#### Before the UNITED STATES COPYRIGHT ROYALTY JUDGES The Library of Congress

In the Matter of

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

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

#### APPLE INC.'S FINDINGS OF FACT AND CONCLUSIONS OF LAW

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### **DEFINED TERMS**

#### **Shortened Terms**

Term	Definition
Amazon	Amazon Digital Services LLC
Apple	Apple Inc.
BMG	BMG Rights Management
Copyright Owners	National Music Publishers' Association and Nashville Songwriters
	Association International
CRB	Copyright Royalty Board
Downtown	Downton Music Publishing
Google	Google Inc.
Kobalt	Kobalt Music Group
NMPA	National Music Publishers' Association
Pandora	Pandora Media, Inc.
RIAA	Recording Industry Association of America
Sony/ATV	Sony/ATV Music Publishing
Sony/EMI	EMI Music Publishing Companies
Spotify	Spotify USA Inc.
UMPG	Universal Music Publishing Group
Warner/Chappell	Warner/Chappell Music, Inc.

## Witness Testimony

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Ex. 22 (Hubbard WDT)	Written Direct Testimony of Dr. Glenn Hubbard (16-CRB-0003-PR)	Amazon
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#### FINDINGS OF FACT

#### I. PRELIMINARY STATEMENT

APL-F1. Now is the time for the CRB to adopt a royalty structure and rate for interactive streaming that recognizes the symbiotic relationship between the interactive streaming services, which make music available in innovative and convenient ways never before possible, and the songwriters and publishers, who write and publish the music that consumers want to hear. Such a structure should incentivize all industry participants to continue to experiment and make music available, while also ensuring a fair return on their respective contributions in a transparent and easily understandable way that eliminates the confusion and disparity of the current rate system. Apple's proposal does just that. *See infra* APL-F86–167.

APL-F2. The interactive streaming industry is no longer a nascent or untested market. *See infra* APL-F94–100. In fact, it is clear that there is tremendous consumer demand for the convenience of interactive streaming, which for many users is a substitute for digital downloads of music. *See infra* APL-F46–51, 168–176. It also is clear that interactive streaming services have invested **Example 1** to develop cutting edge platforms that make music seamlessly available to consumers in a way that was hard to even imagine in the not so distant past. *See infra* APL-F11–33. There can be no doubt that such investments have greatly benefitted music publishers and songwriters, as the interactive streaming platforms encourage consumers to discover and listen to more music than ever before. *See infra* APL-F14–25, 34–39, 54–64. Conversely, the existence of high quality music undoubtedly has made interactive streaming more desirable to consumers. *See infra* APL-F11–25, 46–51. Any rate plan needs to reflect this mutually beneficial and interdependent relationship between the rights holders and the services, which is reflected in the Section 801(b) factors.

APL-F3. Apple is uniquely positioned to make such a proposal. Apple has been a leader in the digital music industry since 2003 when it launched the iTunes Music Store and provided a fair, simple and transparent way for people legally to obtain digital music. 3/22 Tr. (Dorn) 2445:6-21; 2481:23-2482:21; *see infra* APL-F12–13. This service radically improved the digital music industry, thus benefitting consumers, copyright holders, and Apple. 3/22 Tr. (Dorn) 2445:6-21; *see infra* APL-F12.

APL-F4. Inspired by its experience with iTunes, Apple's proposal for interactive streaming in this proceeding is similarly fair, simple and transparent, and reflects the next iteration in Apple's leadership. 3/22 Tr. (Dorn) 2481:11-2482:21. It recognizes that music has an inherent value, such that publishers and songwriters should be fairly, and consistently, compensated, but also considers that services, like Apple Music, provide a great benefit to consumers and to publishers and songwriters. Ex. 1611 (Dorn WDT) ¶¶ 5-7. Apple's proposal shares the best ideas of both the Copyright Owners' proposal and those of other services, and accomplishes the necessary balancing, providing the best answer to the challenging question of what royalty structure should be adopted and what the particular rate should be.

APL-F5. In short, Apple proposes eliminating the current multi-pronged, revenuebased royalty structure with ten different rates for ten different types of services that was enacted when the interactive streaming industry was in its untested infancy. *See infra* APL-F65–85. The current structure has led to numerous, well-documented problems, with the payment that publishers and songwriters receive for the same song varying wildly from month-to-month and service-to-service because the payment is dependent upon the service's revenue and the service category into which the service falls, rather than on demand for their songs. *See infra* APL-F71– 85. This complex royalty structure and lack of transparency have led to the dissatisfaction and

frustration of songwriters. *See infra* APL-F76–77. To solve these problems, Apple proposes a single all-in per-play rate of \$0.00091, from which performance royalties may be deducted to determine the total mechanical royalties owed, for all services. Ex. 1611 (Dorn WDT) ¶¶ 5-7; 3/22 Tr. (Dorn) 2476:14-2486:8, 2496:14-19.

APL-F6. Apple's per-play proposal has many benefits. It brings streaming in line with the traditional compensation model for music distribution—on a per-unit basis. *See infra* APL-F107–111. It also links the compensation paid for the use of a song to the demand for that song, leading to a predictable, transparent, easy-to-use system that provides fair compensation, rather than rates that vary widely across services and time periods. *See infra* APL-F102–106, 112–119. Further, it is business model agnostic, meaning that it can apply to all types of interactive streaming business models. Although some services do not have **1**, and others do not have subscribers, every interactive streaming service allows users to play songs. *See infra* APL-F40–45. But what makes Apple's proposal particularly appropriate is that these virtues work to the benefit of all participants in the interactive streaming industry.

APL-F7. Under Apple's proposal, services are incentivized to make music available to the public because there is a predictable cost structure. *See infra* APL-F112–114, 148–149. The services know that if they devise an attractive platform with features that appeal to consumers, after compensating the publishers and songwriters for the use of their music, they will be able to reap the upside and receive a fair return for the risks they have incurred and their investments in and contributions to the music industry. *See infra* APL-F118–119. The publishers and songwriters, on the other hand, can create music with the knowledge that any time a consumer listens to a song—which is the key contribution the publishers and songwriters make to the interactive streaming market—they will receive a fixed and fair return. *See infra* APL-

F113–114. Certainty and transparency create incentives for songwriters to write music, and protect songwriters and publishers from the business risks the services may choose to take. *See infra* APL-F116–117. And, of course, the publishers and songwriters also share indirectly in the upside of the services' investments, as the more innovations the services create to encourage people to listen to music, the more compensation publishers and songwriters will receive and the less likely consumers will resort to piracy. *See infra* APL-F34–39, 118.

APL-F8. Apple's proposal provides all of these benefits without disruption to the interactive streaming, publishing, or songwriting industries. *See infra* APL-F107–111, 145–149, 252–259. That is because Apple's proposal is structurally tied to the fair, established statutory download rate that already is accepted and used by the industry, and which reflects the 801(b) objectives that the CRB must apply. *See infra* APL-F168–186. Apple merely converted this rate to a rate for interactive streaming using industry developed conversion ratios, arrived at without bias or a litigation slant, upon which everyone in the industry—including NMPA—relies. *See infra* APL-F187–220. Moreover, multiple experts in this proceeding for other services rely on these conversion ratios, which also have been corroborated by independent academic research conducted over a two-year period using ample data by respected scholars. *See infra* APL-F212, 221–228. The particular rate Apple is proposing also is consistent with the

, and thus ensures that interactive streaming will continue to be an area of **Control of** for publishers and songwriters, while ensuring services the opportunity to profit from their investment and innovation. *See infra* APL-F252–259. Finally, adopting a rate based on a conversion from downloads to interactive streaming reflects the reality that streaming has become a substitute for digital downloads. *See infra* APL-F170– 175.

APL-F9. By contrast, while agreeing with Apple that a per-play rate now makes sense, the Copyright Owners' proposal goes on to undermine the per-play principle. It adds a per-user rate prong (of \$1.06 per user), and proposes a mechanical-only royalty and an excessively high per-play number (*i.e.*, \$0.0015, which is

). *See infra* APL-F281–326. Notably, the Copyright Owners' rate is derived by using an unprecedented, made for litigation methodology that is inconsistent with both logic and industry practice. Among other things, the Copyright Owners' benchmarking methodology

. See infra APL-

F346–353, 411–421, 443, 450. It also is premised on the fundamental error of using noncomparable sound recording royalties in order to devise a rate for musical works, while tellingly ignoring far more analogous digital download royalty benchmarks in order to justify unmerited higher rates. See infra APL-F330–338. The Copyright Owners' proposal, if enacted, would undermine the ability of services to continue providing innovative and varied interactive streaming. See infra APL-F313–318. It also would essentially eliminate the incentives for companies to provide locker services, as the Copyright Owners' plan would require locker services to make royalty payments equal to those for interactive streaming even when a consumer already owns the work. See infra APL-F314, 461–463. That means that for Apple to allow a consumer to redownload a song he or she already purchased from Apple, Apple would have to pay \$1.06 in mechanical royalties for that redownload (under the per-user prong), even though the publisher and songwriter received only \$0.091 in mechanical royalties when the song was purchased. In other words, the royalty for redownloading the song is 1,165% higher than the royalty for purchasing that same song. See generally infra APL-F291. Such overreaching is particularly inappropriate given the fact that downloads and interactive streams are well

recognized as substitutes, yet the Copyright Owners are seeking to put themselves in a materially different position with regard to the digital distribution of interactive streams. This transparent pursuit of an immediate windfall would come at the expense of the long-term health of the industry, threatening the availability of music through interactive streaming and making everyone the poorer.

APL-F10. Thus, Apple respectfully requests that the CRB conclude, after reviewing Apple's Findings of Fact and Conclusions of Law and the evidence and law cited herein, that Apple's rate proposal should be adopted.

#### II. THE ROLE OF INTERACTIVE STREAMING SERVICES

## A. Interactive Streaming Services Play a Vital Role in Making Music Available to Consumers

APL-F11. Interactive streaming services play a key role in making music available to consumers. *See* Ex. 1617 (Ghose WDT) ¶¶ 49-50. Consumers used to have to travel to a store and hope that it had the CD or cassette in stock that they wanted to buy. *See* 3/22 Tr. (Dorn) 2444:19-25; Ex. 1615 (Ramaprasad WDT) ¶¶ 50-51. Now, with the advent of digital technology, music is available much more conveniently. Ex. 1615 (Ramaprasad WDT) ¶¶ 52-53.

APL-F12. Apple was a pioneer in the digital music revolution. 3/22 Tr. (Dorn) 2445:13-21; Ex. 1611 (Dorn WDT) ¶¶ 16-17; Ex. 1615 (Ramaprasad WDT) ¶ 53. Through the creation of the iTunes platform in 2003, Apple facilitated the same reliable access to music through downloads that consumers used to get from purchasing physical copies, but with more ease. *See* Ex. 1615 (Ramaprasad WDT) ¶ 53. The iTunes Music Store provided (and continues to provide) both convenience to consumers, and a boon to music creators because downloads were a good alternative to piracy and showed that people were willing to pay for digital music.

See 3/22 Tr. (Dorn) 150:3-18; Ex. 1615 (Ramaprasad WDT) ¶ 53; Ex. 3027 (Eisenach WDT) ¶ 43 ("Most notable of the digital music stores was the Apple iTunes store, which launched . . . with the backing of the major music labels" and "[t]he creation of legitimate retail markets for digital music led to the gradual decline of digital music piracy.").

APL-F13. Interactive streaming services were the next big innovation in providing digital access to music. *See* 3/22 Tr. (Dorn) 2444:19-2445:25, 2446:21-2447:8, 2448:4-2450:10. Although, as discussed *infra* APL-F40–45, the services may vary in the business models they use or the features they offer, one thing they all have in common is that they make it possible for consumers to listen to the songs they choose without the inconvenience of visiting a store, carrying a CD, filling hard drive space with downloads, or synching music collections across devices. *See* Ex. 1615 (Ramaprasad WDT) ¶ 19; Ex. 1617 (Ghose WDT) ¶ 50. As Mr. Israelite, NMPA's President and Chief Executive Officer, testified, "there is no doubt that [interactive streaming services] have increased the availability of works . . . it is certainly more accessible than if you were to try to find a physical version of those 40 million songs, no question." 3/29 Tr. (Ghose) 2843:21-25; 4/12 Tr. (Ghose) 5689:7-25; 3/15 Tr. (Leonard) 1101:24-1102:9, Ex. 698 (Leonard WRT) ¶ 161.

#### B. Interactive Streaming Services Provide Many Creative, Innovative Features That Benefit Consumers and Copyright Holders

APL-F14. Although providing access to music is a key aspect of what they do, interactive streaming services are not only repositories of music, in the way that a library is a repository of books, nor are they simply data exchange pipelines, in the way that a phone company provides connectivity. Rather, it is important to remember that services, like Apple Music, provide a host of innovative features of their own, some of which are copyrightable, that

make music more accessible, discoverable, and appealing to consumers. *See* Ex. 1615 (Ramaprasad WDT) ¶¶ 68-71 & Table 4; Ex. 1611 (Dorn WDT) ¶¶ 36-57, 60; 3/22 Tr. (Dorn) 2459:23-2461:11, 2468:14-2471:13, 2468:14-2471:13; Ex. 886 (Katz WRT) ¶ 217; Ex. 1443 at 9 (International Federation of the Phonographic Industry reporting that "[t]he consumer is now being offered an incredible array of music experiences and artists have more opportunities to reach the widest possible audience."); Ex. 132 (Hubbard WRT) ¶ 2.13.

