioned that you were aware of Amazon Music Unlimited. Prior to this survey, were you or were you not aware of how much Amazon Music Unlimited costs per month <br> (Select one only) Yes, I was aware of how much Amazon Music Unlimited costs per month No, I was not aware of how much Amazon Music Unlimited costs per month Don't know/Unsure |  |
| :---: | :---: |
|  | NEXT |
| Copyright © 2017, Applied Marketing Science, Inc. |  |
| $0 \%$ complete $100 \%$ |  |

Q6c

Prior to this survey, were you aware that Amazon Music Unlimited was available to Prime members at a $\$ 2.00$ discount from the regular price?
(Select one only)
$\bigcirc$ Yes
No
Don't know/Unsure

Q6d

Prior to this survey, were you aware that Alexa-enabled device owners can stream Amazon Music Unlimited to a single Alexa-enabled device at a $\$ 6$ discount from the regular price (or a $\$ 4$ discount from the price paid by Amazon Prime Members)?
(Select one only)
Yes
No
Don't know/Unsure

## Streaming Music Survey

## Legend:

[PROGRAMMER NOTES IN BOLD CAPS AND BRACKETS]
Notes to respondent in italics

## Overview

Sample:
$\bigcirc$ Recruited from an online panel
$\bigcirc$ Gen Pop, inbound click balancing on age (18+)/gender/region
[NO SURVEY TITLE WILL BE DISPLAYED TO RESPONDENTS] [EACH QUESTION WILL BE DISPLAYED ON ITS OWN PAGE, UNLESS OTHERWISE SPECIFIED]

## Introduction and Screening

[NO SURVEY TITLE TO BE DISPLAYED TO RESPONDENTS]
Thank you for your willingness to participate in our study. The responses you give to our questions are very important to us. If you don't know an answer to a question or are unsure, please indicate this in your response. Please do not guess.

Your answers will be kept in confidence. The results of this study will not be used to try to sell you anything.

When you are ready to get started, please click the "NEXT" button.
["NEXT" BUTTON TAKES RESPONDENT TO QUESTION QS0]
[TEXT FOR TERMINATES "Thank you for your interest in our study. We are no longer looking for people who match your characteristics. We appreciate your time."]
[NEXT PAGE]
QS0. Please enter the code exactly as it appears above, and then click "NEXT" to continue. [INSERT CAPTCHA]
[NEXT PAGE]

## Screening Questions

QS1. What type of electronic device are you using to complete this survey? (Select one only) [RANDOMIZE LIST; ANCHOR "OTHER MOBILE OR ELECTRONIC DEVICE" LAST]

○ Desktop computer [CONTINUE]
$\bigcirc$ Laptop computer [CONTINUE]
© Tablet computer (e.g., Apple iPad, Kindle Fire, Samsung Galaxy Tab, Motorola Xoom)
[CONTINUE]
© Smartphone (e.g., Apple iPhone, Samsung Galaxy S4, HTC One) [ON HOLD]
$\bigcirc$ Other mobile or electronic device [ON HOLD]
[DISPLAY A MESSAGE TO ON-HOLD RESPONDENTS AND ASK THEM TO REENTER USING AN APPROPRIATE DEVICE (USING THE SAME LINK): "This survey is not formatted for viewing on an electronic device other than a computer or a tablet. Please return to the survey, using the same link, from a desktop, laptop or tablet computer."]
[NEXT PAGE]
QS2. Are you...? (Select one only)

- Male
© Female
[NEXT PAGE]
QS3. Into which of the following categories does your age fall? (Select one only)
$\bigcirc$ Under 18 [TERMINATE]
© 18-34
© 35-49
© 50-64
© 65+
[TERMINATE IF AGE AND GENDER DO NOT MATCH THE VALUES PASSED BY PANEL PROVIDER]
[NEXT PAGE]
QS4. In which state do you live? (Select one only) [DROP DOWN LIST OF 50 STATES + DC + MY AREA NOT LISTED; ASSIGN REGION VARIABLE. TERMINATE IF "MY AREA NOT LISTED" SELECTED]
[NEXT PAGE]

QS5a. Do you or does any member of your household work in any of the following industries?
(Select all that apply)
[RANDOMIZE LIST; NONE OF THE ABOVE LAST]
$\square$ Music
$\square$ Graphic design
$\square$ Fashion
$\square$ Financial services
$\square$ Market research [TERMINATE]
$\square$ Advertising [TERMINATE]
$\square$ None of the above [ANCHOR; EXCLUSIVE]

## [NEXT PAGE]

QS5b. Do you or does any member of your household work for any of the following companies?
(Select all that apply)
[RANDOMIZE LIST; NONE OF THE ABOVE LAST]
$\square$ Amazon [TERMINATE]
$\square$ Google
$\square$ Apple
$\square$ Walmart
$\square$ Yahoo
$\square$ Samsung
$\square$ Comcast
$\square$ Verizon
$\square$ None of the above [ANCHOR; EXCLUSIVE]

## [NEXT PAGE]

QS6. Which of the following products, if any, do you currently own? (Select all that apply)
[RANDOMIZE LIST; NONE OF THE ABOVE LAST]
$\square$ Amazon Alexa-enabled device (i.e., Echo, Echo Dot, or Tap) [CODE AS "ALEXA-
ENABLED DEVICE OWNER"]
$\square$ Google Home
$\square$ Fitbit Charge
$\square$ Apple iPhone 7 Plus
$\square$ Oculus Rift
$\square$ Samsung Gear VR
$\square$ Nest Learning Thermostat
$\square$ GoPro Hero
$\square$ None of the above [ANCHOR; EXCLUSIVE]
[NEXT PAGE]

QS7. To which of the following services, if any, do you currently subscribe? (Select all that apply)
[RANDOMIZE LIST; NONE OF THE ABOVE LAST]
$\square$ Amazon Prime
$\square$ Stitch Fix
$\square$ Xbox Live
$\square$ Audible
$\square$ Netflix
$\square$ SiriusXM
$\square$ Skype Premium
$\square$ Playstation Plus
$\square$ None of the above [ANCHOR; EXCLUSIVE]
[IF AMAZON PRIME SELECTED, CODE AS "PRIME MEMBER" OTHERWISE CODE AS "NON-PRIME MEMBER"]

## [NEXT PAGE]

QS8. Which of the following, if any, have you ever done? (Select all that apply)
[RANDOMIZE LIST; NONE OF THE ABOVE LAST]
$\square$ Streamed (listened to) music over the internet, e.g., using Spotify or Pandora
[CONTINUE]
$\square$ Downloaded music to be played on my computer, phone, etc., e.g., using iTunes
$\square$ Used a navigation app on a smartphone
$\square$ Listened to an audio book
$\square$ Played an online multi-player video game
$\square$ Visited a movie theater
$\square$ Downloaded a movie on a tablet computer
$\square$ Created a fashion board on Pinterest
$\square$ Purchased clothing for yourself online
$\square$ Hosted a video conference call
$\square$ None of the above [ANCHOR; EXCLUSIVE]
[TERMINATE IF "STREAMED MUSIC OVER THE INTERNET" IS NOT SELECTED]
[NEXT PAGE]

QS9a. You mentioned that you have streamed (listened to) music over the internet. Which, if any, of the following music streaming service providers have you ever used? (Select all that apply)
$\square$ Amazon
$\square$ Apple Music (i.e., not iTunes)
$\square$ Deezer
$\square$ Google
$\square$ Pandora
$\square$ Spotify
$\square$ Other. Please specify: [TEXT BOX, DO NOT ALLOW BLANK]
$\square$ None of the above [EXCLUSIVE. TERMINATE]

## [NEXT PAGE]

QS9b. You mentioned that you have streamed (listened to) music over the internet. Which, if any, of the following music streaming service providers do you currently use? (Select all that apply)
[INCLUDE ONLY THOSE CHOSEN IN QS9a - IF ONLY ONE CHOSEN IN QS9a, AUTOFILL QS9b AND SKIP TO QS9c]
$\square$ Amazon
$\square$ Apple Music (i.e., not iTunes)
$\square$ Deezer
$\square$ Google
$\square$ Pandora
$\square$ Spotify
$\square$ [FILL FROM QS9A "OTHER. PLEASE SPECIFY"]
$\square$ None of the above; I do not currently stream music over the internet [EXCLUSIVE. TERMINATE]

## [NEXT PAGE]

QS9c. You mentioned that you currently use one or more music streaming services. Which of the following best describes your role in the decision to use [IF ONE SELECTED IN QS9b: "this"; IF MORE THAN ONE SELECTED IN QS9b: "these"] music streaming [IF ONE SELECTED IN QS9b: "service"; IF MORE THAN ONE SELECTED IN QS9b: "services"]? (Select one only)
[ROTATE LIST TOP TO BOTTOM; DON'T KNOW/UNSURE LAST]
$\bigcirc$ I made the decision myself
$\bigcirc$ I played a major role in the decision
$\odot$ I played a minor role in the decision [TERMINATE]
© I was not involved in the decision at all [TERMINATE]
○ Don't know/Unsure [ANCHOR; TERMINATE]

## [NEXT PAGE]

## PUBLIC VERSION

[IF AMAZON SELECTED IN QS9b:]
QS10a. You mentioned that you currently use a music streaming service from Amazon. Which of the following Amazon music streaming services do you currently use? (Select all that apply) [ROTATE FIRST TWO OPTIONS]
$\square$ Amazon Prime Music (limited music catalog available to Prime members for no additional charge) [CONTINUE]
$\square$ Amazon Music Unlimited (full music catalog with a paid monthly subscription for music streaming) [CONTINUE]
$\square$ Don't know/Unsure [ANCHOR; EXCLUSIVE. TERMINATE]

## [NEXT PAGE]

[ASK FOR EACH NON-AMAZON AND NON-APPLE SERVICE SELECTED IN QS9b:] QS10b-g. You mentioned that you currently use a music streaming service from [FILL FROM QS9b-g; BOLD AND UNDERLINE BRAND NAME]. Do you use the ad-supported free version or do you pay for a subscription to the service? (Select one only)
[ROTATE FIRST TWO OPTIONS; IF APPLE IS SELECTED IN QS9a, AUTO FILL QS10b AS "PAID" AND SKIP TO NEXT QUESTION IN QS10 SERIES IF APPLICABLE OR CONTINUE TO QS11]
$\bigcirc$ Ad-supported free version [SKIP TO NEXT QUESTION IN QS10 SERIES IF
APPLICABLE OR CONTINUE TO QS11]
© Paid subscription version [SKIP TO NEXT QUESTION IN QS10 SERIES IF
APPLICABLE OR CONTINUE TO QS11]
$\odot$ Currently in a free trial period prior to a paid subscription version [SKIP TO NEXT
QUESTION IN QS10 SERIES IF APPLICABLE OR CONTINUE TO QS11;
ANCHOR]
○ Don't know/Unsure [TERMINATE; ANCHOR]
[NEXT PAGE]
QS11. Please select SOUTH from the following list in order to continue into the survey. (Select one only) [RANDOMIZE LIST]

○ NORTH [TERMINATE]
○ SOUTH
$\bigcirc$ EAST [TERMINATE]
○ WEST [TERMINATE]
[IF "SOUTH" SELECTED CONTINUE, OTHERWISE TERMINATE]
[NEXT PAGE]

QS12. You have qualified to take this survey. Before continuing, please carefully read these instructions:

- Please take the survey in one session without interruption.
- While taking the survey, please do not consult any other websites or other electronic or written materials.
- Please answer all questions on your own without consulting any other person.
- If you normally wear glasses or contact lenses when viewing a screen, please wear them for the survey.
(Select one only)
$\bigcirc$ I understand and agree to the above instructions
○ I do not understand or do not agree to the above instructions [TERMINATE]
[NEXT PAGE]


## Main Questionnaire

Intro 1:
Next, we will ask you some questions about your use of music streaming services.
If you don't know the answer to a question, or if you are unsure, then indicate this by choosing the "Don't know/Unsure" option. It is very important that you do not guess.

Please click the "NEXT" button when you are ready to continue.
[NEXT PAGE]

## [IF "AMAZON MUSIC UNLIMITED" SELECTED IN QS10a, ASK Q1, OTHERWISE SKIP TO Q2b-g]

Q1. Which of the following best describes your music streaming habits before you subscribed to Amazon Music Unlimited? (Select all that apply)
[ROTATE FIRST 3 OPTIONS TOP TO BOTTOM; ANCHOR LAST TWO OPTIONS]
$\square$ I used a paid subscription to a different music streaming service
$\square$ I used one or more ad-supported free music streaming services
$\square$ I used Amazon Prime Music (limited music catalog available to Prime members for no additional charge)
$\square$ I was not streaming music over the internet prior to subscribing to Amazon Music Unlimited [ANCHOR; DESELECT ALL OTHERS]
$\square$ Don't know/Unsure [ANCHOR; DESELECT ALL OTHERS]

## [NEXT PAGE]

## [IF OPTIONS OTHER THAN "AMAZON" SELECTED IN QS9b; ASK/FILL Q2b-g FOR EACH OPTION IN WHICH "PAID MONTHLY SUBSCRIPTION VERSION" OR "CURRENTLY IN A FREE TRIAL PERIOD" SELECTED IN QS10b-g. OTHERWISE SKIP TO Q3]

Q2b-g. Which of the following best describes your music streaming habits before you subscribed to [FILL FROM QS9b]? (Select all that apply)
[ROTATE FIRST 2 OPTIONS; ANCHOR LAST TWO OPTIONS]
$\square$ I used a paid subscription to a different music streaming service
$\square$ I used one or more ad-supported free music streaming services
$\square$ I was not streaming music over the internet prior to subscribing to [FILL FROM QS9b;
ANCHOR, DESELECTS ALL OTHERS]
$\square$ Don't know/Unsure [ANCHOR; DESELECT ALL OTHERS]

## [NEXT PAGE]

[IF "AMAZON MUSIC UNLIMITED" SELECTED IN QS10a AND CODED AS "ALEXA-ENABLED DEVICE OWNER" IN QS6, ASK Q3, OTHERWISE SKIP TO INTRO 2]<br>Q3. You indicated that you currently subscribe to Amazon Music Unlimited. How much do you pay for your monthly subscription for this music streaming plan? (Select one only) [FILL<br>SECOND RESPONSE OPTIONS DEPENDING ON PRIME/NOT]<br>© \$3.99/month to stream music on a single Amazon Echo, Echo Dot, or Amazon Tap only<br>○ [IF CODED AS PRIME MEMBER IN QS7 INSERT: $\$ 7.99 /$ month; IF NOT CODED AS PRIME MEMBER IN QS7 INSERT: $\$ 9.99 / \mathrm{month}]$ to stream music on multiple devices (e.g., your smartphone, computer, tablet, Amazon Echo, etc.)<br>$\odot$ Currently in a free trial period prior to a paid subscription version<br>© Don't Know/Unsure

[NEXT PAGE]

## PUBLIC VERSION

Intro 2:
[IF "AMAZON MUSIC UNLIMITED" SELECTED IN QS10a, SKIP TO END. OTHERWISE, CONTINUE TO INTRO 2]

## ASSIGN TO QUESTION TRACK AND EXPERIMENTAL CELL:

## TRACK:

- IF CODED AS PRIME MEMBER IN QS7, ASSIGN TO TRACK 1 (not currently subscribing but eligible to pay $\$ 3.99 / \mathrm{mo}$ OR $\$ 7.99 / \mathrm{mo}$ for AMU);
- IF NOT CODED AS PRIME MEMBER IN QS7 (ALEXA-ENABLED DEVICE OR NOT), ASSIGN TO TRACK 2 (not currently subscribing but could pay $\$ 3.99 / \mathrm{mo}$ OR \$9.99/mo for AMU)

CELLS:

IF TRACK 1 ROTATE CELLS 1, 2 \& 3.
IF TRACK 2, ROTATE CELLS 4, 5 \& 6.

| Track 1-Prime Members |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Price Level Shown |  |  |
| Cells | Stream to <br> single <br> Alexa- <br> enabled <br> device | Stream to <br> multiple <br> devices | Stream <br> using <br> other <br> services |
| $\mathbf{1}$ | $\$ 3.99$ | $\$ 7.99$ | $\$ 9.99$ |
| $\mathbf{2}$ | $\$ 4.99$ | $\$ 8.99$ | $\$ 10.99$ |
| $\mathbf{3}$ | $\$ 5.99$ | $\$ 9.99$ | $\$ 11.99$ |


| Track 2 - Non-Prime Members |  |  |  |
| :---: | :---: | :---: | :---: |
| Cells | Price Level Shown |  |  |
|  | Stream to <br> single <br> Alexa- <br> enabled <br> device | Stream to <br> multiple <br> devices | Stream <br> using <br> other <br> services |
|  | $\$ 3.99$ | $\$ 9.99$ | $\$ 9.99$ |
| $\mathbf{5}$ | $\$ 4.99$ | $\$ 10.99$ | $\$ 10.99$ |
| $\mathbf{6}$ | $\$ 5.99$ | $\$ 11.99$ | $\$ 11.99$ |

[NEXT PAGE]

## PUBLIC VERSION

## TRACK 1 (PRIME MEMBERS)

Q4a_b. Amazon offers two different music streaming services. Amazon Prime Music includes over 2 million songs without ads and at no additional cost to Prime subscribers. Amazon Music Unlimited includes a full catalog of songs (tens of millions of tracks), including new releases, and allows you to create your own playlists or access playlists that have been created by others.

## [IF ALEXA-ENABLED DEVICE OWNER IN QS6 ASK]:

You indicated earlier that you own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and that you do not currently subscribe to Amazon Music Unlimited. Suppose that Alexa-enabled device owners could pay [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to a single Alexa-enabled device only. Suppose further that, as an Amazon Prime member, you would be eligible to subscribe to this service and stream to multiple devices for a price of [FILL BASED ON CONDITION] per month. This would be a $\$ 2$ discount off the regular monthly price of [FILL BASED ON CONDITION]. Finally, assume other paid music streaming services [FOR CELLS 2 and 3 ONLY:
[IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10b-g, ADD ", including those you currently subscribe to,"] would be priced at [FILL BASED ON CONDITION].

## [IF NOT ALEXA-ENABLED DEVICE OWNER IN QS6 ASK]:

You indicated earlier that you are not currently subscribing to Amazon Music Unlimited. Suppose that individuals who own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) could pay [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to a single Alexa-enabled device only. Suppose further that, as an Amazon Prime member, you would be eligible to subscribe to this service and stream to multiple devices for a price of [FILL BASED ON CONDITION] per month. This would be a $\$ 2$ discount off the regular monthly price of [FILL BASED ON CONDITION]. Finally, assume that other paid music streaming services [FOR CELLS 2 and 3 ONLY: [IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10b-g, ADD ", including those you currently subscribe to,"] would be priced at [FILL BASED ON CONDITION].
[ASK ALL]:
Thinking about these options, which of the following, if any, would you be likely to do? Please select one option from the first list of paid streaming options. Please select all that apply from the list of other streaming options.

## PUBLIC VERSION

Paid streaming options (Select one only)
[ROTATE LIST TOP TO BOTTOM]
$\odot$ Pay [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to multiple devices
$\bigcirc$ [IF NOT ALEXA-ENABLED DEVICE OWNER: Purchase an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and pay; IF ALEXA-ENABLED DEVICE OWNER: Pay] [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to one Alexa-enabled device only ○ [IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10b-g: I would continue paying for my current monthly streaming subscription [FOR CELLS 2 and 3 ONLY, ADD: ", which would be priced at [FILL BASED ON CONDITION]; ELSE: Purchase a monthly subscription to a different streaming service for [FILL BASED ON CONDITION]]
○ I would not pay for a monthly streaming subscription [DO NOT SHOW RESPONSE OPTION IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10b-g AND IF CELL 1]

Other (non-paid) streaming options (Select all that apply)<br>[RANDOMIZE LIST]<br>$\square$ Listen to an ad-supported free music streaming service<br>$\square$ Listen to Amazon Prime Music (available at no additional charge through my Amazon Prime subscription)<br>$\square$ Download music over the internet<br>$\square$ Subscribe to a satellite radio service (e.g., SiriusXM)<br>$\square$ Listen to music on the radio (AM/FM)<br>$\square$ Purchase CDs and/or listen to CDs I already own<br>○ Don't Know/Unsure [DESELECTS OPTIONS FROM BOTH LISTS]

[IF "I WOULD NOT PAY..." AND "DOWNLOAD MUSIC OVER THE INTERNET" BOTH SELECTED CONTINUE TO Q4e, OTHERWISE SKIP TO INTRO 3]
[PROGRAM 20 SECOND SPEED BUMP BEFORE NEXT PAGE BUTTON APPEARS]
[NEXT PAGE]

## PUBLIC VERSION

Q4c. You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? (Select all that apply)
[RANDOMIZE LIST, ANCHOR OTHER AND NONE OF THE ABOVE LAST.]
$\square$ Downloading music from an online service where users pay per track or album downloaded (e.g., iTunes, Amazon Music, eMusic, Google Play, etc.)
$\square$ Downloading music from an online site for free through a file sharing program (e.g., Bit
Torrent sites such as The Pirate Bay or KickAssTorrents)
$\square$ Downloading music from blogs that share music for free
$\square$ Downloading music by converting YouTube videos to MP3s using a converter
$\square$ Other. Please specify: [TEXT BOX, DO NOT ALLOW BLANK; ANCHOR]
$\square$ None of the above [ANCHOR; DESELECT ALL OTHERS]
[NEXT PAGE]

## [SKIP TO INTRO 3]

## TRACK 2 (NON-PRIME MEMBERS)

Q5a_b. Amazon offers a music streaming service called Amazon Music Unlimited that includes a full catalog of songs (tens of millions of tracks), including new releases, and allows you to create your own playlists or access playlists that have been created by others.