APL-F15. **Ease of Use.** Interactive streaming starts with an engaging, easy to use, interface. Ex. 1611 (Dorn WDT) ¶ 5; see also Ex. 321 ¶ 21. Apple Music has been at the forefront in this area, building a stylish, intuitive graphic user interface that provides seamless access to all of Apple Music's features. 3/22 Tr. (Dorn) 2460:20-2461:11; Ex. 1611 (Dorn WDT) ¶ 5, 35-36, 41, 43, 57. Consumers can easily toggle from searching for music to listening to Apple's Beats 1 radio station. See 3/22 Tr. (Dorn) 2460:2-2461:11. They also can create playlists and a library of music with their favorite songs from Apple Music's catalog. Ex. 1611 (Dorn WDT) ¶¶ 11, 42-47; see also Ex. 693 (Joyce WDT) ¶ 6 (describing Google Play Music's playlist feature); Ex. 1061 (Page WDT) ¶ 50 (describing Spotify's playlist feature). Consumers can even access their private music collections that are stored on their devices from within the Apple Music application. Ex. 1611 (Dorn WDT) ¶ 38. This unified music platform, which Apple created through its own ingenuity and technological innovation, makes access to music easy and provides substantial value to consumers. See 3/22 Tr. (Dorn) 2468:14-2469:3; Ex. 1611 (Dorn WDT) ¶¶ 38-54; Ex. 321; see also Ex. 321 ¶ 32 ("We can put as much music in [Rhapsody's] catalog as possible, but if subscribers cannot easily find what they are looking for, the service loses value for them.").

APL-F16. <u>Music Discovery & Promotional Tools.</u> Music curation and discovery are other key features that interactive streaming services provide. *See* 3/22 Tr. (Dorn) 2470:7-2471:13. For example, Apple Music employs a large editorial team of experts from around the world to create playlists for its subscribers. 3/22 Tr. (Dorn) 2470:7-2471:1; Ex. 1611 (Dorn WDT) ¶¶ 11, 50-52. It also provides personalized recommendations to its subscribers using input from its editorial staff and sophisticated software which creates user "taste profiles" that update based on a subscriber's listening behavior. 3/22 Tr. (Dorn) 2470:7-2471:13.

APL-F17. Other services also place considerable emphasis on playlists and other music discovery tools. *See, e.g.*, Ex. 880 (Herring WDT) ¶¶ 19, 23-24 (describing Pandora's Music Genome Project Algorithm, collective intelligence algorithms, and collaborative filtering algorithms); Ex. 1 (Mirchandani WDT) ¶¶ 20, 24, 56, 64 (describing Amazon playlists); Ex. 693 (Joyce WDT) ¶ 7 (describing Google's ability to generate playlists of "celebratory," "introspective," or "working out" songs); Ex. 1061 (Page WDT) ¶ 74 (describing Spotify's curated mood-based playlists); Ex. 22 (Hubbard WDT) ¶ 3.9; Ex. 132 (Hubbard WRT) ¶ 2.18 (describing Amazon Prime Music's "handcrafted" and "expert-curated" playlists).

APL-F18. These music curation and discovery features are very popular with consumers. Ex. 1611 (Dorn WDT) ¶ 55. For example, the "For You" section of the Apple Music application, where users can find the recommendations that Apple Music creates and provides, is "the most accessed part of [Apple Music.]" 3/22 Tr. (Dorn) 2471:2-13; *see also* Ex. 1615 (Ramaprasad WDT) ¶ 74 (Spotify's Discover Weekly playlists reportedly had 40 million users streaming 5 billion streams during the feature's first 10 months alone); Ex. 1572.

APL-F19. Music curation and discovery features also benefit copyright holders tremendously because they promote music to consumers. For example, interactive streaming

services help many lesser-known and "niche" artists who are underserved by traditional music distribution channels find an audience. *See, e.g.*, Ex. 1064 (Lucchese WDT) ¶¶ 31-38 (music discovery tools "democratize music promotion and discovery"); Ex. 1615 (Ramaprasad WDT) ¶¶ 6, 48, 72-73; Ex. 1061 (Page WDT) ¶¶ 68, 75-81. For example, Spotify has found that artists on its "Fresh Finds" music discovery playlists, which focus on lesser-known artists, gain more listeners after their Fresh Finds debut. Ex. 1064 (Lucchese WDT) ¶ 34.

. Ex. 1065 (Marx WDT)

¶ 51. Academic research also shows that because streaming services encourage discovery of new music, interactive streaming consumers listen to a wider variety of music, which increases the likelihood that music will find an audience and earn revenue as a result of streaming. Ex. 1617 (Ghose WDT) ¶ 50; Ex. 201 at 27, 29.

APL-F20. Interactive streaming services also help foreign artists reach U.S. audiences, and vice versa, thus opening new markets to artists, songwriters, and publishers around the world. Ex. 1615 (Ramaprasad WDT) ¶¶ 6, 48, 72-77; Ex. 1611 (Dorn WDT) ¶ 35, 57; Ex. 1061 (Page WDT) ¶¶ 3, 75-81, 89; Ex. 1064 (Lucchese WDT) ¶¶ 17-42; Ex. 880 (Herring WDT) ¶¶ 39-42; Ex. 1066 (McCarthy WRT) ¶ 22.

APL-F21. In addition, interactive streaming services extend the longevity and revenue earning potential of songs in the back catalog. For example, according to a Goldman Sachs report, "[s]treaming 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." Ex. 973 at 37; *see also* Ex. 1615 (Ramaprasad WDT) ¶ 69

(describing Nielsen report indicating that subscribers to interactive streaming services skew toward "catalog" music, while sales reflect purchases of more "current" content).

APL-F22. Engagement Features. Interactive streaming services also provide many features that create communities for music enjoyment and deepen their engagement with music. 3/22 Tr. (Dorn) 2473:25-2474:19. For example, Apple Music subscribers can share songs, albums, and playlists with one another. 3/22 Tr. (Dorn) 2473:25-2474:10; Ex. 1611 (Dorn WDT) ¶ 69. They also can follow artists on the Connect feature, which enables artists to post messages directly to their fans. 3/22 Tr. (Dorn) 2473:25-2474:19; Ex. 1611 (Dorn WDT) ¶ 59. Apple created Connect after years of people in the industry asking Apple for a feature that would allow artists to communicate with their fans. 3/22 Tr. (Dorn) 2473:25-2474:19. These engagement features create a deeper connection with music and enhance the relationship between artists and their fans, to the benefit of all copyright holders. Ex. 1611 (Dorn WDT) ¶ 60.

APL-F23. Other services also offer social engagement features such as integration with existing social networks and the ability to share music with one another. Ex. 885 (Katz WDT) ¶ 38. Spotify, for example, allows its users to share playlists and reports that half of its users "stream from other users" playlists at least monthly." Ex. 1615 (Ramaprasad WDT) ¶ 74; Ex. 1515. Recently, former President Obama released his personal playlist on Spotify, which became the most listened-to user-generated playlist on the service within 24 hours. Ex. 2965.

APL-F24. <u>Other Features.</u> In addition to a user platform, music discovery and curation, and social engagement features, interactive streaming services provide a variety of other appealing features to users. Some services offer enhanced sound quality. Ex. 885 (Katz WDT) ¶ 38 & n.49. Others offer compatibility with a broad array of devices. Apple Music, for

example, can be used on Android operating systems, Apple Watch, iPhone, PCs, and the Sonos sound system, with a user's playlists and preferences flawlessly transferring from one device to the other. Ex. 1611 (Dorn WDT) ¶ 18. Many subscription services also offer limited or "tethered" downloads that allow subscribers to temporarily download music and listen to it "offline" without an internet or mobile connection. Ex. 1615 (Ramaprasad WDT) ¶ 19, 22, Table 2; Ex. (Dorn WDT) ¶ 18; 3/22 Tr. (Dorn) 2469:19-24701:6.

APL-F25. Through these various features, interactive streaming services attract users and differentiate themselves from one another. *See, e.g.*, 3/22 Tr. (Dorn) 2474:20-24; Ex. 22 (Hubbard WDT) ¶¶ 2.14, 2.18; Ex. 695 (Leonard WDT) ¶ 120. For example, a consumer may prefer Apple's human-curated playlist to Pandora's algorithmic recommendations. Or a consumer may prefer a service that integrates with third-party social media platforms to one with a more contained social structure. Through a diverse array of products and features, interactive streaming services ensure that all consumers can find a service and the features that they want from a streaming application.

#### C. Providing the Technological Functionality to Operate an Interactive Streaming Service and the Creative Additional Features Come at a Cost

APL-F26. It cannot be overemphasized that creating, developing, and providing the technological infrastructure necessary to offer an interactive streaming service, as well as additional innovative features, constitute an expensive and risky undertaking that would not be possible without the great commitment of interactive streaming services. As David Dorn, the Senior Director of Apple Music, explained, "there is a great deal more that goes into the investment. There are obviously costs for design, for software engineering, marketing, the product development of how it integrates across all of [a service's] ecosystem, and different device support, so there is quite a bit that goes into it that sits behind the scenes . . . ." 3/22 Tr.

(Dorn) 2455:20-2456:13; *see also* Ex. 1611 (Dorn WDT) ¶¶ 35-36; Ex. 1 (Mirchandani WDT) ¶ 55; Ex. 695 (Leonard WDT) ¶ 98; Ex. 1063 (Harteau WDT) ¶¶ 5-18; 3/23 Tr. (Ghose) 2847:22-2848:7.

APL-F27. **Infrastructure, Personnel, and Administration.** Interactive streaming services must take on substantial costs just to operate and promote their services. For example,



. Ex. 1 (Mirchandani WDT) ¶¶ 55, 65. Pandora spent over \$100 million, including acquisitions, to redesign its non-interactive service into an interactive service prior to it even launching. *See* Ex. 880 (Herring WDT) ¶ 46.

APL-F28. Personnel requirements for interactive streaming services also are significant. Product teams alone may involve hundreds of dedicated employees, including data scientists, software engineers, quality assurance engineers, project managers, product analysts, product designers, researchers, and algorithmic technologists. Ex. 877 (Phillips WDT) ¶ 36; Ex. 696 (Pakman WDT) ¶ 39. Further, establishing a national or international global streaming network with low-latency music streaming in high fidelity to thousands of different devices may require hundreds of engineers and network operations experts. Ex. 696 (Pakman WDT) ¶ 39.

APL-F29. Interactive streaming services also have substantial costs from data tracking, analysis, and reporting compliance for copyright holders. For example, Pandora spent \$25 million to acquire Next Big Sound, an online music analytics and insights tracking program, which it believed was "a key element of [its] strategy to develop interactive features" and "to

satisfy certain reporting requirements contained in our direct licenses with sound recording and musical work copyright holders." Ex. 880 (Herring WDT) ¶ 44.

APL-F30. <u>Value-Add Features.</u> The value-added features that services provide, such as personalized playlists, curated programming, and recommendation and discovery tools, come at significant cost. Ex. 1 (Mirchandani WDT) ¶¶ 57, 64; Ex. 885 (Katz WDT) ¶ 38; Ex. 696 (Pakman WDT) ¶ 39. For example, Mr. Herring testified that Pandora invested over in its Music Genome Project, which it uses to create playlists on the fly based on a user's selection of a single song or artist as a starting point. Ex. 880 (Herring WDT) ¶ 20. As another

example, the annual cost of the data infrastructure for Spotify's personalized listening recommendations is an estimated **EXAMPLE**. Ex. 1063 (Harteau WDT) ¶ 16.

APL-F31. <u>Strategic Acquisitions</u>. Other costs of the value-added features can be seen through the strategic acquisitions interactive streaming companies have made. For example, Google acquired Songza in July 2014 for

, which it integrated into Google Play Music. Ex. 695 (Leonard WDT)
 115. Spotify acquired Echo Nest, a music data group that uses human skill, social curation, and algorithms to provide intelligent recommendations. Ex. 22 (Hubbard WDT) § 2.18.

APL-F32. Licensing Fees.

See, e.g., Ex. 1060 (McCarthy WDT) ¶ 21; Ex. 695

(Leonard WDT) ¶ 99; Ex. 696 (Pakman WDT) ¶¶ 22 & n.3, 26; Ex. 1065 (Marx WDT) ¶ 161; Ex. 693 (Joyce WDT) ¶ 15. For example, in 2015 Spotify paid 82% of its global revenue in licensing fees to record labels and music publishers—\$1.8 billion in royalties out of \$2.2 billion in revenue. Ex. 695 (Leonard WDT) ¶ 99; Ex. 696 (Pakman WDT) ¶ 26.

Ex. 1060

(McCarthy WDT) ¶ 21.