## [IF ALEXA-ENABLED DEVICE OWNER IN QS6 ASK]:

You indicated earlier that you own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and that you do not currently subscribe to Amazon Music Unlimited. Suppose that Alexa-enabled device owners could pay [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to a single Alexa-enabled device only. Suppose further that you could subscribe to this service and stream to multiple devices for a price of [FILL BASED ON CONDITION] per month. Finally, assume that other paid music streaming services [FOR CELLS 5 and 6 ONLY: [IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10b-g, ADD ", including those you currently subscribe to,"] would be priced at [FILL BASED ON CONDITION].

## [IF NOT ALEXA-ENABLED DEVICE OWNER IN QS6 ASK]:

You indicated earlier that you are not currently subscribing to Amazon Music Unlimited.
Suppose that individuals who own an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) could pay [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to the Alexa-enabled device only. Suppose further that, you could subscribe to this service and stream to multiple devices for a price of [FILL BASED ON CONDITION] per month. Finally, assume that other paid music streaming services [FOR CELLS 5 and 6 ONLY: [IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10b-g, ADD ", including those you currently subscribe to,"] would be priced at [FILL BASED ON CONDITION].
[ASK ALL]:
Thinking about these options, which of the following, if any, would you be likely to do? Please select one option from the first list of paid streaming options. Please select all that apply from the list of other streaming options.
Paid streaming options (Select one only)
[ROTATE LIST TOP TO BOTTOM]
© Pay [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to multiple devices
$\bigcirc$ [IF NOT ALEXA-ENABLED DEVICE OWNER: Purchase an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and pay] [IF ALEXA-ENABLED DEVICE OWNER: Pay] [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to one Alexa-enabled device only ○ [IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10b-g: I would continue paying for my current monthly streaming subscription [FOR CELLS 5 and 6 ONLY, ADD: ", which would be priced at [FILL BASED ON CONDITION]; ELSE: Purchase a monthly subscription to a different streaming service for [FILL BASED ON CONDITION]]
○ I would not pay for a monthly streaming subscription [DO NOT SHOW RESPONSE OPTION IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10b-g AND IF CELL 4]
Other (non-paid) streaming options (Select all that apply)
[RANDOMIZE LIST]
$\square$ Listen to an ad-supported free music streaming service
$\square$ Subscribe to Amazon Prime at $\$ 99$ per year, which includes Amazon Prime Music and other features, including free 2-day shipping of products purchased through the Amazon website
$\square$ Download music over the internet
$\square$ Subscribe to a satellite radio service (e.g., SiriusXM)
$\square$ Listen to music on the radio (AM/FM)
$\square$ Purchase CDs and/or listen to CDs I already own
© Don't Know/Unsure [DESELECTS OPTIONS FROM BOTH LISTS]
[IF "I WOULD NOT PAY..." AND "DOWNLOAD MUSIC OVER THE INTERNET" BOTH SELECTED CONTINUE TO Q5c, OTHERWISE SKIP TO INTRO 3]
[PROGRAM 20 SECOND SPEED BUMP BEFORE NEXT PAGE BUTTON APPEARS]
[NEXT PAGE]

## PUBLIC VERSION

Q5c. You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? (Select all that apply)

## [RANDOMIZE LIST, ANCHOR OTHER AND NONE OF THE ABOVE LAST]

$\square$ Downloading music from an online service where users pay per track or album downloaded (e.g., iTunes, Amazon Music, eMusic, Google Play, etc.)
$\square$ Downloading music from an online site for free through a file sharing program (e.g., Bit Torrent sites such as The Pirate Bay or KickAssTorrents)
$\square$ Downloading music from blogs that share music for free
$\square$ Downloading music by converting YouTube videos to MP3s using a converter
$\square$ Other. Please specify: [TEXT BOX, DO NOT ALLOW BLANK; ANCHOR]
$\square$ None of the above [ANCHOR; DESELECT ALL OTHERS]
[NEXT PAGE]
Intro 3:
We have a few remaining questions for you.
Please click the "NEXT" button when you are ready to continue.

## [NEXT PAGE]

Q6a. Prior to this survey, were you or were you not aware of Amazon Music Unlimited, a full catalog service (with tens of millions of tracks)? (Select one only)
© Yes, I was aware of Amazon Music Unlimited
© No, I was not aware of Amazon Music Unlimited [SKIP TO END]
$\odot$ Don't know/Unsure [SKIP TO END]

## [NEXT PAGE]

Q6b. You mentioned that you were aware of Amazon Music Unlimited. Prior to this survey, were you or were you not aware of how much Amazon Music Unlimited costs per month? (Select one only)
$\bigcirc$ Yes, I was aware of how much Amazon Music Unlimited costs per month
$\bigcirc$ No, I was not aware of how much Amazon Music Unlimited costs per month
© Don’t know/Unsure

## [NEXT PAGE]

Q6c. Prior to this survey, were you aware that Amazon Music Unlimited was available to Prime members at a $\$ 2.00$ discount from the regular price? (Select one only)
$\odot$ Yes
$\bigcirc$ No
© Don’t know/Unsure

## PUBLIC VERSION

## [NEXT PAGE]

Q6d. Prior to this survey, were you aware that Alexa-enabled device owners can stream Amazon Music Unlimited to a single Alexa-enabled device at a $\$ 6$ discount from the regular price (or a $\$ 4$ discount from the price paid by Amazon Prime Members)? (Select one only)
$\odot$ Yes
$\bigcirc$ No
© Don’t know/Unsure
[NEXT PAGE]
[END OF SURVEY. CONTINUE TO PANEL THANK-YOU PAGE.]

## PUBLIC VERSION

## Appendix E: Response Statistics

| $(\mathrm{A})$ Invitations sent | 167,008 |
| :--- | :---: |
| (B) Completed surveys | 2,141 |
| (C) Disqualified | 2,729 |
| Terminates | 2,254 |
| Failed Gender and/or Age Validation | 296 |
| Over-quota $($ QS7 $)$ | 179 |
| (D) Incomplete/Breakoffs | 74 |
| (E) Total Responding | 4,944 |
| Qualification Rate $=(\mathrm{E}-\mathrm{C}) /(\mathrm{E})$ | $44.8 \%$ |
| Completion Rate $=(\mathrm{B}) /(\mathrm{B}+\mathrm{D})$ | $96.7 \%$ |

## PUBLIC VERSION

## Appendix F: Data Glossary

| Variable | Description | Code |
| :---: | :---: | :---: |
| ID | Respondent ID |  |
| QS1 | Electronic device used to take survey | 1 = Desktop computer <br> 2 = Laptop computer <br> 3 = Tablet computer <br> 4 = Smartphone <br> $5=$ Other mobile or <br> electronic device |
| QS2 | Gender | $\begin{aligned} & 1=\text { Male } \\ & 2=\text { Female } \end{aligned}$ |
| QS3 | Age | $\begin{aligned} & 1=\text { Under } 18 \\ & 2=18-34 \\ & 3=35-49 \\ & 4=50-64 \\ & 5=65+ \end{aligned}$ |
| QS4 | State |  |
| QS5a_1 | Do you or does any member of your household work in any of the following industries? | $1=$ Music |
| QS5a_2 | Do you or does any member of your household work in any of the following industries? | 1 = Graphic design |
| QS5a_3 | Do you or does any member of your household work in any of the following industries? | 1 = Fashion |
| QS5a_4 | Do you or does any member of your household work in any of the following industries? | 1 = Financial services |
| QS5a_5 | Do you or does any member of your household work in any of the following industries? | 1 = Market research |
| QS5a_6 | Do you or does any member of your household work in any of the following industries? | 1 = Advertising |
| QS5a_7 | Do you or does any member of your household work in any of the following industries? | 1 = None of the above |
| QS5b_1 | Do you or does any member of your household work for any of the following companies? | 1 = Amazon |
| QS5b_2 | Do you or does any member of your household work for any of the following companies? | 1 = Google |
| QS5b_3 | Do you or does any member of your household work for any of the following companies? | 1 = Apple |
| QS5b_4 | Do you or does any member of your household work for any of the following companies? | 1 = Walmart |
| QS5b_5 | Do you or does any member of your household work for any of the following companies? | 1 = Yahoo |
| QS5b_6 | Do you or does any member of your household work for any of the following companies? | 1 = Samsung |


| QS5b_7 | Do you or does any member of your household work for any of the following companies? | 1 = Comcast |
| :---: | :---: | :---: |
| QS5b_8 | Do you or does any member of your household work for any of the following companies? | $1=$ Verizon |
| QS5b_9 | Do you or does any member of your household work for any of the following companies? | 1 = None of the above |
| QS6_1 | Which of the following products, if any, do you currently own? | 1 = Amazon Alexa-enabled device (i.e., Echo, Echo Dot, or Tap) |
| QS6_2 | Which of the following products, if any, do you currently own? | 1 = Google Home |
| QS6_3 | Which of the following products, if any, do you currently own? | 1 = Fitbit Charge |
| QS6_4 | Which of the following products, if any, do you currently own? | 1 = Apple iPhone 7 Plus |
| QS6_5 | Which of the following products, if any, do you currently own? | 1 = Oculus Rift |
| QS6_6 | Which of the following products, if any, do you currently own? | 1 = Samsung Gear VR |
| QS6_7 | Which of the following products, if any, do you currently own? | $1=$ Nest Learning <br> Thermostat |
| QS6_8 | Which of the following products, if any, do you currently own? | 1 = GoPro Hero |
| QS6_9 | Which of the following products, if any, do you currently own? | 1 = None of the above |
| QS7_1 | To which of the following services, if any, do you currently subscribe? | 1 = Amazon Prime |
| QS7_2 | To which of the following services, if any, do you currently subscribe? | 1 = Stitch Fix |
| QS7_3 | To which of the following services, if any, do you currently subscribe? | 1 = Xbox Live |
| QS7_4 | To which of the following services, if any, do you currently subscribe? | 1 = Audible |
| QS7_5 | To which of the following services, if any, do you currently subscribe? | 1 = Netflix |
| QS7_6 | To which of the following services, if any, do you currently subscribe? | 1 = SiriusXM |
| QS7_7 | To which of the following services, if any, do you currently subscribe? | 1 = Skype Premium |
| QS7_8 | To which of the following services, if any, do you currently subscribe? | 1 = Playstation Plus |
| QS7_9 | To which of the following services, if any, do you currently subscribe? | 1 = None of the above |

## PUBLIC VERSION

|  |  | $1=$ Streamed (listened to) <br> music over the internet, e.g., <br> using Spotify or Pandora |
| :--- | :--- | :--- |
| QS8_1 | Which of the following, if any, have you ever done? | $1=$ Downloaded music to be <br> played on my computer, <br> phone, etc., e.g., using <br> iTunes |
| QS8_2 | Which of the following, if any, have you ever done? | $1=$ Used a navigation app on <br> a smartphone |
| QS8_3 | Which of the following, if any, have you ever done? | $1=$ Listened to an audio <br> book |
| QS8_4 | Which of the following, if any, have you ever done? | $1=$ Played an online multi- <br> player video game |
| QS8_5 | Which of the following, if any, have you ever done? | $1=$ Visited a movie theater <br> QS8_6 |
| Which of the following, if any, have you ever done? |  |  |

PUBLIC VERSION
\(\left.$$
\begin{array}{|l|l|l|}\hline \text { QS9a_8 } & \begin{array}{l}\text { You mentioned that you have streamed (listened to) } \\
\text { music over the internet. Which, if any, of the following } \\
\text { music streaming service providers have you ever used? }\end{array} & 1=\text { None of the above } \\
\hline \text { QS9aX } & \begin{array}{l}\text { You mentioned that you have streamed (listened to) } \\
\text { music over the internet. Which, if any, of the following } \\
\text { music streaming service providers have you ever } \\
\text { used?: Other. Please specify: }\end{array} & \\
\hline \text { QS9b_1 } & \begin{array}{l}\text { You mentioned that you have streamed (listened to) } \\
\text { music over the interne. Which, if any, of the following } \\
\text { music streaming service providers do you currently } \\
\text { use? }\end{array} & \begin{array}{l}\text { You mentioned that you have streamed (listened to) } \\
\text { music over the internet. Which, if any, of the following } \\
\text { music streaming service providers do you currently } \\
\text { use? }\end{array}\end{array}
$$ \begin{array}{l}1=Apple Music (i.e., not <br>

iTunes)\end{array}\right]\)| QS9b_2You mentioned that you have streamed (listened to) <br> music over the internet. Which, if any, of the following <br> music streaming service providers do you currently <br> use? |
| :--- |
| QS9b_3 |

## PUBLIC VERSION

| QS9c | You mentioned that you currently use one or more music streaming services. Which of the following best describes your role in the decision to use [IF ONE SELECTED IN QS9b: "this"; IF MORE THAN ONE SELECTED IN QS9b: "these"] music streaming [IF ONE SELECTED IN QS9b: "service"; IF MORE THAN ONE SELECTED IN QS9b: "services"]? | 1 = I made the decision myself 2 = I played a major role in the decision 3 = I played a minor role in the decision $4=\mathrm{I}$ was not involved in the decision at all 5 = Don't know/Unsure |
| :---: | :---: | :---: |
| QS10a_1 | You mentioned that you currently use a music streaming service from Amazon. Which of the following Amazon music streaming services do you currently use? | 1 = Amazon Prime Music (limited music catalog available to Prime members for no additional charge) |
| QS10a_2 | You mentioned that you currently use a music streaming service from Amazon. Which of the following Amazon music streaming services do you currently use? | 1 = Amazon Music Unlimited (full music catalog with a paid monthly subscription for music streaming) |
| QS10a_3 | You mentioned that you currently use a music streaming service from Amazon. Which of the following Amazon music streaming services do you currently use? | 1 = Don't know/Unsure |
| QS10b | You mentioned that you currently use a music streaming service from Apple. Do you use the adsupported free version or do you pay for a subscription to the service? | 2 = Paid subscription version |
| QS10c | You mentioned that you currently use a music streaming service from Deezer. Do you use the adsupported free version or do you pay for a subscription to the service? | $\begin{aligned} & 1=\text { Ad-supported free } \\ & \text { version } \\ & 2=\text { Paid subscription version } \\ & 3=\text { Currently in a free trial } \\ & \text { period prior to a paid } \\ & \text { subscription version } \\ & 4=\text { Don't know/Unsure } \\ & \hline \end{aligned}$ |
| QS10d | You mentioned that you currently use a music streaming service from Google. Do you use the adsupported free version or do you pay for a subscription to the service? | 1 = Ad-supported free version <br> $2=$ Paid subscription version <br> $3=$ Currently in a free trial period prior to a paid subscription version 4 = Don't know/Unsure |


| QS10e | You mentioned that you currently use a music streaming service from Pandora. Do you use the adsupported free version or do you pay for a subscription to the service? | 1 = Ad-supported free version <br> $2=$ Paid subscription version <br> $3=$ Currently in a free trial <br> period prior to a paid <br> subscription version <br> 4 = Don't know/Unsure |
| :---: | :---: | :---: |
| QS10f | You mentioned that you currently use a music streaming service from Spotify. Do you use the adsupported free version or do you pay for a subscription to the service? | 1 = Ad-supported free version <br> $2=$ Paid subscription version <br> $3=$ Currently in a free trial <br> period prior to a paid <br> subscription version <br> 4 = Don't know/Unsure |
| QS10g | You mentioned that you currently use a music streaming service from [FILL FROM QS9A "OTHER. PLEASE SPECIFY"]. Do you use the ad-supported free version or do you pay for a subscription to the service? | 1 = Ad-supported free version <br> $2=$ Paid subscription version <br> $3=$ Currently in a free trial <br> period prior to a paid <br> subscription version <br> 4 = Don't know/Unsure |
| QS11 | Please select SOUTH from the following list in order to continue into the survey. | $\begin{aligned} & 1=\text { NORTH } \\ & 2=\text { SOUTH } \\ & 3=\text { EAST } \\ & 4=\text { WEST } \end{aligned}$ |
| QS12 | You have qualified to take this survey. Before continuing, please carefully read these instructions: | $1=$ I understand and agree to the above instructions $2=\mathrm{I}$ do not understand or do not agree to the above instructions |
| Q1_1 | Which of the following best describes your music streaming habits before you subscribed to Amazon Music Unlimited? | $1=\mathrm{I}$ used a paid subscription to a different music streaming service |
| Q1_2 | Which of the following best describes your music streaming habits before you subscribed to Amazon Music Unlimited? | 1 = I used one or more adsupported free music streaming services |
| Q1_3 | Which of the following best describes your music streaming habits before you subscribed to Amazon Music Unlimited? | 1 = I used Amazon Prime Music (limited music catalog available to Prime members for no additional charge) |
| Q1_4 | Which of the following best describes your music streaming habits before you subscribed to Amazon Music Unlimited? | $1=$ I was not streaming music over the internet prior to subscribing to Amazon Music Unlimited |


| Q1_5 | Which of the following best describes your music streaming habits before you subscribed to Amazon Music Unlimited? | 1 = Don't know/Unsure |
| :---: | :---: | :---: |
| Q2b_1 | Which of the following best describes your music streaming habits before you subscribed to Apple? | 1 = I used a paid subscription to a different music streaming service |
| Q2b_2 | Which of the following best describes your music streaming habits before you subscribed to Apple? | 1 = I used one or more adsupported free music streaming services |
| Q2b_3 | Which of the following best describes your music streaming habits before you subscribed to Apple? | 1 = I was not streaming music over the internet prior to subscribing to Apple |
| Q2b_4 | Which of the following best describes your music streaming habits before you subscribed to Apple? | 1 = Don't know/Unsure |
| Q2c_1 | Which of the following best describes your music streaming habits before you subscribed to Deezer? | $1=$ I used a paid subscription to a different music streaming service |
| Q2c_2 | Which of the following best describes your music streaming habits before you subscribed to Deezer? | 1 = I used one or more adsupported free music streaming services |
| Q2c_3 | Which of the following best describes your music streaming habits before you subscribed to Deezer? | $1=$ I was not streaming music over the internet prior to subscribing to Deezer |
| Q2c_4 | Which of the following best describes your music streaming habits before you subscribed to Deezer? | 1 = Don't know/Unsure |
| Q2d_1 | Which of the following best describes your music streaming habits before you subscribed to Google? | 1 = I used a paid subscription to a different music streaming service |
| Q2d_2 | Which of the following best describes your music streaming habits before you subscribed to Google? | 1 = I used one or more adsupported free music streaming services |
| Q2d_3 | Which of the following best describes your music streaming habits before you subscribed to Google? | $1=$ I was not streaming music over the internet prior to subscribing to Google |
| Q2d_4 | Which of the following best describes your music streaming habits before you subscribed to Google? | 1 = Don't know/Unsure |
| Q2e_1 | Which of the following best describes your music streaming habits before you subscribed to Pandora? | $1=\mathrm{I}$ used a paid subscription to a different music streaming service |
| Q2e_2 | Which of the following best describes your music streaming habits before you subscribed to Pandora? | 1 = I used one or more adsupported free music streaming services |
| Q2e_3 | Which of the following best describes your music streaming habits before you subscribed to Pandora? | 1 = I was not streaming music over the internet prior to subscribing to Pandora |


| Q2e_4 | Which of the following best describes your music streaming habits before you subscribed to Pandora? | 1 = Don't know/Unsure |
| :---: | :---: | :---: |
| Q2f_1 | Which of the following best describes your music streaming habits before you subscribed to Spotify? | $1=\mathrm{I}$ used a paid subscription to a different music streaming service |
| Q2f_2 | Which of the following best describes your music streaming habits before you subscribed to Spotify? | 1 = I used one or more adsupported free music streaming services |
| Q2f_3 | Which of the following best describes your music streaming habits before you subscribed to Spotify? | $1=\mathrm{I}$ was not streaming music over the internet prior to subscribing to Spotify |
| Q2f_4 | Which of the following best describes your music streaming habits before you subscribed to Spotify? | 1 = Don't know/Unsure |
| Q2g_1 | Which of the following best describes your music streaming habits before you subscribed to [FILL FROM QS9A "OTHER. PLEASE SPECIFY"]? | $1=\mathrm{I}$ used a paid subscription to a different music streaming service |
| Q2g_2 | Which of the following best describes your music streaming habits before you subscribed to [FILL FROM QS9A "OTHER. PLEASE SPECIFY"]? | 1 = I used one or more adsupported free music streaming services |
| Q2g_3 | Which of the following best describes your music streaming habits before you subscribed to [FILL FROM QS9A "OTHER. PLEASE SPECIFY"]? | 1 = I was not streaming music over the internet prior to subscribing to [FILL FROM QS9A "OTHER. PLEASE SPECIFY"] |
| Q2g_4 | Which of the following best describes your music streaming habits before you subscribed to [FILL FROM QS9A "OTHER. PLEASE SPECIFY"]? | 1 = Don't know/Unsure |
| Q3 | You indicated that you currently subscribe to Amazon Music Unlimited. How much do you pay for your monthly subscription for this music streaming plan? | $1=\$ 3.99 /$ month to stream music on a single Amazon Echo, Echo Dot, or Amazon Tap only <br> $2=$ [IF CODED AS PRIME MEMBER IN QS7 INSERT: \$7.99/month; IF NOT CODED AS PRIME MEMBER IN QS7 INSERT: $\$ 9.99 /$ month] to stream music on multiple devices (e.g., your smartphone, computer, tablet, Amazon Echo, etc.) 3 = Currently in a free trial period prior to a paid subscription version 4 = Don't Know/Unsure |