APL-F33. In addition to costs, there are risks associated with interactive streaming. Services have to make a substantial investment before they begin earning any income. *See* Ex. 880 (Herring WDT) ¶ 46. They also have to invest in features to attract consumers that may never catch on. And, as with all businesses, there is a risk that consumers will not like the product and the business will never recover its expenses. Ex. 1611 (Dorn WDT) ¶¶ 12, 67-68. This has been the fate of many interactive streaming services. For example, Samsung's Milk Music, JB Hi-Fi's Now, and Rara.com have shut down, and Rdio filed for bankruptcy in November 2015. Ex. 695 (Leonard WDT) ¶ 100.

# **D.** Interactive Streaming Services Have a Symbiotic Relationship with Copyright Holders

APL-F34. There is a symbiotic relationship between songwriters and publishers, on the one hand, and interactive streaming services, on the other hand. The existence of musical works helps fuel interactive streaming services, and publishers and songwriters benefit considerably from the investments and developments interactive streaming services have made and the risks that they have taken. *See* APL-F16–22, APL-F35–39.

APL-F35. Publishers and songwriters have neither the financial means nor the technological know-how to distribute music to consumers the way that interactive streaming services can. *See* Ex. 1617 (Ghose WDT) ¶¶ 47-49. Notably, labels and publishers have not succeeded in creating their own interactive streaming service. *See* Ex. 1617 (Ghose WDT) ¶ 56 (describing Sony's failed attempt to develop a streaming service). Indeed, if not for the interactive streaming services, it is unclear what the publishers' and songwriters' financial state would be, because many consumers likely would resort to "self-help" to obtain digital music via

piracy. *See, e.g.*, 3/29 Tr. (Israelite) 3769:5-8 (interactive streaming services have played "a positive role" in stemming piracy); 3/13 Tr. (Katz) 611:24-612:2 ("[S]treaming is replacing piracy"); Ex. 321 ¶¶ 56, 63-64. Even Mr. Israelite, NMPA's President and Chief Executive Officer admitted that digital services are "important partners" for publishers. 3/29 Tr. (Israelite) 3769:1-4.

APL-F36. Further, as described above, copyright holders prosper from the music discovery and engagement features that interactive streaming services provide. *See supra* APL-F16–22. These features lead interactive streaming users to listen to a greater variety of music, and to consumer more music overall. Ex. 1615 (Ramaprasad WDT) ¶¶ 70-71 ("academic research has found that interactive streaming leads to a 43% increase in overall music consumption"); *see also* Ex. 1061 (Page WDT) ¶ 72

(emphasis in original)),  $\P$  89 ("Spotify benefits artists and songwriters by increasing the diversity and amount of music listened to by users.").

APL-F37. Interactive streaming also encourages subscribers to listen to a greater variety of music. Ex. 1617 (Ghose WDT) ¶ 50; *see also* Ex. 321 ¶ 27 (describing market research showing that the top 100 artists accounted for 48.5% of sales at physical retailers, 33% at online download stores iTunes, 28% on peer-to-peer networks, and only 24% on Rhapsody's interactive service). Through music curation, music recommendations, and music engagement tools, interactive streaming services "help[] music publishers unearth new revenue streams" and enhance consumer engagement with music and artists. Ex. 221 at 5; Ex. 132 (Hubbard WRT) ¶ 3.11 & n.79; Ex. 1611 (Dorn WDT) ¶ 57.

APL-F38. Interactive streaming services also

. Ex. 880 (Herring WDT) ¶ 42; Ex. 1611 (Dorn WDT) ¶¶ 58-62; Ex. 1061 (Page WDT) ¶¶ 82-86; Ex. 1064 (Lucchese WDT) ¶¶ 4-16.

> . *Id.* ¶ 62. Interactive streaming services also . 4/3 Tr. (Brodsky) 4527:7-4528:22; 3/27 Tr. (Kokakis)

3278:7-3279:1.

APL-F39. In sum, as a result of interactive streaming services, the music community has a wider, more engaged audience than ever before, as well as a viable alternative to piracy. *See* 3/22 Tr. (Dorn) 2473:19-24 Ex. 1611 (Dorn WDT) ¶¶ 30, 61; 3/13 Tr. (Katz) 611:24-612:2. Given the mutually beneficial relationship between interactive streaming services and publishers and songwriters, and the important role they each play in making music available to consumers, the royalty rate needs to balance the contributions of each. Ex. 1617 (Ghose WDT) ¶¶ 46-59.

#### **III. THE CURRENT STATE OF THE INTERACTIVE STREAMING INDUSTRY**

## A. The Current Interactive Streaming Industry Is Comprised of a Wide Variety of Services Operating Under a Range of Business Models

APL-F40. The interactive streaming industry is made up of a diverse array of companies, including "pure play" companies, like Spotify, and diversified companies, like Amazon, Google, and Apple. *See* Ex. 1615 (Ramaprasad WDT) ¶ 21 & Table 2. These companies have developed a wide variety of business models to provide their services to consumers and appeal to a broad audience. *Id*.

APL-F41. One business model is a subscription service, which allows consumers to stream music in exchange for a monthly fee. Ex. 1615 (Ramaprasad WDT) ¶ 20. Subscription services range from \$3.99 per month for Amazon's Unlimited for Echo to \$19.99 per month for

Tidal Hi Fi, with most services costing \$9.99 per month for an individual plan. Ex. 1 (Mirchandani WDT) ¶ 25; Ex. 1615 (Ramaprasad WDT) ¶ 21 & Table 2.

APL-F42. In addition to individual plans, many subscription services offer discount plans, such as student plans for college students and group plans for families. Ex. 1615 (Ramaprasad WDT) ¶ 21 & Table 2; Ex. 1611 (Dorn WDT) ¶ 19. Some services, such as Apple Music, also offer free trial periods to subscribers. Ex. 1611 (Dorn WDT) ¶ 19. These discount plans provide substantial value to publishers and songwriters because they attract new users to interactive streaming products. 4/3 Tr. (Rysman) 4406:19-23; 3/22 Tr. (Dorn) 2458:10-2459:11; 3/13 Tr. (Joyce) 777:19-780:6 (consumers are more likely to convert after a free trial).

APL-F43. Another business model is an ad-supported service. Ex. 1615 (Ramaprasad WDT) ¶ 20. An ad-supported service is free to the user and generates revenue through advertising. Ex. 1615 (Ramaprasad WDT) ¶ 20. Unlike subscription services, adsupported services do not receive a subscription fee from users. *See* Ex. 1615 (Ramaprasad WDT) ¶ 20. Thus,

Ex. 3026 (Rysman WDT) ¶ 27; Ex.

877 (Phillips WDT) ¶¶ 33-35; Ex. 1066 (McCarthy WRT) ¶ 18 (discussing how Spotify uses metric that calculates ad revenue per 1,000 hours of listening).

APL-F44. A third business model is bundling. See Ex. 22 (Hubbard WDT)  $\P$  3.3 (describing Amazon's business model). A bundled interactive streaming service is sold to consumers as part of a package that includes other products, such as Amazon Prime. *Id.* Although the company offering a bundled service may receive a subscription fee for the entire bundle, \_\_\_\_\_\_\_. 3/16 Tr. (Mirchandani) 1484:3-11.

APL-F45. Through these various business models, interactive streaming services serve a wide audience, providing music to both music aficionados and casual music fans, and meeting the needs of consumers with varying willingness to pay. Ex. 695 (Leonard WDT) n. 136; Ex. 22 (Hubbard WDT) ¶ 1.6 ("By offering a diversity of digital music service offerings, the digital music industry serves many consumer segments, measured either in terms of willingness and ability to pay, or in terms of preferences for particular features embodied in each service.").

#### B. Consumer Demand for Interactive Streaming Is High

APL-F46. There is high consumer demand for interactive streaming, as shown in the growth of streams, subscribers, and revenue. *See* 3/21/17 Tr. (Hubbard) 2198:4-20; *see also* Ex. 1615 (Ramaprasad WDT) ¶ 62 ("The interactive streaming service industry has grown substantially since its early days, in terms of number of users, number of paying users, revenues, and number of services available.").

APL-F47. First, the number of streams on interactive services has increased significantly since the first services launched, and will likely continue doing so. At trial, Apple's music industry expert, Professor Jui Ramaprasad, Ph.D., testified about the Copyright Owners' Demonstrative 4, which illustrates that the number of total streams has increased over time<sup>1</sup>:

<sup>&</sup>lt;sup>1</sup> Note that the demonstrative suggests that Pandora's interactive streaming service has not launched because the service had not launched at the start of the hearing. 3/9 Tr. (Phillips) 397:1-15 (explaining at trial that Pandora Premium was just "weeks away" from launching).



3/22 Tr. (Ramaprasad) 2592:23-2593:15; *see also* Ex. 1611 (Dorn) ¶ 25 ( ; Ex. 1436

APL-F48. Second, interactive streaming services have experienced substantial growth in the number of subscribers and users. *See* 3/22 Tr. (Ramaprasad) 2593:16-2594:12. As illustrated below in Figure 2 from Professor Ramaprasad's written direct testimony, industrywide figures show that the number of paid subscribers has increased steadily since 2011, and those trends are expected to continue:


FIGURE 2: Paid Subscriptions to Streaming Music Services in the U.S., 2011 – 2021

Ex. 1615 (Ramaprasad WDT) ¶ 58 & Figure 2.



streaming. For example,
. Ex. 1611 (Dorn WDT) ¶¶
24, 31 See Ex.
1060 (McCarthy WDT) ¶ 6 (
); Ex. 694 (Alyeshmerni WDT) ¶ 9 (
). Further, subscribers have been converting from non-paying accounts to paying
accounts at an increasing rate, as illustrated below in Figure 3 from Professor Ramaprasad's

written direct testimony:



FIGURE 3: Conversion Rates of Ad-Supported Users into Premium Subscribers Spotify: December 2012 – December 2015

Ex. 1615 (Ramaprasad WDT) ¶ 59 & Figure 3.

APL-F50. Third, revenues from interactive streaming have increased significantly as well. For example, as illustrated by Figure 4 from Dr. Ramaprasad's written direct testimony, data from the RIAA shows that revenue from paid interactive streaming subscriptions has been increasing, and growing substantially since 2014:



Ex. 1615 (Ramaprasad WDT) ¶ 60 & Figure 4; see also Ex. 1438 (APL-010).

APL-F51. Thus, interactive streaming clearly is a growing industry, attracting new users and increasing revenue every day.

#### C. Interactive Streaming Services

APL-F52. Despite the growing consumer demand for interactive streaming,

. See Ex. 973 at 66; Ex. 885 (Katz WDT) ¶ 64;

Ex. 132 (Hubbard WRT) ¶ 6.14 n.159; Ex. 694 (Alyeshmerni WDT) ¶ 17; Ex. 695 (Leonard WDT) ¶¶ 98-101; Ex. 775. Interactive streaming continues to be a low gross margin industry.
3/22 Tr. (Pakman) Tr. 2301:16-22.

 APL-F53.
 For example, Spotify, the longest tenured interactive streaming services in

 this proceeding, had
 Image: Comparison of the stream of the

Ex. 1060 (McCarthy WDT) ¶ 17.

. Ex. 1611 (Dorn WDT) ¶ 21; Ex. 775. U.S.	
operations for Google Play Music have	
. Ex. 694 (Alyeshmerni WDT) ¶¶ 17-18. Tidal reportedly	
ost \$28 million in 2015, despite a 30% year-over-year increase in revenue with over 4 million	
baid subscribers. Ex. 695 (Leonard WDT) $\P$ 100. Deezer, which has approximately 6 million	
subscribers, is not profitable, and had to cancel a planned IPO in 2015. Id. Rhapsody had 2015	5
revenue of \$202 million, but reported a loss of \$35.5 million. <i>Id.</i> SoundCloud reportedly lost	
852 million in 2015. Ex. 886 (Katz WRT) ¶ 206.	
D. Publishers and Songwriters Have from Interactive Streaming	
APL-F54. Although interactive streaming services for the service	s,
bublishers and songwriters from interactive streamin	g.
See Ex. 1616 (Ramaprasad WRT) ¶ 64-68; see generally Ex. 1070 (Zmijewski WRT); Ex. 1691	Ĺ
Zmijewski WST).	
APL-F55.	
Royalties paid from streaming services to publishers and songwriters	
. Ex. 1048 at 2. Specifically,	
. Ex. 1048 at 2; 3/29 Tr. (Israelite) 3471:5-3743:16; see also Ex. 1616	
Ramaprasad WRT) ¶ 65.	
. Ex. 1048 at 2; Ex. 1616	
Ramaprasad WRT) ¶ 66.	
APL-F56.	I
. Moreover, although publishers have expressed concern that	

mechanical royalties from physical and digital phonorecord deliveries are decreasing, see, e.g.,

Ex. 3018 (Kokakis WDT) ¶ 72,
. Ex. 1048 at 2; <i>see also</i> Ex. 1615
(Ramaprasad WDT) ¶ 66; Ex. 1070 (Zmijewski WRT) ¶ 14; 4/12 Tr. (Zmijewski) 5765:4-7.
APL-F57. Specifically,
as noted above, <i>supra</i> APL-F55. Ex. 1048 at 1. <sup>2</sup>
Ex. 1048.
In other words.
. Ex.