| Q4a | Thinking about these options, which of the following, if any, would you be likely to do?: Paid streaming options | 1 = Pay [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to multiple devices 2 = [IF NOT ALEXAENABLED DEVICE OWNER: Purchase an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and pay; IF ALEXA-ENABLED DEVICE OWNER: Pay] [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to one Alexaenabled device only 3 = [IF INDICATED "PAID MONTHLY SUBSCRIPTION VERSION" ON ANY Q10bg : I would continue paying for my current monthly streaming subscription [FOR CELLS 2 and 3 ONLY, ADD: ", which would be priced at [FILL BASED ON CONDITION]; ELSE: <br> Purchase a monthly subscription to a different streaming service for [FILL BASED ON CONDITION]] 4 = I would not pay for a monthly streaming subscription |
| :---: | :---: | :---: |
| Q4b_1 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | $1=$ Listen to an ad-supported free music streaming service |
| Q4b_2 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | 1 = Listen to Amazon Prime Music (available at no additional charge through my Amazon Prime subscription) |
| Q4b_3 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | $1=$ Download music over the internet |


| Q4b_4 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | 1 = Subscribe to a satellite radio service (e.g., <br> SiriusXM) |
| :---: | :---: | :---: |
| Q4b_5 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | $1=$ Listen to music on the radio (AM/FM) |
| Q4b_6 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | $1=$ Purchase CDs and/or listen to CDs I already own |
| Q4b_7 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | 1 = Don't Know/Unsure |
| Q4c_1 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Downloading music from an online service where users pay per track or album downloaded (e.g., iTunes, Amazon Music, eMusic, Google Play, etc.) |
| Q4c_2 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Downloading music from an online site for free through a file sharing program (e.g., Bit Torrent sites such as The Pirate Bay or KickAssTorrents) |
| Q4c_3 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | $1=$ Downloading music from blogs that share music for free |
| Q4c_4 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Downloading music by converting YouTube videos to MP3s using a converter |
| Q4c_5 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Other. Please specify: |
| Q4c_6 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = None of the above |


| Q4cX | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet?: Other. Please specify: |  |
| :---: | :---: | :---: |
| Q5a | Thinking about these options, which of the following, if any, would you be likely to do?: Paid streaming options | 1 = Pay [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to multiple devices 2 = [IF NOT ALEXAENABLED DEVICE OWNER: Purchase an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and pay; IF ALEXA-ENABLED DEVICE OWNER: Pay] [FILL BASED ON CONDITION] per month to stream Amazon Music Unlimited to one Alexaenabled device only 3 = [IF INDICATED "PAID MONTHLY <br> SUBSCRIPTION <br> VERSION" ON ANY Q10bg : I would continue paying for my current monthly streaming subscription [FOR CELLS 5 and 6 ONLY, ADD: ", which would be priced at [FILL BASED ON CONDITION]; ELSE: Purchase a monthly subscription to a different streaming service for [FILL BASED ON CONDITION]] 4 = I would not pay for a monthly streaming subscription |
| Q5b_1 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | $1=$ Listen to an ad-supported free music streaming service |

## PUBLIC VERSION

| Q5b_2 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | 1 = Subscribe to Amazon Prime at $\$ 99$ per year, which includes Amazon Prime Music and other features, including free 2-day shipping of products purchased through the Amazon website |
| :---: | :---: | :---: |
| Q5b_3 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | $1=$ Download music over the internet |
| Q5b_4 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | 1 = Subscribe to a satellite radio service (e.g., SiriusXM) |
| Q5b_5 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | $1=$ Listen to music on the radio (AM/FM) |
| Q5b_6 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | $1=$ Purchase CDs and/or listen to CDs I already own |
| Q5b_7 | Thinking about these options, which of the following, if any, would you be likely to do?: Other (non-paid) streaming options | 1 = Don't Know/Unsure |
| Q5c_1 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Downloading music from an online service where users pay per track or album downloaded (e.g., iTunes, Amazon Music, eMusic, Google Play, etc.) |
| Q5c_2 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Downloading music from an online site for free through a file sharing program (e.g., Bit Torrent sites such as The Pirate Bay or KickAssTorrents) |
| Q5c_3 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Downloading music from blogs that share music for free |
| Q5c_4 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Downloading music by converting YouTube videos to MP3s using a converter |


| Q5c_5 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = Other. Please specify: |
| :---: | :---: | :---: |
| Q5c_6 | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet? | 1 = None of the above |
| Q5cX | You indicated that you would choose to download music over the internet and that you would not subscribe to a paid music service. Which, if any, of the following ways would you choose to download music over the internet?: Other. Please specify: |  |
| Q6a | Prior to this survey, were you or were you not aware of Amazon Music Unlimited, a full catalog service (with tens of millions of tracks)? | 1 = Yes, I was aware of Amazon Music Unlimited $2=$ No, I was not aware of Amazon Music Unlimited 3 = Don't know/Unsure |
| Q6b | You mentioned that you were aware of Amazon Music Unlimited. Prior to this survey, were you or were you not aware of how much Amazon Music Unlimited costs per month? | 1 = Yes, I was aware of how much Amazon Music Unlimited costs per month $2=$ No, I was not aware of how much Amazon Music Unlimited costs per month 3 = Don't know/Unsure |
| Q6c | Prior to this survey, were you aware that Amazon Music Unlimited was available to Prime members at a $\$ 2.00$ discount from the regular price? | $\begin{aligned} & 1=\text { Yes } \\ & 2=\text { No } \\ & 3=\text { Don't know/Unsure } \end{aligned}$ |
| Q6d | Prior to this survey, were you aware that Alexaenabled device owners can stream Amazon Music Unlimited to a single Alexa-enabled device at a $\$ 6$ discount from the regular price (or a $\$ 4$ discount from the price paid by Amazon Prime Members)? | $\begin{aligned} & 1=\text { Yes } \\ & 2=\text { No } \\ & 3=\text { Don't know/Unsure } \end{aligned}$ |
| Device | Hidden variable coded from QS6 to identify AlexaEnabled Device Owners |  |
| UserType | Hidden variable coded from QS7 to identify Prime members and non-Prime members |  |
| Track | Track Version | $\begin{aligned} & 1=\text { Track } 1 \text { (Prime members) } \\ & 2=\text { Track } 2 \text { (Non-prime } \\ & \text { members) } \end{aligned}$ |


| Cell | Cell 1 Price Level Shown: <br> - Stream to single Alexa-enabled device: $\$ 3.99$ <br> - Stream to multiple devices: $\$ 7.99$ <br> - Stream using other services: $\$ 9.99$ <br> Cell 2 Price Level Shown: <br> - Stream to single Alexa-enabled device: $\$ 4.99$ <br> - Stream to multiple devices: $\$ 8.99$ <br> - Stream using other services: $\$ 10.99$ <br> Cell 3 Price Level Shown: <br> - Stream to single Alexa-enabled device: \$5.99 <br> - Stream to multiple devices: $\$ 9.99$ <br> - Stream using other services: \$11.99 <br> Cell 4 Price Level Shown: <br> - Stream to single Alexa-enabled device: $\$ 3.99$ <br> - Stream to multiple devices: $\$ 9.99$ <br> - Stream using other services: $\$ 9.99$ <br> Cell 5 Price Level Shown: <br> - Stream to single Alexa-enabled device: $\$ 4.99$ <br> - Stream to multiple devices: $\$ 10.99$ <br> - Stream using other services: $\$ 10.99$ <br> Cell 6 Price Level Shown: <br> - Stream to single Alexa-enabled device: $\$ 5.99$ <br> - Stream to multiple devices: \$11.99 <br> - Stream using other services: \$11.99 | $\begin{aligned} & 1=\text { Cell } 1 \\ & 2=\text { Cell } 2 \\ & 3=\text { Cell } 3 \\ & 4=\text { Cell } 4 \\ & 5=\text { Cell } 5 \\ & 6=\text { Cell } 6 \end{aligned}$ |
| :---: | :---: | :---: |
| On- <br> Demand_ <br> Coded | Coding of on-demand music streamers | $0=$ On-demand music streamer $1=$ On-demand alternative music streamer |
| Region | U.S Census Region |  |
| StartTime | Time the survey was started |  |
| EndTime | Time the survey was completed |  |

## APPENDIX G

## RESTRICTED DOCUMENT

Subject to Protective Order in Docket No. 16-CRB-0003-PR (2018-2022)


[^0]:    ${ }^{1}$ Introductory Memorandum of the Rights Owners, at A-3; Witness Statement of David M. Israelite, at 9 103;

[^1]:    ${ }^{2}$ Amazon Digital Services LLC, Google Inc., Spotify USA Inc., and Pandora Media, Inc. are jointly presenting the expert testimony of Dr. Mark Zmijewski.

[^2]:    ${ }^{1}$ Please refer to the written rebuttal submission of Spotify USA Inc.

[^3]:    ${ }^{1}$ Expert Report of Lawrence S. Miller ("Miller Report"), at 『I 13.
    ${ }^{2}$ Id.; see also, e.g., Witness Statement of David M. Israelite ("Israelite WS") at $\mathbb{1}$ 37; Witness Statement of Peter Brodsky ("Brodsky WS") at © 65; Witness Statement of David Kokakis ("Kokakis WS") at ๆ 60; Expert Report of Marc Rysman, Ph.D. ("Rysman Report") at $\mathbb{1}$ 29; Miller Report at $\mathbb{\top} 31$.

[^4]:    ${ }^{3}$ Israelite WS at 937.
    ${ }^{4}$ Miller Report at $\boldsymbol{1}$ I 31.
    ${ }^{5}$ Id.

[^5]:    ${ }^{6}$ Written Rebuttal Testimony of Kelly Brost at ๆ 5, Exhibit 31.

[^6]:    ${ }^{7}$ Written Rebuttal Testimony of Robert L. Klein ("Klein Consumer Survey") at 『 62.
    ${ }^{8}$ Written Direct Testimony of Rishi Mirchandani ("Mirchandani Direct Testimony") at $\mathbb{}$ I 28.
    

[^7]:    ${ }^{10}$ Echo Detail Page, attached hereto as Amazon Exhibit 21.
    ${ }^{11}$ Id.
    ${ }^{12} I d$.
    ${ }^{13}$ See, e.g., Amazon Echo, Amazon Echo: "The Break Up", YouTube (Nov. 16, 2016), https://www.youtube.com/watch?v=ejcfX2017Ik.
    ${ }^{14}$ Amazon Exhibit 21; see also Echo Purchase Flow Pages, attached hereto as Amazon Exhibit 22.

[^8]:    ${ }^{15}$ See $\longrightarrow$, attached hereto as Amazon Exhibit 23.
    ${ }^{16}$ Miller Report at 931.
    ${ }^{17}$ Israelite WS at $\mathbb{1} 38$.

[^9]:    ${ }^{18}$ Klein Consumer Survey at 967 ; see also Amazon Exhibit 24 at p. 8
    ${ }^{19}$ Amazon Exhibit 20 at p. 1.
    ${ }^{20}$ Amazon Exhibit 24 at p. 3
    ${ }^{21} I d$. at p. 8.

[^10]:    ${ }^{22}$ Introductory Memorandum to Copyright Owner’s Written Direct Statement ("CO Intro Memo"), at A-2-A-3; see, e.g., Brodsky WS at 9 64-65 ("It appears to me that for at least some of the Digital Services, revenue is less important than building a customer base..."); Kokakis WS at 『 59-60 ("The percentage of revenue prong of the current rate structure does not provide songwriters and publishers with sufficient royalties because the Digital Services have apparently made the business decision not to maximize revenues..."); Miller Report at $\mathbb{1} 13$ ("Some of the services are using music as a loss leader to promote the sale of other products and services."); Witness Statement of Justin Kalifowitz ("Kalifowitz WS") at 『 50 ("[Publishers and songwriters] are not currently compensated for that value because the Digital Services have chosen not to focus on revenue but, rather, on the acquisition and "lock-in" of customers.").

[^11]:    ${ }^{26}$ Id.
    ${ }^{27} 17$ U.S.C. § 801(b)(1)(B).

[^12]:    ${ }^{29}$ Written Rebuttal Testimony of Kelly Brost at $\mathbb{\top}$ 6, Exhibit 32.

[^13]:    ${ }^{37}$ See, e.g., Aguiar, L. and J. Waldfogel, "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?," European Commission Joint Research Center, Institute for Prospective Technological Studies, Digital Economy Working Paper 2015/05, 2015, at pp. 21-25 (finding "clear evidence of piracy displacement" by streaming music services); "IFPI Digital Music Report: Charting the Path to Sustainable Growth," IFPI, 2015, at p. 15 (noting that "[s]treaming services have also . . . helped migrate consumers to licensed services by offering a convenient alternative to piracy"); Press Release, The NPD Group, Music File Sharing Declined Significantly in 2012 (Feb. 26, 2012) ("40 percent of consumers who had illegally downloaded music via P2P services in 2011 reported that they had stopped or downloaded less music from P2P networks. The primary reason for this reduced sharing activity was an increased use of free, legal music streaming services. In fact nearly half of those who stopped or curtailed file sharing cited the use of streaming services as their primary reason for stopping or reducing their filesharing activity.")

[^14]:    ${ }^{38}$ This theme pervades the Rights Owners’ written direct statement. See Israelite WS at $\mathbb{9} 106$ ("These technology companies are generating a lot of money for themselves from the songs provided by the publishers and their songwriters. Their profitability or their massive enterprise value growth (which will eventually translate into profitability at a time of their own choosing) is demonstrated not only be their public financial statements, but also by the fact that new entrants are eager to get into the game. For these reasons, it seems equally clear that the rates proposed by the Copyright Owners would not significantly disrupt the interactive streaming industry"); Witness Statement of Bart Herbison ("Herbison WS") at 97 ("I am told that this Board is required to consider whether the rate and rate structure for interactive streaming sought by the songwriters and publishers will cause disruption to the interactive streaming industry, represented in these Proceedings by some of the largest companies in the world. It seems apparent the answer is 'No.'").
    ${ }^{39}$ See Mirchandani Direct Testimony at $9 \mathbb{1}$ 39, 42.
    ${ }^{40}$ See Mirchandani Direct Testimony at $9 \mathbb{1}$ 40-41.

[^15]:    ${ }^{41}$ Written Rebuttal Testimony of Kelly Brost at $\mathbb{9} 9$ 9, Exhibit 35. ${ }^{42} \mathrm{Id}$.
    ${ }^{43}$ Written Direct Testimony of Kelly Brost at $\mathbb{1} 9$, Exhibit 18; Written Rebuttal Testimony of Kelly Brost at $\mathbb{\|} 10$, Exhibit 36.

[^16]:    ${ }^{44}$ Written Rebuttal Testimony of Kelly Brost at $\mathbb{9}$ 11, Exhibit 37.
    ${ }^{45}$ See Mirchandani Direct Testimony at $\mathbf{9 \|}$ 55, 63-66.
    ${ }^{46}$ Israelite WS at $\mathbb{1} 55$.

[^17]:    ${ }^{47}$ Mirchandani Direct Testimony at $\mathbb{9} 53$.
    ${ }^{48}$ Expert Report of Jeffrey A. Eisenach, Ph.D. ("Eisenach Report") at 7.

[^18]:    ${ }^{49}$ See Copyright Owners' Proposed Rates and Terms; Apple Inc.'s Proposed Rates and Terms.

[^19]:    ${ }^{50}$ See 37 C.F.R. § 385.3(a); 37 C.F.R. § 385.13(a)(1); 37 C.F.R. § 385.13(a)(3); 37 C.F.R. § 385.13(a)(4); 37 C.F.R. § 385.23(a)(4); 37 C.F.R. § 385.23(a)(5).
    ${ }^{51}$ Notably, if the CRB determines to adopt this approach, the per-play rate for purchased content locker services should be zero, because-as explained above—rightsholders will have already been paid a fair mechanical royalty at the time of purchase. See $\mathbb{\$} 53$ above.

[^20]:    1 "Expert Report of Jeffrey A. Eisenach," In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), October 31, 2016; "Expert Report of Joshua Gans," In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), October 31, 2016; "Expert Report of Marc Rysman," In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), October 28, 2016.
    2 "Expert Report of Glenn Hubbard," In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), November 1, 2016.

[^21]:    4 See Initial Report, at Exhibit 1. "Recorded music" refers to physical formats, such as CDs, as well as digital formats, such as permanent downloads and streaming music.
    5 "U.S. Sales Database," Recording Industry Association of America. Accessed August 12, 2016, <https://www riaa.com/u-s-sales-database/>.

[^22]:    6 Yang, L., H.P. Terry, M. Sugiyama, S. Jankowski, and H. Bellini, "Music in the Air: Stairway to Heaven, Volume 1," Goldman Sachs Equity Research, October 4, 2016 (hereinafter, "Goldman Sachs Report"), at p. 4.

    7 As I discuss below, current ad-supported and bundled streaming music options that are "free of charge" to consumers nevertheless generate royalty payments to Copyright Owners.

    8 See, e.g., Hui, K., and I. Png, "Piracy and the Legitimate Demand for Recorded Music," B.E. Journal of Economic Analysis \& Policy, 2, 1, 2003; Peitz, M., and P. Waelbroeck, "The Effect of Internet Piracy on CD Sales: Cross-Section Evidence," CESifo Working Paper No. 1122, 2004; Michel, N.J., "The Impact of Digital File Sharing on the Music Industry: An Empirical Analysis," The B.E. Journal of Economic Analysis \& Policy, 6, 1, 2006; Zentner, A., "Measuring the Effect of File Sharing on Music Purchases," Journal of Law Economics, 49, 2006; Waldfogel, J., "Music File Sharing and Sales Displacement in the iTunes Era," Information Economics and Policy, 22, 4, 2010.
    9 "Proposed Findings of Fact of National Music Publishers’ Association, Inc., The Songwriters Guild of America, and The Nashville Songwriters Association International (Public Version)," In the Matter of Mechanical and Digital Phonorecord Delivery Rate Adjustment Proceeding, July 2, 2008, at pp. 7677.

[^23]:    10 "Copyright and the Music Marketplace," U.S. Copyright Office, 2015, at pp. 78-79.
    11 "Stream ripping" "involves turning a song or music video played on a streaming service into a permanent download." (Karp, H., "Music Industry's Latest Piracy Threat: Stream Ripping," Wall Street Journal, September 12, 2016. Accessed February 12, 2017, [https://www.wsj.com/articles/music-industrys-latest-piracy-threat-stream-ripping-1473718919](https://www.wsj.com/articles/music-industrys-latest-piracy-threat-stream-ripping-1473718919).)
    

    15 'Proposed Findings of Fact of National Music Publishers' Association, Inc., The Songwriters Guild of America, and The Nashville Songwriters Association International (Public Version)," In the Matter of Mechanical and Digital Phonorecord Delivery Rate Adjustment Proceeding, July 2, 2008, at p. 144.

[^24]:    39 Aguiar, L., and J. Waldfogel, "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?," European Commission Joint Research Center, Institute for Prospective Technological Studies, Digital Economy Working Paper 2015/05, 2015, at p. 21.

    40 "IFPI Digital Music Report 2015: Charting the Path to Sustainable Growth," IFPI, 2015, at p. 15. Similarly, Page (2013) found that, since the introduction of Spotify in the Netherlands, "piracy overall is now lower, and artists that engage with Spotify see less piracy." (Page, W., "Adventures in the Netherlands: Spotify, Piracy and the new Dutch experience," Spotify, 2013, at p. 1.)
    ${ }^{41}$ Mulligan, M., "On Demand In Demand: Meeting The Needs Of The On Demand Fan," MIDiA, June 2015, at p. 7.
    42 Goldman Sachs Report, at p. 4.

[^25]:    43 Amazon launched Prime Music in June 2014. See Christman, E., "Amazon Launches Prime Music Streaming Service, Minus UMG," Billboard, June 12, 2014. Accessed February 2, 2017, [http://www.billboard.com/biz/articles/news/digital-and-mobile/6114217/amazon-launches-prime-music-streaming-service-minus-umg](http://www.billboard.com/biz/articles/news/digital-and-mobile/6114217/amazon-launches-prime-music-streaming-service-minus-umg).

    44 "Prime," Amazon, 2016. Accessed October 26, 2016,
    [https://www.amazon.com/gp/dmusic/promotions/PrimeMusic](https://www.amazon.com/gp/dmusic/promotions/PrimeMusic).
    45 Initial Report, at $9 \mathbb{| l |}$ 3.10-3.11.
    46 An Amazon Prime membership costs 10.99 per month (or $\$ 99$ per year), or $\$ 49$ per year for students. ("Amazon Prime," Amazon, 2016. Accessed July 28, 2016, [https://www.amazon.com/Amazon-Prime-One-Year-Membership/dp/B00DBYBNEE](https://www.amazon.com/Amazon-Prime-One-Year-Membership/dp/B00DBYBNEE); "Prime Student," Amazon, 2017. Accessed February 12, 2017, < https://www.amazon.com/Amazon-Student/b?ie=UTF8\&node=668781011>.