1048 at 2; see also Ex. 1616 (Ramaprasad WRT) ¶ 65-67.

APL-F58. The extent to which royalties from interactive streaming (and other digital services that pay performance royalties) **Services** to publishers and songwriters overall can be seen in the below graphic from the written direct testimony of the financial accounting and financial economics expert Dr. Mark E. Zmijewski:





). APL-F59. Individual publisher data are consistent with these industry-wide trends. For example,





4/12 Tr. (Zmijewski) 5780:19-5781:16.

	. 4/12 Tr. (Zmijewski)
5780:19-5781:16.	
APL-F60.	
	. Ex. 1048 at 1; Ex. 1616 (Ramaprasad WRT) ¶¶ 14, 68.

. 4/12 Tr. (Zmijewski) 5765:18-

5766:5.



4/12 Tr. (Zmijewski) 5765:18-5772:13.

APL-F61. . 4/12 Tr. (Zmijewski) 5766:6-17, 5769:17-5771:2.

4/12 Tr. (Zmijewski) 5766:6-17, 5769:17-5771:2.



4/12 Tr. (Zmijewski) 5766:6-17.

APL-F62.

. *See, e.g.*, Ex. 3017 (Kelly WDT) ¶¶ 1, 59; Ex. 3019

(Sammis WDT) ¶¶ 1, 50. In fact, these data show that the songwriters and publishers are significantly better off because of interactive streaming. *See* Ex. 1616 (Ramaprasad WRT) ¶¶ 64-68; Ex. 1070 (Zmijewski WRT) ¶¶ 10-17; Ex. 1691 (Zmijewski WST) ¶¶ 9-13.

APL-F63. Further, these data are consistent with one of the benefits that interactive streaming services provide, namely, promoting lesser known artists who have been disserved by traditional media, as discussed *supra* APL-F16–21. 4/12 Tr. (Zmijewski) 5772:7-13. As shown in the demonstratives above, among the individual music publishers who produced data in this proceeding,

	. 4/12 Tr.
(Zmijewski) 5770:12	2-5771:2.
	. 4/12 Tr. (Zmijewski) 5772:7-13.
APL-F64.	In sum, contrary to the Copyright Owners' lamentations, the evidence
shows that	
	. <i>See</i> Ex. 1616 (Ramaprasad WRT) ¶¶ 64-

68; Ex. 1070 (Zmijewski WRT) ¶¶ 10-17; Ex. 1691 (Zmijewski WST) ¶¶ 9-13; Ex. 1048.

## IV. THE CURRENT ROYALTY RATE STRUCTURE IS PROBLEMATIC

APL-F65. The current rate structure is highly problematic because it is overly complex, economically unsound, and unpredictable. As discussed below, these combined problems have resulted in a loss of trust and overall dissatisfaction with interactive streaming among songwriters in general, and in some instances have caused artists to refuse to license their work for interactive streaming. *See infra* APL-F66–85.

## A. The Current Structure Is Too Complex

APL-F66. It cannot credibly be disputed that the current Subpart B and Subpart C rates for interactive streaming and locker services are extremely complicated. Ex. 1617 (Ghose WDT) ¶¶ 26-31; 3/23 Tr. (Ghose) 2585:1-9; *cf.* 3/8 Tr. (CO Opening Statement) 89:13-92:9. They include 10 different rates that correspond to 10 different types of offerings. 37 C.F.R. §§ 385.10-385.26. An illustration of the calculation for just one of the current rate categories—Standalone Portable Subscriptions, Mixed Use—is shown below:



<u>https://www.harryfox.com/documents/rate\_charts/s\_p\_s\_mu.pdf</u> (last accessed Oct. 14, 2016).

Ex. 3027 (Eisenach WDT) ¶ 20 & Figure 1.

Similar rate charts exist for each of the other nine categories to help make sense of the complex rate calculations. Ex. 846.

APL-F67. Across the ten different rate categories, there are roughly 79 different calculations that can be made. *See* 37 C.F.R. § 385, Subparts B–C. Each category requires the calculation of an all-in headline rate based on a percentage of a service's revenue. *Id.* It also requires calculations of the alternative prongs involving per-subscriber minima and/or a rate based on a percentage of the royalties paid for sound recordings, which may kick in instead of the percentage of revenue prong depending on the results of various "greater of" and "lesser of" determinations. *Id.* Once the all-in royalty pool is determined, the mechanical royalty pool is

calculated by subtracting performance royalties from this all-in pool. *Id.* Further, four of the ten rate categories have a mechanical-only floor, which services must pay if the mechanical royalty calculated using the all-in pool is less than the mechanical royalty calculated using the mechanical-only floor. *Id.* 

APL-F68. This complexity creates several problems. The calculation of royalty payments is not transparent or easy to understand, so publishers and songwriters typically have no idea why they are receiving the amount they are receiving from a given service in a given month. 3/22 Tr. (Dorn) 2477:5-2478:2; Ex. 1613 (Wheeler WDT) ¶¶ 15-16; Ex. 1617 (Ghose WDT) ¶ 81; Ex. 1611 (Dorn WDT) ¶ 8. The determination of what is or is not revenue also is opaque to publishers and songwriters, and could be subject to a variety of definitions, which creates further confusion. Ex. 3026 (Rysman WDT) ¶ 43-45, 53; 3/23 Tr. (Ghose) 2858:24-2859:16; Ex. 1617 (Ghose WDT) ¶¶ 76-82.

APL-F69. The overly complex rate structure also creates uncertainty for services, who may find it difficult to predict which prong of the current rate structure will kick in in any given month. 3/23 Tr. (Ghose) 2865:12-24. It

. See Ex. 1613 (Wheeler WDT) ¶¶ 5, 9-14, 16); 3/23 Tr.

(Ghose) 2865:12-24; Ex. 1617 (Ghose WDT) ¶¶ 76-82. In order to calculate the payments they must make under the relevant rate structure, services must track numerous data points, including the number of subscribers, the number of plays, sound recording royalty payments, and monthly revenue. 37 C.F.R. §§ 385.10-385.26; 3/23 Tr. (Ghose) 2865:12-24. They also must engage in multi-step calculations every month to determine the amount of royalties they owe and the

royalty prong under which they will pay—which can vary from month to month. 37 C.F.R. §§ 385.10-385.26; *cf.* Ex. 1613 (Wheeler WDT) ¶¶ 5, 9-14, 16.

APL-F70. Finally, the complexity of the rate structure tends to stifle innovation around new pricing or distribution models, as services are incentivized to create businesses that fit into the ten pre-defined "boxes." *See* 37 C.F.R. §§ 385.10-385.26; 3/23 Tr. (Ghose) 2865:12-24; Ex. 1617 (Ghose WDT) ¶¶ 76-82.; *cf.* Ex. 3026 (Rysman WDT) ¶ 51 (royalty payments structures "should be neutral across distribution technologies, and should not bias the market toward one technology or another").

#### B. The Current Structure Is Economically Unsound

APL-F71. In addition to the practical problems discussed above, *see supra* APL-F66–70, the current structure is problematic because it is based on revenue. This is economically unsound because (1) the amount of the royalties paid to a songwriter or publisher is unrelated to the demand for their songs, which results in unpredictable variations in the amounts paid for streams of that song across services and months; and (2) it inappropriately allocates the risks and rewards of interactive streaming. Ex. 1617 (Ghose WDT) ¶¶ 60-70, 76-82.

### 1. The Current Structure Decouples Compensation from Demand, Leading to Inconsistent Payments and Per-Play Rates

APL-F72. From an economic perspective, because the value of a song, and the cost of creating it, does not change from one month to the next, or one service to the next, the royalty that is paid for each use of that song also should not change. *See* 3/23 Tr. (Ghose) 2863:16-2864:11; 3/22 Tr. (Dorn) 2478:15-2479:9; Ex. 1611 (Dorn WDT) ¶¶ 7, 33; Ex. 1615 (Ramaprasad WDT) ¶ 65. Under the current rate structure, however, the payment that publishers receive for a given song can and does vary wildly from month-to-month and service-to-service because the royalty depends on the service's revenue (as well as the particular statutory service

category into which the service falls), and not demand for the song as measured by the number of streams. 3/23 Tr. (Ghose) 2851:22-24, 2861:24-2863:15; 3/22 Tr. (Dorn) 2478:15-2479:9; Ex. 1617 (Ghose WDT) ¶¶ 64-65; Ex. 3026 (Rysman WDT) ¶ 52 (testifying that the current rate structure "does not directly link to the rights being licensed, whereas a per-performance rate does."); Ex. 1611 (Dorn WDT) ¶¶ 7, 33; Ex. 3014 (Israelite WDT) ¶ 39.

APL-F73. For example, as shown below in Apple Demonstrative 66 from the testimony of Apple's economic expert, Dr. Anindya Ghose, a stream of the same song on the same service may generate a different payment each month as the service's revenue fluctuates due to changes in usage and subscribership. Ex. 1617 (Ghose WDT) ¶ 64. Similarly, a stream on one service may generate a payment that is several times greater than the payment for the exact same song when streamed on a different service. 3/22 Tr. (Dorn) 2477:5-2478:2; Ex. 1617 (Ghose WDT) ¶ 65; Ex. 1611 (Dorn WDT) ¶¶ 7, 33; Ex. 3014 (Israelite WDT) ¶ 39.

Decouplin	g Demand and	Compensation
Demand:	Service A	Service B
Number Streams Revenue	1 million \$1 million	1 million \$1.5 million
Compensation:		
Per-Play Rate	A pays the <u>same</u> as B	B pays the <u>same</u> as A
Percentage Revenue	A pays <u>less</u> per stream than service B	B pays <u>more</u> per stream than service A
Source: Ghose WDT 1 65.		Apple Demonstrative 66

3/23 Tr. (Ghose) 2862:8-2863:15.

APL-F74. Another problem with the separation of demand and compensation under a revenue-based rate structure is that as the number of streams of a song increases (*i.e.*, the demand for it increases), the effective per-play royalty to the publisher and songwriter for that song can actually decrease. Ex. 3026 (Rysman WDT) ¶¶ 40, 57; Ex. 1611 (Dorn WDT) ¶ 33; Ex. 3014 (Israelite WDT) ¶ 39. In fact, as shown below in Apple Demonstratives 75 and 76 from Dr. Ghose's testimony,

. Ex. 1618 (Ghose WRT) ¶¶ 27-36; 4/12 Tr. (Ghose) 5709:19-

5710:12.





4/12 Tr. (Ghose) 5694:24-5696:7, 5698:20-5699:5 (incomplete data for 2016)

APL-F75. The current structure also causes this rate variability because it divides the services into numerous business model categories, which each have a different rate formula. See Ex. 3014 (Israelite WDT) ¶¶ 28-31, 33; 37 C.F.R. §§ 385.10-385.26. All interactive streaming services offer fundamentally the same thing—*i.e.*, the ability to stream any song in a service's catalog regardless of whether the consumer owns the song—but under the current royalty structure, they may pay very different royalty rates due to the business models they have chosen. 37 C.F.R. §§ 385.10-385.26.

APL-F76. This disconnect between the demand for a song and the value paid for the use of that song is not fair to publishers and songwriters. 3/22 Tr. (Dorn) 2477:5-2478:2; Ex. 3026 (Rysman WDT) ¶ 40. It creates uncertainty and mistrust between copyright owners and services, which can reduce incentives for the songwriters to write songs. 3/23 Tr. (Ghose) 2862:12-21; 3/22 Tr. (Dorn) 2477:5-2478:2, 2480:15-2481:10; Ex. 1611 (Dorn WDT) ¶ 33. Indeed, several high profile artists have repeatedly voiced their frustration with the variability in

streaming rates. 3/22 Tr. (Dorn) 2480:15-2481:10 (citing Prince and Adele as examples of artists who voiced such frustrations); 3/22 Tr. (Ramaprasad) 2600:6-2601:4.

APL-F77. Further, the mistrust that results from unpredictable and mysteriously fluctuating royalty payments may decrease the availability of music by causing songwriters who are also recording artists to withhold their catalogs from streaming. Indeed, while musical works are subject to compulsory mechanical licensing, there have been reports that songwriter-artists have withheld their sound recording rights from interactive streaming services. *See* Ex. 1538 (Kristin M. Hall, "In Wake of Spotify Pullout, Music Industry Debates Streaming," *The Seattle Times*, November 25, 2014) (reporting that Taylor Swift pulled her catalog from Spotify (not admitted for truth of the matter)); *cf.* Ex. 3026 (Rysman WDT) ¶ 51 (royalty payments structures "should be neutral across distribution technologies, and should not bias the market toward one technology or another").