[^26]:    47 As I discussed in my Initial Report, "Amazon’s Echo is a smart speaker system that 'answers questions, reads audiobooks and the news, reports traffic and weather, gives info on local business' and 'controls lights, switches, and thermostats,' among other features." In order to function, the Echo needs to be connected to a wireless network. (Initial Report, at Footnote 56. See also, "Amazon Echo - Black," Amazon, 2016. Accessed October 17, 2016, <https://www.amazon.com/Amazon-Echo-Bluetooth-Speaker-with-WiFi-
    Alexa/dp/B00X4WHP5E/ref=sr_1_1?ie=UTF8andqid=1476715646andsr=8-1andkeywords=echo>; "Amazon Music Unlimited for Echo," Amazon, 2016. Accessed October 17, 2016, [https://www.amazon.com/b?ie=UTF8andnode=15451028011](https://www.amazon.com/b?ie=UTF8andnode=15451028011).)
    48 "Amazon Echo - Black," Amazon, 2016. Accessed October 17, 2016, [https://www.amazon.com/Amazon-Echo-Bluetooth-Speaker-with-WiFi-Alexa/dp/B00X4WHP5E/ref=sr_1_1?ie=UTF8andqid=1476715646andsr=8-1andkeywords=echo](https://www.amazon.com/Amazon-Echo-Bluetooth-Speaker-with-WiFi-Alexa/dp/B00X4WHP5E/ref=sr_1_1?ie=UTF8andqid=1476715646andsr=8-1andkeywords=echo).

    49 "Music Unlimited," Amazon, 2016. Accessed October 29, 2016.
    [https://www.amazon.com/gp/dmusic/promotions/AmazonMusicUnlimited/ref=sv_dmusic_0](https://www.amazon.com/gp/dmusic/promotions/AmazonMusicUnlimited/ref=sv_dmusic_0).
    50 "Amazon Music Unlimited for Echo," Amazon, 2016. Accessed October 17, 2016, [https://www.amazon.com/b?ie=UTF8andnode=15451028011](https://www.amazon.com/b?ie=UTF8andnode=15451028011).

    51 "About Media Formats," Amazon, 2016. Accessed on August 1, 2016,
    [https://www.amazon.com/gp/help/customer/display.html?nodeId=201379550](https://www.amazon.com/gp/help/customer/display.html?nodeId=201379550); "Amazon Music

[^27]:    

    55 "U.S. Sales Database," Recording Industry Association of America. Accessed August 12, 2016, <https://www riaa.com/u-s-sales-database/>; Initial Report, at Exhibit 1; Inflation data from: "Consumer Price Index for All Urban Consumers: All items less food and energy (CUUS0000SA01E)," United States Bureau of Labor Statistics. Accessed February 9, 2017, [https://fred.stlouisfed.org/series/CUUS0000SA0L1E](https://fred.stlouisfed.org/series/CUUS0000SA0L1E).
    56 Figures include Paid Subscriptions, SoundExchange Distributions, and On-Demand Streaming (AdSupported). ("U.S. Sales Database," Recording Industry Association of America. Accessed August 12, 2016, <https://www riaa.com/u-s-sales-database/>.)
    57 Friedlander, J.P., "News and Notes on 2016 Mid-Year RIAA Music Shipment and Revenue Statistics," Recording Industry Association of America, 2016, at p. 1; Inflation data from: "Consumer Price Index for All Urban Consumers: All items less food and energy (CUUS0000SA01E)," United States Bureau of Labor Statistics. Accessed February 9, 2017, [https://fred.stlouisfed.org/series/CUUS0000SA0L1E](https://fred.stlouisfed.org/series/CUUS0000SA0L1E).

[^28]:    58 Blackledge, J., and T. Arcuri, "Music Industry Poised To Get Its Groove Back," Cowen and Company, June 29, 2016, at p. 3.
    59 Swinburne, B., R. Fiftal, and M. Ripps, "Pandora Media Inc.: Managing a Portfolio of Assets," Morgan Stanley, April 7, 2016, at p. 12.
    ${ }^{60}$ Goldman Sachs Report, at p. 9.
    61 Goldman Sachs Report, at p. 12.
    62 Gans Report, at $9 \uparrow 10,16,25$.

[^29]:    ${ }^{85}$ Goldman Sachs Report, at pp. 4, 13, 57. "Physical mechanical royalties" refers to mechanical royalties for physical media such as CDs. (Goldman Sachs Report, at p. 7.)
    ${ }^{86}$ Enders, A., and C. Hayes, "Global music publishing 2016," Enders Analysis, June 28, 2016, at p. 6 ("Enders Analysis Report"). This increase does not include international collections of the Performance Rights Organizations ("PROs") to avoid double-counting.
    ${ }^{87}$ Enders Analysis Report, at p. 12.
    ${ }^{88}$ "Play means, for purposes of this subpart, the digital transmission of any portion of a sound recording of a musical work in the form of an interactive stream or limited download, and (a) in the case of an interactive stream, each subsequent playback of any portion of a sound recording of a musical work from a streaming cache reproduction." ("Copyright Owners' Proposed Rates and Terms," In the Matter of Determination Of Rates And Terms For Making And Distributing Phonorecords (Phonorecords III), at pp. B-7-B-8.)

[^30]:    ${ }^{89}$ Copyright Owners' Statement, at pp. A-6-A-7.
    ${ }^{90}$ Gans Report, at $\boldsymbol{9}$ 46. "[O]pportunity cost compensation is a basic but critical principle of fair compensation under the ECPR model that should inform the analysis of rates and structures here." (Gans Report, at $\mathbb{9} 50$.) "As described in the above example regarding rail access, ECPR is agnostic regarding the costs, but it is also agnostic regarding the business activity of independent rail service providers so long as they do not impact on the provider's opportunity costs." (Gans Report, at ๆ 53.) Although Professor Gans does not explicitly state that Copyright Owners face a constant opportunity cost of provision across all service providers, he does articulate the following: "To align this notion with the language in the music industry, I articulate the principle ('business model neutrality') that the rate structure for mechanical licensing should be neutral with respect to the business model for interactive streaming services." (Gans Report, at 『 54.)
    ${ }^{91}$ See Footnote 90.

[^31]:    92 I understand that Apple has proposed a similar flat-rate mechanical royalty structure. ("Apple Inc. Proposed Rates and Terms," In the Matter of Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), November 1, 2016, at p. 2.)
    93 Gans Report, at ब 150.
    94 Cabral, L.M.B., Introduction to Industrial Organization. (The MIT Press: Cambridge, Massachusetts, 2000), at pp. 81-82.

[^32]:    106 Final Rule, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding; Review of Copyright Royalty Judges Determination; Final Rule and Notice, 37 C.F.R. Part 385, January 26, 2009, at p. 4515, citing to 17 U.S.C. 115(c) and 17 U.S.C. 801(b)(1).
    107 Rysman Report, at $\mathbb{9} 11$.

[^33]:    114 The cost of creating the musical work can be thought of as "fixed" in this context because, once the musical work is created, its production cost does not vary with the number of times it is streamed.
    115 Opportunity cost compensation is consistent with the concept behind Professor Gans's ECPR discussion. However, by assuming his concept of "business model neutrality" (i.e., "the rate structure for mechanical licensing should be neutral with respect to the business model for interactive streaming services"), appears to implicitly assume that there is complete market cannibalization across different streaming music products (i.e., each new subscriber to a service must be taken from another service). See Gans Report, at § IV.B and Section 4.A herein.
    116
    Emphasis original. Rysman Report, at $\uparrow 71$.

[^34]:    ${ }^{120}$ According to the Copyright Royalty Board, "disruption' typically refers to an adverse impact that is substantial, immediate and irreversible in the short-run because there is insufficient time for the industry participants to adequately adapt to the changed circumstances and, as a consequence, such adverse impacts threaten the viability of the music delivery currently offered under the license in question." (Final Rule, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding; Review of Copyright Royalty Judges Determination; Final Rule and Notice, 37 C.F.R. Part 385, January 26, 2009, at p. 4516, citing SDARS I, 73 Fed. Reg. at 4097.)
    ${ }^{121}$ Additionally, as I discuss in Section 4.C, the Copyright Owners' proposal also eliminates the "active subscriber" distinction for Bundled Subscription Services and applies a per-play rate to all streams, including promotional streams, such as those less than 30 seconds in length. Such changes would lead to additional increases for some service providers.

[^35]:    127 Rysman Report, at $\boldsymbol{9} \llbracket \mid 36,41$.

[^36]:    137 Rysman Report, at $\mathbb{9} 11$.
    138 Rysman Report, at § III, 『I 50.
    139 Initial Report, at § 4.B.
    140 Moreover, as I discuss in Paragraph 3.11, streaming music promotes consumption of "back catalogue" songs, which ameliorates concerns about revenue deferral.

    141 Initial Report, at § 4.B.

[^37]:    ${ }^{142} 17.36$ percent in cases in which the record company is the licensee under 17.U.S.C. 115. (Final Rule, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding; Review of Copyright Royalty Judges Determination; Final Rule and Notice, 37 C.F.R. Part 385, January 26, 2009, at pp 4531-4533.)

    143 Final Rule, Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding; Review of Copyright Royalty Judges Determination; Final Rule and Notice, 37 C.F.R. Part 385, January 26, 2009, at pp. 4531-4532.
    

[^38]:    151 I rely on the fact that 35.05 percent of tracks are skipped before 30 seconds are elapsed to impute the total number of streams (\# of Over-30-Second Streams / (1-0.3505)). ("The Skip," Music Machinery, May 2, 2014. Accessed January 26, 2017, [https://musicmachinery.com/2014/05/02/the-skip/](https://musicmachinery.com/2014/05/02/the-skip/).) I divide total mechanical royalties by this imputed total stream count to arrive at an "effective per-play" mechanical royalty for all streams.
    152 See Gans Report, at Table 3, rows [8] and [10].

[^39]:    168 Eisenach Report, at व 142.
    169 See, for example, "Digital music services...suggest that the songwriter concerns are more accurately traced to the division of total royalties between sound recording owners and musical work owners. From the services' perspective, total content costs are the relevant consideration [emphasis added and internal notes omitted]." "Copyright and the Music Marketplace", U.S. Copyright Office, 2015, at pp. 76-77.

[^40]:    $\square$
    190 Eisenach Report, at $\mathbb{\|} 83$.
    ${ }_{191}$ Further, I understand that the economics of the ringtone business are different from that of the streaming music business more generally. For example, according to an October 2015 IBISWorld report, "advancements in wireless cellular technology have virtually erased revenue derived from paid ringtones. Cell phones' capacity to hold digital music files and the ability of mobile apps or other software to manipulate these files into digital ringtones has hampered some demand for music ringtone downloads." (IBISWorld Report, at p. 7.)

[^41]:    (1)

    193 Eisenach Report, at ब 140.
    194 I am aware of the legal right also granted for non-interactive streaming, called an "ephemeral" right, that pertains to server reproductions of sound recordings. The Web IV Determination describes the "agreement among all participants that these two distinct legal rights (ephemeral and performance) should be treated as one bundle" and then goes on to state: "The Judges also find that the minimum fee for the Section 112 [ephemeral] license should be subsumed under the minimum fee for the Section 114 [performance] license, $5 \%$ of which shall be allocable to the Section 112 license holders, with the remaining 95\% allocated to the Section 114 license holders." ("Determination," In re Determination Of Royalty Rates And Terms For Ephemeral Recording And Webcasting Digital Performance Of Sound Recordings (Web IV), United States Copyright Royalty Judges, The Library of Congress, March 4, 2016.) Because such a small portion is allocated to ephemeral licenses, I do not discuss it further in this report.

[^42]:    ${ }^{1}$ An on-demand music streaming service is a music streaming service that is interactive and allows a user to create a playlist or listen to particular songs on-demand.
    ${ }^{2}$ Amazon.com website, available at https://www.amazon.com/gp/dmusic/promotions/PrimeMusic, last visited January 25, 2017.

[^43]:    ${ }^{3} \mathrm{http}: / / \mathrm{www} . i n t e r n e t w o r l d s t a t s . c o m / s t a t s 14 \mathrm{htm}$ as of June 30, 2016 (viewed 1/25/2017)
    ${ }^{4}$ According to an annual study conducted by Inside Research®, ${ }^{\circledR} 43 \%$ of survey research in the U.S. was conducted online in 2013.
    ${ }^{5}$ Shari Seidman Diamond, "Reference Guide on Survey Research" in Reference Manual on Scientific Evidence, Federal Judicial Center and The National Academies Press (3d ed. 2011); Gabriel M. Gelb and Betsy D. Gelb, Internet Surveys for Trademark Litigation: Ready or Not, Here They Come, 97 Trademark Rep. 1073 (2007); also Bruce Isaacson et al., Why Online Consumer Surveys Can Be A Smart Choice In Intellectual Property Cases, 26 IPL Newsletter (ABA Section of Intellectual Property Law) 1, 12-15 (2008); Hal Poret, A Comparative Empirical Analysis of Online versus Mall and Phone Methodologies for Trademark Surveys, 100 Trademark Rep. 756 (2010); Alex Simonson, Online Interviewing For Use in Lanham Act Litigation, 14 Intell. Prop. Strategist 3 (2007).
    ${ }^{6}$ Active members are defined as having responded to a survey invitation in the past 12 months.

[^44]:    7 "Click balancing" refers to the process of ensuring that the group of people who click on the survey link (not to be confused with the group of people who qualify and complete the survey) is representative of the U.S. population. The process of click balancing involves sending periodic updates to the panel vendor on the age, gender, and region breakdown of inbound clicks on the survey link so that the panel vendor can make any necessary adjustments to their survey invitation mailings (i.e., which age/gender/region groups they send invitations to and in what quantity).

[^45]:    ${ }^{8}$ A quota was implemented to ensure adequate sample sizes were achieved for Track 1 and Track 2 (i.e., Prime and non-Prime respondents.)

[^46]:    ${ }^{9}$ If respondents previously indicated in QS9b that they currently streamed music from Amazon, they were not asked this question, as it was already determined in QS10a which Amazon service (i.e., Amazon Prime Music or Amazon Music Unlimited) they currently used.
    ${ }^{10}$ If respondents indicated in QS9b that they currently use Apple Music (which only offers a paid streaming service) as a music streaming provider, the QS10b-g series was not asked and was automatically populated with "Paid subscription version."

[^47]:    ${ }^{11}$ Cell 1: $\$ 3.99$, Cell 2: $\$ 4.99$, Cell 3: $\$ 5.99$.
    ${ }^{12}$ Cell 1: $\$ 7.99$; Cell 2: $\$ 8.99$; Cell 3: $\$ 9.99$.
    ${ }^{13}$ Cell 1: \$9.99; Cell 2: \$10.99; Cell 3: \$11.99.
    ${ }^{14}$ If respondents in Cell 2 and Cell 3 indicated that they subscribed to a "paid monthly subscription version" on any streaming service in QS10b-g, this sentence read, "Finally, assume other paid music streaming services, including those you currently subscribe to, would be priced at..."
    ${ }^{15}$ Cell 1: $\$ 9.99$; Cell 2: $\$ 10.99$; Cell 3: $\$ 11.99$.

[^48]:    ${ }^{16}$ Cell 1: $\$ 3.99$; Cell 2: $\$ 4.99$; Cell 3: $\$ 5.99$.
    ${ }^{17}$ Cell 1: \$7.99; Cell 2: $\$ 8.99$; Cell 3: \$9.99.
    ${ }^{18}$ Cell 1: $\$ 9.99$; Cell 2: $\$ 10.99$; Cell 3: $\$ 11.99$.
    ${ }^{19}$ If respondents in Cell 2 and Cell 3 indicated that they subscribed to a "paid monthly subscription version" on any streaming service in QS10b-g, this sentence read, "Finally, assume other paid music streaming services, including those you currently subscribe to, would be priced at..."
    ${ }^{20}$ Cell 1: $\$ 9.99$; Cell 2: $\$ 10.99$; Cell 3: $\$ 11.99$.
    ${ }^{21}$ Cell 1: \$7.99; Cell 2: \$8.99; Cell 5: \$9.99.

[^49]:    ${ }^{22}$ Cell 1: \$3.99; Cell 2: \$4.99; Cell 3: \$5.99.
    ${ }^{23}$ If respondents did not indicate that they owned an Alexa-enabled device on QS6, this response option read, "Purchase an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and pay [\$3.99/\$4.99/\$5.99] per month to stream Amazon Music Unlimited to one Alexa-enabled device only."
    ${ }^{24}$ Cell 1: \$9.99; Cell 2: \$10.99; Cell 3: \$11.99.
    ${ }^{25}$ If respondents indicated that they subscribed to a "paid monthly subscription version" on any streaming service in QS10b-g, this response option read, "I would continue paying for my current monthly streaming subscription." If these respondents were also in Cells 2 or 3, this response option read, "I would continue paying for my current monthly streaming subscription, which would be priced at [\$10.99/\$11.99]." For all other respondents who did not indicate that they subscribed to any "paid monthly subscription version" on QS10b-g, this response option read, "Purchase a monthly subscription to a different streaming service for [\$9.99/\$10.99/\$11.99]."
    ${ }^{26}$ If respondents in Cell 1 indicated that they subscribed to a "paid monthly subscription version" on any streaming service in QS10b-g, this response option was not shown.

[^50]:    ${ }^{27}$ Cell 4: \$3.99, Cell 5: \$4.99, Cell 6: \$5.99.
    ${ }^{28}$ Cell 4: \$9.99; Cell 5: \$10.99; Cell 6: \$11.99.
    ${ }^{29}$ If respondents in Cell 5 and Cell 6 indicated that they subscribed to a "paid monthly subscription version" on any streaming service in QS10b-g, this sentence read, "Finally, assume other paid music streaming services, including those you currently subscribe to, would be priced at..."
    ${ }^{30}$ Cell 4: \$9.99; Cell 5: \$10.99; Cell 6: \$11.99.

[^51]:    ${ }^{31}$ Cell 4: \$3.99, Cell 5: \$4.99, Cell 6: \$5.99.
    ${ }^{32}$ Cell 4: \$9.99; Cell 5: \$10.99; Cell 6: \$11.99.
    ${ }^{33}$ If respondents in Cell 5 and Cell 6 indicated that they subscribed to a "paid monthly subscription version" on any streaming service in QS10b-g, this sentence read, "Finally, assume other paid music streaming services, including those you currently subscribe to, would be priced at..."
    ${ }^{34}$ Cell 4: \$9.99; Cell 5: \$10.99; Cell 6: \$11.99.
    ${ }^{35}$ Cell 4: \$9.99, Cell 5: \$10.99, Cell 6: \$11.99.
    ${ }^{36}$ Cell 4: \$3.99, Cell 5: \$4.99, Cell 6: \$5.99.
    ${ }^{37}$ If respondents did not indicate that they owned an Alexa-enabled device on QS6, this response option read, "Purchase an Alexa-enabled device (i.e., the Amazon Echo, Echo Dot, or Amazon Tap) and pay [\$3.99/\$4.99/\$5.99] per month to stream Amazon Music Unlimited to one Alexa-enabled device only."
    ${ }^{38}$ Cell 4: \$9.99, Cell 5: \$10.99, Cell 6: \$11.99.
    ${ }^{39}$ If respondents indicated that they subscribed to a "paid monthly subscription version" on any streaming service in QS10b-g, this response option read, "I would continue paying for my current monthly streaming subscription." If these respondents were also in Cells 5 or 6, this response option read, "I would continue paying for my current

[^52]:    monthly streaming subscription, which would be priced at [\$10.99/\$11.99]." For all other respondents who did not indicate that they subscribed to any "paid monthly subscription version" on QS10b-g, this response option read, "Purchase a monthly subscription to a different streaming service for [\$9.99/\$10.99/\$11.99]."
    ${ }^{40}$ If respondents in Cell 4 indicated that they subscribed to a "paid monthly subscription version" on any streaming service in QS10b-g, this response option was not shown.

[^53]:    ${ }^{41}$ More specifically, respondents were removed from the analysis database for the following reasons: 3 respondents indicated that they paid for a subscription to a music streaming service that only offers an ad-supported option or indicated that they used an ad-supported version of a service that does not offer an ad-supported version (QS10b); 22 respondents indicated they used Amazon Prime Music (QS10a), but did not indicate they subscribe to Amazon Prime (QS7); 6 respondents selected all response options on a "select all that apply" question (i.e., straight-lined on QS6, QS7, Q9a, QS9b); 3 respondents provided nonsensical responses to an open-ended question; and 6 respondents indicated in the "Other. Please specify" text box on QS9b a non-streaming music service as the only music streaming service they currently use (e.g., iTunes).

[^54]:    (E) 8

    Marage your accourt golios
    Comacinif you have mylinues
    
    

    - Newards and the \& Nowwhs iogs ara tradenarks of Research Now Crouat inc. All riatus reserved.