## 2. The Current Royalty Structure Misallocates Risks and Rewards among the Industry Stakeholders

APL-F78. The current revenue-based royalty structure also is economically unsound because it inappropriately allocates the risks and rewards of the interactive streaming business between copyright holders and services. Ex. 1617 (Ghose WDT) ¶¶ 62-69; 3/23 Tr. (Ghose) 2864:15-2865:11; Ex. 1611 (Dorn WDT) ¶¶ 63-64, 69-70.

APL-F79. From an economic perspective, risks and rewards are appropriately aligned when (1) the services bear the downside risk of developing a service and then stand to reap the upside benefits if they are successful; and (2) the copyright holders are protected from the downside risk of an unsuccessful service, receive stable compensation for their songs, and indirectly share in the upside benefits that services create through increased demand. Ex. 1617

(Ghose WDT) ¶¶ 47-59; 3/23 Tr. (Ghose) 2848:11-2851:13. Under the current structure, however, both risk and reward are allocated inappropriately. Ex. 1617 (Ghose WDT) ¶¶ 62-69.

APL-F80. <u>First</u>, risk is misallocated under the current revenue-based structure because the amount that a service pays to copyright holders to use a song is not fixed, but instead can vary depending upon the service's business decisions about how it chooses to price its services. Ex. 3026 (Rysman WDT) ¶¶ 35-36. If a service chooses to defer revenue to the future, or adopt a loss leader strategy, publishers and songwriters will receive lower royalties now than they would have if the service focused on maximizing the revenue from interactive streaming today. Ex. 1617 (Ghose WDT) ¶¶ 66-67; Ex. 3026 (Rysman WDT) ¶¶ 35-36. In effect, the revenue-based structure forces publishers and songwriters to assume the same risk of revenue fluctuation as do the services, but without any control over how the services choose to operate their businesses. Ex. 1617 (Ghose WDT) ¶ 63; Ex. 3026 (Rysman WDT) ¶¶ 35-36, 39.

APL-F81. The problem of deferring revenue is particularly significant because of timing considerations: a popular songwriter today may not be popular tomorrow. Ex. 3026 (Rysman WDT) ¶ 50. For example, as the Copyright Owner's expert, Dr. Mark Rysman testified, data from 2010 to 2016 show that the artist Gotye experienced only a narrow window of heavy streams in 2012 for his then-ubiquitous hit "Somebody That I Used to Know":





Sources and Notes: Last.fm streaming of Gotye, an Australian-Belgian musician and singersongwriter. The figure above summarizes monthly aggregate global data for streams as sent to Last.fm over the last six years. See, Listening Trends – Months, <u>http://www.last.fm/music/Gotye</u> (last accessed Oct. 26, 2016).

#### Ex. 3026 (Rysman WDT) ¶ 50 & Figure 3.

A songwriter with an ephemeral hit will never benefit from a service's decision to defer revenue to the future. Ex. 3026 (Rysman WDT) ¶ 50. Similarly, a service may fail before any future revenue is realized, or monetize its use of music in ways that do not result in increased royalty payments. Ex. 3026 (Rysman WDT) ¶¶ 46-49.

APL-F82. Second, the current percentage-of-revenue structure also misallocates the rewards, or upside benefits, from interactive streaming. 3/23 Tr. (Ghose) 2864:15-2865:11; Ex. 1617 (Ghose WDT) ¶¶ 68-69. Services undertake many risky, welfare-enhancing investments when entering and operating in the interactive streaming market. 3/23 Tr. (Ghose) 2864:15-2865:11; Ex. 1617 (Ghose WDT) ¶ 55; Ex. 1611 (Dorn WDT) ¶¶ 34-62; Ex. 1615 (Ramaprasad WDT) ¶¶ 68-77. For example, they must make substantial investments in infrastructure and software, create new, appealing features in order to attract consumers to their services, and face the risk of being unable to recoup these substantial investments. *See, e.g.*, 3/23 Tr. (Ghose) 2864:15-2865:11; 3/22 Tr. (Dorn) 2473:7-18; Ex. 1617 (Ghose WDT) ¶¶ 55, 68; Ex. 1611 (Dorn

WDT) ¶¶ 34-63. Copyright holders do not incur any of these costs or risks. Their only risks are those they would have to take regardless of whether there were interactive streaming services, such as the risk that they will invest time and money in a song or songwriter that ultimately is not successful." *See* Ex. 1617 (Ghose WDT) ¶ 62. Because the services are the ones taking these risks, economic theory dictates that they should receive the upside reward when the risks pay off in the form of more customers. 3/23 Tr. (Ghose) 2864:15-2865:11; Ex. 1617 (Ghose WDT) ¶¶ 61, 68; *see also* Ex. 1611 (Dorn WDT) ¶ 66.

APL-F83. Under a percentage-of-revenue structure, however, publishers and songwriters share in the increased revenue that the interactive streaming services generate through their own innovation, even if that increase in revenue does not lead to an increase in the number of songs streamed. 3/23 Tr. (Ghose) 2864:15-2865:11; Ex. 1617 (Ghose WDT) ¶¶ 68-69; Ex. 1611 (Dorn WDT) ¶ 7. This is a problem because it reduces, if not eliminates, the increntive for services to innovate because any incremental revenue that they generate above and beyond the cost of a song is shared with the songwriters and publishers. Ex. 1617 (Ghose WDT) ¶ 68; 3/23 Tr. (Ghose) 2864:15-2865:11. In other words, with a percentage of revenue royalty structure, the interactive streaming services do not receive the full benefit of their innovation, which reduces the incentive to innovate in the first place. Ex. 1617 (Ghose WDT) ¶ 68; 3/23 Tr. (Ghose) 2864:15-2865:11.

\* \* \*

APL-F84. Given the problems described above, *see supra* APL-F71–83, rate structures like the current one that use revenue and business models as a basis for determining royalty payments are not appropriate. 3/23 Tr. (Ghose) 2861:15-23; Ex. 1617 (Ghose WDT) ¶¶ 60-70, 76-82.

### C. The Mechanical Floor In The Current Rate Structure Adds Uncertainty and Leads To Services Paying Royalties Well Above the "All-In" Amount.

APL-F85. As explained in greater detail below, *see infra* APL-F138–167, an additional problem with the current royalty rate structure is that it contains a mechanical "floor" for several service categories. Because interactive streaming services and music locker services acquire both mechanical and performance licenses from publishers and songwriters in order to operate their services, there is no economic or business rationale for a royalty rate with a mechanical-only floor. *See* Ex. 885 (Katz WDT) ¶¶ 87-94; Ex. 695 (Leonard WDT) ¶¶ 56, 76, 82; Ex. 1065 (Marx WDT) ¶¶ 135; Ex. 1612 (Dorn WRT) ¶¶ 15-18. All it does is increase total royalty payments to unjustifiably high levels and reduce predictability for services. *See infra* APL-F138–167.

#### V. APPLE'S RATE PROPOSAL FOR INTERACTIVE STREAMING

APL-F86. In order to address the problems with the current rate structure, Apple has proposed a mechanical royalty rate equal to an "all-in" per-play rate of \$0.00091 minus performance royalties for all non-fraudulent plays 30 seconds or longer for all interactive streaming and limited download services. 3/22 Tr. (Dorn) 2476:8-2477:4. Apple's rate is illustrated below by Apple Demonstrative 3, which Mr. Dorn testified about:



3/22 Tr. (Dorn) 2476:3-7.

APL-F87. As shown above in Demonstrative 3, the key aspects of Apple's proposal

for interactive streaming and limited download services are:

- 1. A single per-play rate;
- 2. A business model-agnostic approach, such that the same rate applies consistently across all interactive streaming and limited download services;
- 3. An all-in rate;
- 4. A per-play rate of \$0.00091; and
- 5. Exclusion of plays under 30 seconds and fraudulent plays.

Id.

# VI. IT IS APPROPRIATE TO ADOPT A SINGLE PER-PLAY RATE THAT IS THE SAME FOR ALL SERVICES

### A. The Adoption of a Per-Play Rate Structure Is Appropriate Given the Changes in the Interactive Streaming Market Since 2008, When the CRB Adopted a Revenue-Based Structure

APL-F88. "[T]he time is right now" to adopt a per-play rate structure that will "create the same level of simplicity, transparency, and fairness" that exists with respect to other music services that similarly allow consumers to listen to any music they want, whenever they want—whether by purchasing a CD or downloading a single track. See 3/22 Tr. (Dorn) 2513:24-2514:2; *see also* 4/12 Tr. (Ghose) 5721:12-20.

# 1. The Current Revenue-Based Structure Was Set When the Interactive Streaming Industry Was Nascent

APL-F89. The first interactive streaming services were not launched until the early 2000s. *See* 3/8 Tr. (Levine) 145:1-146:5. At that time, there was no established model for how to license musical works for use on interactive streaming services. *See* 3/8 Tr. (Levine) 145:19-146:2. In fact, there "was a great deal of uncertainty of whether or not you could build a business model" around streaming music. *See* 3/22 Tr. (Dorn) 2452:11-21; *see also* Ex. 322 (Sheeran), 6182:7-9.

APL-F90. Understanding that it would have been "very dangerous to launch a service" without a license, in late 2001 or early 2002 the interactive streaming services negotiated license agreements directly with the owners of the musical works. *See* 3/8 Tr. (Levine) 148:21-149:17. Those agreements struck "a very practical bargain that . . . eliminated the risk for launching" new interactive streaming services. *See* 3/8 Tr. (Levine) 151:2-5.

APL-F91. In 2008, the current revenue-based rate structure for interactive streaming and limited downloads was determined through a settlement in the *Phonorecords I* proceeding between the Copyright Owners, the Digital Media Association, the RIAA, and several others.

*See* Ex. 1617 (Ghose WDT) ¶ 26; *see also* Ex. 1486.

See Ex. 6013 (Phonorecords

*I* Settlement).

APL-F92. This revenue-based rate structure reflected the uncertainty at the time as to the future viability of the interactive streaming industry. *See* 3/22 Tr. (Ramaprasad) 2587:14-17, 2593:11-15 (in 2008, there was "barely any streams"); 3/8 Tr. (Levine) 145:1-4 (the industry still was "very nascent" and "very challenging" in 2008); 3/13 Tr. (Katz) 611:8-14 (streaming "doesn't even show up in the RIAA figures . . . before 2005"); Ex. 322 (Sheeran) 6178:8-9 (testifying in *Phonorecords I* that "[w]e're still fairly early in the transition to digital"); 4/12 (Ghose) 5721:12-20

It also allowed the still-developing streaming services to avoid what would otherwise have been burdensome royalty costs at a fixed rate. *See* 3/22 (Dorn) 2478:15-2479:4. 2543:25-2544:7; Ex. 322 (Sheeran), 6178:9-15 (testifying in *Phonorecords I* that the concern at that time was to set "rates that do not impose constraints that would prevent either an existing business from trying something new or a potential business from getting created to go after a given market.").

APL-F93. In 2012, recognizing that the streaming industry still was developing, the services and the copyright owners agreed to continue the *Phonorecords I* settlement. *See* 3/8 Tr. (Levine) 158:22-159:23; *see also* 3/21 Tr. (Hubbard) 2198:21-2199:2.

### 2. Because the Interactive Streaming Market Has Matured Since the Current Rate Structure Was Adopted, a Change to a Per-Play Structure Is Appropriate Now

APL-F94. The interactive streaming industry in 2017 is markedly different from the industry as it existed at the time that the current revenue-based royalty structure was adopted in 2008. *See* Ex. 1615 (Ramaprasad WDT) ¶ 47; *see also* Ex. 1501 (APL-090); Ex. 1509 (APL-101). In particular, unlike 2008, the digital music market today is neither new, nor untested. *See* 3/22 Tr. (Dorn) 2544:13-16; *see also* Ex. 1611 (Dorn WDT) ¶ 31; 3/22 Tr. (Pakman) 2395:22-2396:6. On the contrary, it has matured significantly and is on a healthy, sustainable trajectory. *See* 3/23 Tr. (Ghose) 2874:3-20 ("[I]n the last eight years the interactive streaming market has developed and progressed a lot. It is a lot more mature now than obviously what it was in 2008. And even in 2012."); 3/13 Tr. (Katz) 643:2-23 ("[The industry] is healthy enough" and "on a trajectory that's sustainable."); 3/22 Tr. (Dorn) 2452:11-2453:5 ("[Streaming music] is a future business model that is very sustainable ... that ... will continue to grow over time.").

APL-F95. Technological developments facilitated the rapid growth of interactive streaming. In the early 2000s, there was limited use of interactive streaming services, and the press surrounding the launch of such services highlighted concerns such as the quality of the services. Ex. 1615 (Ramaprasad WDT) ¶ 63. Around 2011, improvements in buffering technologies, increases in network speeds and coverage, developments in wireless technologies, and the rise of internet-connected mobile devices increased the acceptance of interactive streaming services, and in particular portable services on mobile devices. *Id.; see also* Ex. 880 (Herring WDT) ¶ 30; Ex. 132 (Hubbard WRT) ¶ 2.8 ("Digital music has moved rapidly from fixed line desktop PC experience to on-the-go consumption on wireless smartphones and devices."); 4/3 Tr. (Brodsky) 4532:13-18; 3/22 Tr. (Ramaprasad) 2590:3-19 (since 2011, distribution of music via interactive streaming has increased while distribution via downloads

has decreased). As a result, subscription streaming services are just as important today for distribution as download services. *See* 3/22 Tr. (Dorn) 2455:15-17 (testifying that streaming is at a "level of maturity where it is an equal part of the conversation" with downloading).

APL-F96. It is fair to say that the subscription streaming business has not yet achieved "complete maturity" because "there is a lot more room for growth." *See* 3/22 Tr. (Dorn) 2453:6-15. Nevertheless, "there is actually a business model that has taken hold, . . . there are people participating . . . within that business model, . . . [and] it is growing." *See* 3/22 Tr. (Dorn) 2454:22-2455:5; *see also id.* 2455:6-15 ("[T]here are enough people who are streaming now [that the market] has risen to a level of importance in the music industry collectively . . . where streaming is as much a part of the conversation now . . . as the download business is."). As discussed *supra* APL-F46–51, the development of the interactive streaming industry since 2008 is evidenced by significant growth with respect to the number of consumers, the number of streams, and the number of entrants into the market.

APL-F97. The fact that some subscription streaming services are not profitable does not mean that the market is not sufficiently mature to support a non-revenue based rate structure. *See* 3/22 Tr. (Dorn) 2454:22-25. Rather, the "entry and exit" of different streaming service companies is "consistent with a well-functioning, competitive market. . . ." *See* 3/13 Tr. (Katz) 769:16-25; *see also* 3/13 Tr. (Katz) 616:25-617:8. The growth of the interactive streaming industry is demonstrated by the new entrants in the interactive streaming market since 2008, including Spotify, Google Music, Xbox, Napster, TIDAL, and groove. *See* 3/22 Tr. (Ramaprasad) 2592:6-22.

APL-F98. Apple itself is a relatively new entrant in the subscription streaming service market, as it "wait[ed] to see . . . if there is growth and potential to build a business." *See* 

3/22 Tr. (Dorn) 2448:4-20. In around 2014, Apple recognized that "there was a large number of
people who were streaming music," and that other businesses' streaming services "were starting
to gain some traction as well." See 3/22 Tr. (Dorn) 2450:4-10; see also 3/13 Tr. (Katz) 645:20-
646:6 ("[T]here's also significant product differentiation across services, so that I would think
this is an industry where we would expect multiple streaming services to survive"). Based on
what it saw in the market, Apple determined that it could build a subscription streaming service
into a sustainable business model. See 3/22 Tr. (Dorn) 2448:20-23; 2451:5-8. Apple Music
launched on June 30, 2015, and "
." See Ex. 1611 (Dorn WDT), ¶ 21; see
<i>also</i> Exs. 775 777 1436 (
APL-F99. Other new services are continuing to enter the market,
<i>See</i> 3/15 Tr.
(Mirchandani) 1361:25-1362:11.
APL-F100.
. Ex. 3026 (Rysman WDT) ¶ 41; Ex. 1611 (Dorn WDT)
¶¶ 10, 29-32; Ex. 1615 (Ramaprasad WDT) ¶¶ 46-81; Ex. 3014 (Israelite WDT) ¶ 33. As Dr.
Rysman, the Copyright Owners' expert, explained, the need to "jump-start[]" the industry has
passed. Ex. 3026 (Rysman WDT) ¶ 41; see also Ex. 1611 (Dorn WDT) ¶¶ 10, 29-32; Ex. 1615
(Ramaprasad WDT) ¶ 64; Ex. 3014 (Israelite WDT) ¶ 33; 3/22 Tr. (Dorn) 2454:18-2455:17;
2545:8-2546:20; 3/22 Tr. (Ramaprasad) 2594:13-17.

# **B.** The Adoption of a Per-Play Rate Solves the Problems of the Current Rate Structure

APL-F101. Apple's rate proposal is appropriate because, as discussed in greater detail *infra* APL-F102–119, it addresses all of the problems with the current rate structure. In particular, Apple's proposal: (1) is easy to administer and understand; (2) is consistent with the royalties that are paid for other forms of music distribution; (3) links the demand for a song with the compensation that a copyright owner receives for that song; and (4) appropriately balances the risks and rewards from interactive streaming. Ex. 1617 (Ghose WDT) ¶¶ 3-5, 46-84; Ex. 1615 (Ramaprasad WDT) ¶¶ 4-6, 46-81; Ex. 1611 (Dorn WDT) ¶¶ 7-8, 10-13, 29-33, 63-70, 72-76; Ex. 1613 (Wheeler WDT) ¶¶ 17-20; Ex. 3026 (Rysman WDT) ¶¶ 56-57; Ex. 3014 (Israelite WDT) ¶ 40; 3/23 Tr. (Ghose) 2841:9-14; 3/22 Tr. (Dorn) 2476:14-2478:13.

1.Apple's Per-Play Proposal Is Easy to Administer and UnderstandAPL-F102.

. Ex. 1613 (Wheeler WDT) ¶ 5; 3/22 Tr. (Dorn) 2476:14-2478:13; *see* 3/23 Tr. (Ghose) 2854:17-2855:7; 3/27 Tr. (Watt) 3054:1-6 ("a per-play rate introduces a lot of certainty").

APL-F103. The CRB has noted the benefits of simplicity and transparency in past proceedings. *See, e.g., Dig. Performance Right in Sound Recordings and Ephemeral Recordings*, 72 Fed. Reg. 24084-01, 24089-90 (May 1, 2007) ("Web II") (adopting a perperformance rate because, among other things, it involves "the relatively straightforward application" of the rate to usage reports, whereas a revenue-based approach raises "issues of interpretation[s] and controversy related to how revenues are defined or allocated" and "multiple payment systems . . . augment the transaction costs."); *Mech. and Dig. Phonorecord Delivery* 

*Rate Determination Proceeding*, 74 Fed. Reg. 4510-01, 4516-17 (Jan. 26, 2009) ("*Phonorecords I*") (noting the value of a structure that is "readily calculable" and that the "ease of application offers an efficiency in valuing the rights at issue" and rejecting a structure that added "complexity and costs of multiple measurements").

APL-F104.

. Ex. 1613 (Wheeler WDT) ¶¶

5, 18. In particular, services need to track only one data point, *i.e.*, the number of times a song is streamed, which they already track, and then multiply that number by the fixed per-play rate. Ex. 1613 (Wheeler WDT) ¶ 18; 3/23 (Ramaprasad) 2665:2-10.

APL-F105. This simplicity and transparency also is beneficial to publishers and songwriters because it enables them to immediately know exactly why they are being paid the amount they are being paid. Ex. 1613 (Wheeler WDT) ¶¶ 5, 19; 3/23 Tr. (Ramaprasad) 2660:16-25; 3/23 Tr. (Ghose) 2871:23-2872:9; 3/22 Tr. (Dorn) 2481:23-2482:21. Such clarity would create a level of trust between the songwriter community and interactive streaming services and incentivize songwriters to create and make available their works. 3/22 Tr. (Dorn) 2477:5-16, 2482:23-2483:8.

APL-F106. Further, the fact that performance royalties and sound recording royalties generally are not paid using a per-play approach does not complicate or interfere with the adoption of a per-play rate in this proceeding. 3/23 Tr. (Ghose) 2858:10-19. Under Apple's proposal, mechanical royalties are calculated by, first, determining the total "all-in" royalty pool by multiplying the \$0.00091 per-play rate by the number of nonfraudulent streams 30 seconds or longer, and, second, subtracting total performance royalties from this total all-in royalty pool.

*See* Apple's Proposed Rates and Terms. Because <u>total</u> performance royalties are subtracted from the <u>total</u> all-in pool, it does not matter whether these two royalty pools are calculated using the same payment structure or different rate structures. Moreover, because the current rate structure has multiple prongs, it always has been possible that a service would pay mechanical royalties based on one measure and performance royalties on a different measure (and such a possibility will continue under all of the rate proposals put forward in this proceeding). *See* 37 C.F.R. §§ 385.10-385.26. For example, a service currently could pay mechanical royalties based on a persubscriber all-in pool and performance royalties based on a percentage of revenue. *Id.* There is no evidence that this type of mixing-and-matching has caused a problem for any services, publishers or songwriters.

## 2. Apple's Per-Play Proposal Is Consistent with the Royalties Paid for Other Forms of Music Distribution

APL-F107. The CRB has recognized that there is an "efficiency of administration" from aligning the rate structures for mechanical royalties across various forms of music distribution. *Phonorecords I*, 74 Fed. Reg. at n. 21 (deciding that ringtones should use a pennyrate structure, rather than a greater-of formulation with a percentage of revenue prong, "in light of the efficiency of administration gained from a single structure when spread over the much larger number of musical works reproduced as physical phonorecords or digital permanent downloads as compared to ringtones").

APL-F108. The per-play rate that Apple proposes offers such efficiency because it is consistent with the manner in which mechanical royalties are calculated and paid for other forms of music distribution. Ex. 3014 (Israelite WDT) ¶ 39; Ex. 1611 (Dorn WDT) ¶¶ 72, 74-76; Ex. 1615 (Ramaprasad WDT) ¶ 81; 3/23 Tr. (Ghose) 2855:8-2856:4; 3/23 Tr. (Ramaprasad) 2664:16-2665:1.

APL-F109. For example, mechanical royalties are paid on a per-unit basis for (1) downloads (37 C.F.R. § 385.3(a); Ex. 3014 (Israelite WDT) ¶ 39; Ex. 1611 (Dorn WDT) ¶ 75; 3/23 Tr. (Ghose) 2855:8-2856:4), (2) CDs, cassettes, and other physical phonorecord deliveries (37 C.F.R. § 385.3(a); Ex. 1611 (Dorn WDT) ¶ 75; Ex. 1615 (Ramaprasad WDT) ¶ 81; 3/23 Tr. (Ghose) 2855:8-2856:4), and (3) ringtones (37 C.F.R. § 385.3(b); 3/23 Tr. (Ghose) 2855:8-2856:4).

APL-F110. Likewise, non-interactive streaming services also pay per-play rates for performance royalties and related ephemeral copies for sound recordings. 37 C.F.R. § 380.10(a)(1); Ex. 1611 (Dorn WDT) ¶ 73; Ex 1615 (Ramaprasad WDT) ¶ 81.

APL-F111.	In addition,
	See, e.g., Ex. 1433; 2618 &1146, 1074
. <i>See</i> , 6	e.g., Ex. 1074 (agreement between
).	

# **3.** Apple's Per-Play Proposal Perfectly Links the Demand for a Song with the Compensation to the Copyright Holder

APL-F112. Unlike a percentage-of-revenue structure, a per-play rate links

compensation and demand perfectly. 3/23 Tr. (Ghose) 2851:18-2852:2; 3/23 Tr. (Ramaprasad) 2661:13-24. It does so because there is a linear relationship between the number of times a song is streamed and the amount the publisher and songwriter receive in royalties—for each additional

unit of consumption (*i.e.*, a stream of a song), the same per-play amount is paid. 3/23 Tr. (Ghose) 2851:18-2852:2. By tying royalties directly to demand, a per-play rate compensates publishers and songwriters for "the value that they're actually creating on the site." 3/23 Tr. (Ramaprasad) 2661:1-3.

APL-F113. Linking compensation directly to demand means that the per-play royalty rate will not fluctuate across services, so publishers and songwriters can count on receiving the same per-stream amount every month from each service. 3/23 Tr. (Ghose) 2851:18-2852:2, 2862:22-2863:11, 2871:23-2872:9. It also guarantees that the value of their songs will not decrease as streaming becomes more popular. 3/23 Tr. (Ghose) 2871:23-2872:14.

APL-F114. This predictability and consistency is fair to publishers and songwriters and helps incentivize them to continue to create new music and make their music available in the interactive streaming industry. 3/23 Tr. (Ramaprasad) 2658:18-2659:18; 2663:23-2664:9; 3/23 Tr. (Ghose) 2871:7-2872:17. It also benefits the streaming services because it makes their perplay costs more predictable. 3/23 Tr. (Ramaprasad) 2659:22-2660:7; 3/23 Tr. (Ghose) 2877:4-2879:21.

## 4. Apple's Per-Play Proposal Properly Balances the Risks and Rewards to Industry Players

APL-F115. Another advantage of a per-play rate structure is that it balances the risks and rewards to industry stakeholders commensurate to their contributions. 3/23 Tr. (Ghose) 2842:8-2844:7; 2846:7-2851:13. This balance, in turn, appropriately incentivizes publishers and songwriters, on the one hand, and interactive streaming services, on the other, to make musical works available to the public. 3/23 Tr. (Ghose) 2871:7-17.

APL-F116. In the interactive streaming distribution chain, the stakeholders include (1) songwriters and publishers; (2) labels and artists; (3) interactive streaming services; and

(4) consumers. 3/23 Tr. (Ghose) 2842:8-2844:7; 2846:7-13. The songwriters contribute by expending their creative talent and energy writing songs, and the publishers contribute by taking responsibility for various administrative and promotional functions related to the musical works the songwriters create. 3/23 Tr. (Ghose) 2843:1-10. Interactive streaming services contribute by creating the infrastructure and technology that makes streaming possible, and by developing consumer-friendly tools that encourage music discovery, music curation, and music sharing. 3/23 Tr. (Ghose) 2843:18-2844:7. If the revenue generated by these stakeholders is not allocated appropriately, then the stakeholders will be disincentivized to continue contributing to the availability of musical works. 3/23 Tr. (Ghose) 2846:18-2847:3.

APL-F117. Because publishers and songwriters receive a fixed payment under a perplay rate structure, they are insulated from the downside risks of services' decisions about how to structure and operate their business. Ex. 1617 (Ghose WDT) ¶¶ 47-61; 3/23 Tr. (Ghose) 2848:11-2851:13.

APL-F118. Conversely, because the services bear all the risk attendant to their business decisions under a per-play approach, it would be appropriate to grant them all of the upside benefits of those decisions. 3/23 Tr. (Ghose) 2849:13-20; 2850:5-22. In other words, they will receive a "merit-based" reward under Apple's proposed per-play rate. 3/23 Tr. (Ramaprasad) 2658:18-2659:18. Of course, the publishers and songwriters would still benefit indirectly from a service's success, such as through enhanced exposure to new consumers and an increase in volume through the available distribution channels. 3/23 Tr. (Ghose) 2849:21-2850:4; 3/23 Tr. (Ramaprasad) 2658:18-2659:18.

APL-F119. This allocation of risks and rewards is fair and incentivizes services to continue innovating. 3/23 Tr. (Ghose) 2850:24-2851:5, 2871:7-2872:17; 3/23 (Ramaprasad)

2664:10-15. It also is fair to publishers and songwriters and incentivizes them to create new works because they are guaranteed fixed compensation from services, rather than being subject to a service's business decisions. Ex. 1617 (Ghose WDT) ¶¶ 60, 63-64.

#### C. A Per-Play Rate Is Consistent with CRB Precedent

APL-F120. In situations where, as here, usage is readily measurable on a per-unit basis, the CRB has shown a preference for rates linked directly to usage. See, e.g., Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Dig. Performance of Sound Recordings, 84 Fed. Reg. 26316-01, 26326 (May 2, 2016) ("Web IV") (citing fact that "a percent-of-revenue rate would create uncertainty and controversy regarding the definition and allocation of revenue" as a "valid objection[]" to a greater of structure with a percent-of-revenue prong); *Phonorecords I* (adopting a per-unit rate over a percentage of revenue proposal); Determination of Reasonable Rates and Terms for the Dig. Performance of Sound Recordings and Ephemeral Recordings, 67 Fed. Reg. 45240-01, 45249-51 (July 8, 2002) ("Web I") (adopting per-play rate even though both sides found a percentage of revenue at least partially acceptable); see also Web II, 72 Fed. Reg. at 24089 (noting revenue-model is inappropriate because "revenue merely serves as 'a proxy' for what 'we really should be valuing, which is performances." and noting that a revenue-based structure "present[s] measurement difficulties because identifying the relevant [service] revenues can be complex, such as where the [service] offers features unrelated to music.").

APL-F121. For example, in *Web II* the CRB rejected a "greater of" structure with a percentage-of-revenue prong, finding that revenue is merely a "proxy metric" that should only be used when "a usage-based metric is not readily calculable." *Web II*, 72 Fed. Reg. at 24089. The CRB also rejected a "greater of" royalty with per-play and per-subscriber prongs because such a structure is "duplicative." *Id.* at 24090 n.14. Because the per-subscriber prong was allocated

based on usage, it served the same function as the per-play prong and provided no benefits in terms of ease of administration or reduced transaction costs. *Id.* In addition, the CRB noted that the "scaling" of the royalty with usage is "intuitively appealing." *Id.* at 24089 (quoting *Web I* Written Direct Testimony of Dr. Adam Jaffe).

APL-F122. Similarly, in *Phonorecords I*, the CRB adopted a use-based approach for physical phonorecords and permanent digital downloads rather than a percentage of revenue structure because measuring physical and permanent digital phonorecord usage is "straightforward" and, therefore, resorting to a revenue-based proxy is inappropriate. *Phonorecords I*, 74 Fed. Reg. at 4516. The CRB noted that the "ease of application" of a use-based approach "offers an efficiency in valuing the rights at issue not available under the percentage of revenue alternatives." *Id.* Additionally, the CRB found that a percentage of revenue approach "raises serious questions of fairness precisely because the percentage of revenue metric may be a less than fully satisfactory proxy for measuring more usage or the actual intensity of the usage of the rights in question. It is not fair to fail to properly value the reproduction rights at issue in this proceeding." *Id.* at 4517 (citing 17 U.S.C. 801(b)(1)).

APL-F123. In *Web I*, the panel adopted a per-play rate because, among other things, "a per performance fee is directly tied to the right being licensed." *Web I*, 67 Fed. Reg. at 45249. The Librarian of Congress endorsed this rate structure upon the recommendation of the Register of Copyrights. *Id.* at 45249-51, 45271-72.

APL-F124. Indeed, even in *SDARS I*, where the CRB chose to adopt a revenue-based fee structure, it did so only because it had "no true per performance fee proposal [] nor sufficient information from evidence of record to accurately transform any of the parties' proposals into a true per performance fee proposal." *Determination of Rates and Terms for Preexisting* 

*Subscription Servs. and Satellite Dig. Audio Radio Servs.*, 73 Fed. Reg. 4080-01, 4085 (Jan. 24, 2008) ("*SDARS F*"). Thus, it had no choice but to adopt "a proxy for measuring the value of the rights used." *Id*; *see also Determination of Rates and Terms for Preexisting Subscription Servs. and Satellite Dig. Audio Radio Servs.*, 78 Fed. Reg. 23054-01, 23079 (Roberts, J., dissenting) (recognizing that in the satellite radio context "a proxy for use of sound recordings must be adopted because technological impediments do not permit implementation of a per-performance fee").

#### D. A Single Per-Play Rate That Applies to All Business Models Is Appropriate

APL-F125. As discussed in greater detail below, it is appropriate to adopt a single perplay rate for all interactive streaming and limited download services because it (1) is consistent with CRB precedent; (2) properly balances the risks and rewards inherent in the interactive streaming business; (3) is business-model agnostic, and thus compatible with all current and potential business models; and (4) reflects the inherent value of music. *See infra* APL-F126– 136.

### 1. A Per-Play Rate Is Compatible with All Types of Interactive Streaming Business Models

APL-F126. A per-play rate also is appropriate because it is the only rate structure that is business-model agnostic, meaning it can apply to all types of business models.

, 3/16 Tr. (Mirchandani) 1484:3-11,

whereas others do not have any subscribers. Ex. 1060 (McCarthy WDT) ¶ 9. What each interactive streaming service, by definition, does have—including those services that exist now and those that may be created in the future using innovative business models that the industry has not yet seen—is interactive streams, or plays, of songs. Ex. 1615 (Ramaprasad WDT) ¶ 19.
APL-F127. Further, contrary to the claims of various witnesses, a per-play rate is unlikely to lead services to limit consumption because services are profit-maximizing entities. 3/23 Tr. (Ghose) 2865:25-2869:1; see also 3/27 Tr. (Watt) 3038:17-3039:8 ("I see no evidence or no theory, to -- to be honest about a hypothesized incentive to discourage consumption, simply because there's a positive input price. . . . Input -- positive input prices are universal pretty much, everywhere, in all sorts of markets and in all sorts of scenarios. And yet they don't lead to the output supplier attempting to -- to limit consumption or to turn . . . consumers away.") As Dr. Ghose explained, no "profit maximizing corporation . . . will want to reduce the quality of the service they provide or create an inferior quality or product or service, especially [because] in this case, they can very easily come out with pricing innovations." 3/23 Tr. (Ghose) 2866:19-24, 2883:12-17 (suggesting "different pricing innovations based on tiered pricing and menu-based contracts and quantity discounts, where essentially [a service] can offer multiple levels of pricing consistent with [consumer] usage"); see also 3/27 Tr. (Watt) 3038:17-3039:8. Nor are services likely to turn to per-unit pricing just because a per-play rate is adopted. 3/27 Tr. (Watt) 3037:6-3038:11.

APL-F128. Moreover, once a per-play rate is fixed, subscription services can predict average usage easily and set subscription rates accordingly. 3/23 Tr. (Ghose) 2877:21-2879:20, 2881:23-2882:7. Thus, a per-play rate is compatible with a subscription model, provided per-play rates are set at a reasonable level. 3/23 Tr. (Ghose) 2868:20-2869:1, 2877:21-2879:20, 2881:23-2882:7.

APL-F129. A per-play rate also is compatible with ad-supported services. 3/23 Tr. (Ghose) 2888:12-24 ("[T]he per-play rate makes it easier for these ad-supported services"). Even Pandora's expert, Dr. Katz, testified that per-play rates help incentivize ad-supported

services to innovate, which is why he supported a per-play rate in Web IV. 3/13 Tr. (Katz) 590:22-593:4. With a fixed per-play rate, ad-supported services can use predictive models to determine the optimal frequency and price of ads to continue serving low willingness-to-pay consumers. 3/23 Tr. (Ghose) 2889:21-2893:23; see also 3/23 Tr. (Ghose) 2863:16-2864:12 ("it is entirely plausible and feasible for streaming services actually to leverage . . . difference[s] in willingness to pay by having different [pricing models]"); 3/23 Tr. (Ramaprasad) 2662:15-2663:7 ("there are multiple different ways . . . you can price" to extract value from different willingness to pay consumers).

APL-F130.		
	3/21 (Hubbard)	Tr. 2243:5-2244:25
Ex. 3225.		
		. There is risk,

however, that creating the ability to offer services with exceptionally low monthly fees, or no fees, would cause free-riding and cannibalization from consumers who would otherwise be willing to pay more for a subscription service. *See, e.g.*, 3/21 (Hubbard) Tr. 2243:5-2244:25 (discussing Amazon pricing survey showing that some amount of Amazon's new subscribers for lower-priced subscriptions would otherwise have paid higher priced subscriptions on other

services); Ex. 3225. Further, creating low royalty-bearing services that cater to low willingnessto-pay consumers deviates from the traditional rules of paying for obtaining music. *See*, 3/30 Tr. (Gans) 3984:24-3985:1, 4085:12-19, 4086:16-4087:11, 4089:10-24.

## 2. All Interactive Streaming Services Should Pay the Same Per-Play Rate

APL-F131. All interactive streaming and limited download services should pay the same per-play rate. 3/22 Tr. (Dorn) 2479:5-9; 3/23 Tr. (Ghose) 2863:16-2864:4; Ex. 3014 (Israelite WDT) ¶¶ 29, 31.

APL-F132. As a practical matter,

. 4/6 Tr. (Leonard) 5224:24-5225:8. The more appropriate approach is to select a single rate that can apply industry wide to a variety of different business models. *Cf.* Ex. 1611 (Dorn WDT) ¶ 85 (advocating for a per-play rate that is "supportable when viewed in the context of the industry as a whole").

APL-F133. Moreover, a single per-play rate is appropriate because it recognizes that a stream of a song has a "consistent level of value" that does not change from service-to-service. 3/22 Tr. (Dorn) 2479:5-9; Ex. 3014 (Israelite WDT) ¶¶ 29, 31 ("[E]ach interactive stream or play of a limited download of a musical work has an inherent value"); Ex. 1611 (Dorn WDT) ¶ 5 ("[M]usic has an inherent value"). Similarly, the cost of creating a song does not change from service to service. *See* 3/23 Tr. (Ghose) 2863:16-2864:4. Because the inherent value of a song and the cost of creating a song are independent of the service on which it is streamed, it is appropriate to adopt a single per-play rate that applies to all services. 3/22 Tr. (Dorn) 2479:5-9;

3/23 Tr. (Ghose) 2863:16-2864:4; Ex. 3014 (Israelite WDT) ¶¶ 29, 31. It simply is unfair for the same song to be worth a different amount on different services. 3/22 Tr. (Dorn) 2477:5-2478:2.

APL-F134. Adopting a single rate across all distributors also is consistent with what has been done historically in the music industry. 3/22 Tr. (Dorn) 2485:21-2486:8. Whether a CD was sold through a mom and pop record store or a large conglomerate, publishers and songwriters received the same per-unit rate for the sale without regard to the business model of the entity selling it. *See* 3/22 Tr. (Dorn) 2485:21-2486:8.

APL-F135. Adopting a single per-play rate also ensures that songwriter-artists will not favor the dissemination of their music on one service over another because one service pays higher per-play rates, which, as discussed above, is a problem the industry already has faced. *See supra* APL-F77.

APL-F136. Finally, a business-model agnostic approach encourages business model and pricing innovation. *See* Tr. 3/23 Tr. (Ghose) 2883:8-17 (explaining the various pricing methods services could adopt in response to a per-play rate in order to capture consumers with varying willingness to pay, including tiered pricing and quantity discounts). As discussed above, rather than creating services that fit prescribed buckets, services are challenged to create a wider variety of pricing plans and new, innovative business models, which increases the variety of offerings available to consumers. *See supra* APL-F70.

#### VII. IT IS APPROPRIATE TO ADOPT AN ALL-IN RATE

#### A. The CRB Has the Statutory Authority to Adopt an All-In Rate

APL-F137. As a preliminary matter, as discussed in the Conclusions of Law, *see infra* APL-C2–5, the CRB has the statutory authority to set a mechanical royalty rate equal to an all-in rate less performance royalties. *See Adjustment of Determination of Compulsory License Rates for Mech. and Dig. Phonorecords*, 78 Fed. Reg. 67938-02, 67947-48 (Nov. 13, 2013)

("*Phonorecords II*"); *Review of Copyright Royalty Judges Determination*, 74 Fed. Reg. 4537-01 (Jan. 26, 2009). This is the same rate structure that the CRB adopted in both *Phonorecords I* and *Phonorecords II*, and that the Register of Copyright approved without objection following the *Phonorecords I* determination. APL-C2, C4. Accordingly, it within the CRB's authority to once again adopt such a structure here. APL-C2–5.

## B. An All-In Rate Is the Most Economically Appropriate Rate Structure

APL-F138. The CRB should adopt an all-in rate for interactive streaming because (1) mechanical and performance royalties are complementary rights that must be considered together in order to prevent exorbitant costs, (2) **and the current statute use an all-in rate**, (3) all-in rates provide greater predictability for businesses, and (4) recent fragmentation and uncertainty with respect to performance licenses threaten to exacerbate the problems of high costs and uncertainty already present in the industry.

## 1. An All-In Rate Prevents Exorbitant Musical Works Royalties

APL-F139. An all-in rate helps maintain royalties at an economically efficient level because it sets a <u>single</u> value for all of the rights that interactive streaming services must obtain from publishers and songwriters. *See* 3/23 Tr. (Ramaprasad) 2667:9-16, 2669:25-2670:6 (a mechanical-only rate could cause "exorbitant" rates, but an all-in rate would not); Ex. 695 (Leonard WDT) ¶¶ 56; Ex. 885 (Katz WDT) ¶ 94; Ex. 880 (Herring WDT) ¶ 59, *cf.*; Ex. 1616 (Ramaprasad WRT) ¶ 13 (a mechanical-only royalty could lead to "unreasonably high combined royalties for publishers and songwriters"). Rather than engaging in two unrelated negotiations for the performance right and the mechanical right—which can lead to total royalties for musical works that are higher than the appropriate amount—an all-in rate ensures that these two complementary rights are considered in tandem, with the cost of one impacting the cost of the

other. *See* Ex. 1612 (Dorn WRT) ¶ 15; 3/13 Tr. (Katz) 587:8-588:9; 3/15 Tr. (Leonard) 1191:16-1192:6; Ex. 880 (Herring WDT) ¶ 59.

APL-F140. By contrast, if a mechanical-only rate were adopted, interactive streaming services would need to pay for mechanical rights pursuant to the statute and then engage in an <u>entirely separate</u> negotiation for the performance right. Ex. 1612 (Dorn WRT) ¶¶ 14-15; Ex. 1616 (Ramaprasad WRT) ¶ 13. This could lead to an undeserved windfall for publishers and songwriters as, after this negotiation, total royalty payments that interactive streaming services pay for musical works could be exponentially higher than whatever mechanical-only rate the CRB adopts. Ex. 1612 (Dorn WRT) ¶¶ 14-15; Ex. 1616 (Ramaprasad WRT) ¶ 13.

APL-F141. Pricing complementary products together as an all-in rate is appropriate from an economic perspective. Ex. 885 (Katz WDT) ¶¶ 10, 43, 88; Ex. 695 (Leonard WDT) ¶¶ 56; Ex. 885 (Katz WDT) ¶¶ 10, 43, 88; Ex. 695 (Leonard WDT) ¶¶ 56; Ex. 885 (Katz WDT) ¶10, 43, 88; Ex. 695 (Leonard WDT) ¶¶ 56; Ex. 885 (Katz WDT) ¶ 87-94; Ex. 1616 (Ramaprasad WRT) ¶ 13.

APL-F142. Indeed, this is a problem that the industry faced in the early 2000's when interactive streaming services first entered the market. 3/8 Tr. (Levine) 145:1-148:5. Prior to that, there were no music distribution methods that required services to obtain two different publishing licenses for the same use of a work. 3/8 Tr. (Levine) 146:22-147:2.

APL-F143. But with the advent of interactive streaming, services had to negotiate performance licenses from PROs and then engage in separate negotiations with publishers for

mechanical rights. 3/8 Tr. (Levine) 145:1-148:5. These separate negotiations created a "double dip problem," meaning that services could not arrive at "the total value of the use of musical compositions" in a single negotiation. 3/8 Tr. (Levine) 147:23-148:5. This is unfair to interactive streaming services, especially because the money all is going from the same place, the services, to the same entities, the publishers and songwriters. Ex. 880 (Herring WDT) ¶ 59; Ex. 1611 (Dorn WRT) ¶¶ 15-16.

APL-F144. By opposing an all-in rate, and instead seeking a mechanical-only royalty, the Copyright Owners are trying to once again exploit this anomaly (that interactive streaming services pay both mechanical and performance royalties) to create a windfall that would be detrimental to the interactive streaming industry and, consequently, the music industry as a whole. Thus, an all-in rate should be adopted to prevent such an unfair result. *See* Ex. 1616 (Ramaprasad WRT) ¶ 13, 61-63; Ex. 1612 (Dorn WRT) ¶¶ 7, 14-15; Ex. 695 (Leonard WDT) ¶¶ 82-83; Ex. 885 (Katz WDT) ¶ 10; 3/8 Tr. (Levine) 170:3-25; Ex. 880 (Herring WDT) ¶ 59.

2. An All-In Rate Is Consistent the Current Statute

APL-F146. The "Subpart B" and "Subpart C" Section 115 royalties are based on an <u>all-in</u> headline rate that covers <u>both</u> mechanical and performance royalties. Ex. 1611 (Dorn WRT) ¶ 11; 37 C.F.R. §§ 385.10-385.12, 385.20-22. Performance royalties are subtracted from the all-in royalty pool to determine the mechanical royalties that a service owes. 37 C.F.R. §§ 385.12, 385.22. That is exactly what Apple is proposing.

APL-F147.	. See,
e.g.,	
	); see also 3/14 Tr. (Herring)
906:25-907:13 (	); 3/22 Tr. (Dorn)
906:25-907:13, 2559	9:4-19, 2565:13-23 (); Ex. 1616
(Ramaprasad WRT)	¶¶ 13, 62; Ex. 695 (Leonard WDT) ¶¶ 53, 47.
3.	An All-In Rate Adds Predictability for Businesses
APL-F148.	An all-in rate also is important because it provides predictability for
businesses, which ge	enerally view performance and mechanical royalties as a package. See 3/14
Tr. (Herring) 882:17	7-883:2 (Pandora
	), 892:2-13; Ex. 1612 (Dorn WRT) ¶ 15; Ex. 1616 (Ramaprasad WRT) ¶
13	
Ex. 695	(Leonard WDT) ¶ 76 ("
	27)
A.D. E140	· )·
Arl-f149.	
	Ex. 1612 (Dorn WRT) ¶ 15; 3/14 Tr. (Herring)
882:17-883:2	

"); see 3/8 Tr. (Levine) 170:3-25 (explaining the importance of

"). An all-in rate provides business with more certainty as to

what that number will be. 3/14 Tr. (Herring) 882:17-883:2; 3/23 Tr. (Ramaprasad) 2666:23-

2667:8, 2668:10-2669:9; cf. Ex. 1612 (Dorn WRT) ¶ 15-16

); Tr. 3/22 (Dorn) 2508:1-16 (same); Ex. 1616 (Ramaprasad WRT) ¶¶ 13, 63 (same).

This predictability makes it easier for businesses to budget expenses and negotiate the other costs

of running their services. See Ex. 1612 (Dorn WRT) ¶ 16; 3/14 Tr. (Herring) 882:17-883:2.

## 4. The Importance of Adopting an All-In Rate Is Heightened Due to Existing Fragmentation and Uncertainty with Respect to Performance Rights Licenses

APL-F150. It is more critical than ever that the CRB adopt an all-in rate as recent

fragmentation and uncertainty in performance rights licensing threatens to exacerbate the

problems of uncertainty and exorbitant costs that already exist in the industry. See Ex. 1612

(Dorn WRT) ¶¶ 17-18; Ex. 1616 (Ramaprasad WRT) ¶¶ 13, 63; Ex. 875 (Parness WDT) ¶¶ 16-

20; Ex. 885 (Katz WDT) ¶ 87-94; Tr. 3/13 (Katz) 602:13-604:25.

APL-F151. First, in 2014, a fourth PRO, GMR, emerged, in addition to ASCAP, BMI and SESAC. Ex. 875 (Parness WDT) ¶ 18; Ex. 885 (Katz WDT) ¶ 91.

. 3/9 Tr. (Parness) 382:16-383:1; 3/13 Tr. (Katz) 602:13-

#### 604:25.

APL-F152. Second, in the past few years, publishers have taken steps to withdraw from PROs, especially those that are governed by consent decrees. Ex. 1612 (Dorn WRT) ¶ 18; Ex. 1616 (Ramaprasad WRT) ¶¶ 13, 63; Ex. 875 (Parness WDT) ¶ 17; Ex. 885 (Katz WDT) ¶ 91.

APL-F153. For example, UMPG moved a portion of its catalog from ASCAP, which is governed by a consent decree, to SESAC, which is not. 3/27 Tr. (Kokakis) 3207:14-23. It also fully withdrew from BMI for a short period of time in June 2014. 3/27 Tr. (Kokakis) 3204:9-11.

 APL-F154.
 Further, even when publishers have not actually withdrawn,

 .
 For example, Adam Parness, Pandora's Head of Publisher Licensing and

 Relations,

3/9 Tr. (Parness) 376:15-381:1; *see also* Ex. 875 (Parness WDT) ¶ 17 ("several publishers of significant commercial importance have threatened [to withdraw entirely from ASCAP and BMI]."). David Kokakis, UMPG's Executive Vice President and Head of Business & Legal Affairs, Business Development and Digital, confirmed this testimony, stating that he and the services "had discussed at times the possibility of Universal withdrawing" fully from a PRO. 3/27 Tr. (Kokakis) 3206:19-23. In addition, even after returning to BMI, UMPG continued to announce that it was prepared to fully withdraw from ASCAP and BMI in order to get out from under the consent decrees. 3/28 Tr. (Kokakis) 3310:18-3313:8.

APL-F155. These threats of withdrawal create uncertainty in the performance rights marketplace and, if executed, would lead to increased performance royalty costs for interactive streaming, and thus an increase in total royalty costs absence an "all-in" rate. *See* Ex. 1616 (Ramaprasad WRT) ¶ 63 (the only certain result of publishers withdrawing is that performance royalties "will increase"); 3/8 Tr. (Levine) 256:11-257:18, 262:15-263:12; 3/13 Tr. (Katz) 602:13-604:25 (fragmentation leads to higher performance rights costs).

APL-F156. Third, the recent decision *United States v. Broadcast Music Inc.*, regarding fractional licensing, has created even more market power for the owners of musical works, which "almost certainly will lead to higher total payments for performance rights, higher transactions costs, and greater uncertainty." Ex. 875 (Parness WDT) ¶ 20. In that case, the BMI rate court held that PROs can grant licenses for fractional interests in musical works, meaning that in order to offer a work, interactive streaming services must obtain licenses from every entity with even a small partial interest in the work. Ex. 875 (Parness WDT) ¶ 20; *U.S. v. Broad. Music Inc.*, 64 Civ. 3787 (LLS), 2016 WL 4989938 (S.D.N.Y. Sept. 16, 2016). Obtaining a license from the PRO alone may be insufficient. Ex. 875 (Parness WDT) ¶ 20. This gives rights owners "considerable leverage," which further threatens to increase performance royalty costs. Ex. 875 (Parness WDT) ¶ 20; Ex. 885 (Katz WDT) ¶ 92.

APL-F157. In light of these three developments in performance rights licensing—the increase in the number of PROs, withdrawal from PROs, and fractional licensing—the unpredictability and costs associated with performance rights licenses are at a new high. *See* Ex. 875 (Parness WDT) ¶¶ 15-20; Ex. 885 (Katz WDT) ¶¶ 87-94. Thus, the need for an all-in rate that provides predictability and stability for the interactive streaming industry is more important than ever. *See* Ex. 1612 (Dorn WRT) ¶¶ 17-18; Ex. 1616 (Ramaprasad WRT) ¶¶ 13, 63; Ex. 885 (Katz WDT) ¶¶ 87-94.

#### C. The Copyright Owners' Arguments against an All-In Rate Are Unavailing

APL-F158. The Copyright Owners have offered no credible basis for why the CRB should not adopt an all-in rate. Their only arguments seem to be that (1) the statutory authority is limited, (2) mechanical royalties must be protected because publishers recoup advances from mechanical royalties, and (3) an all-in rate could result in mechanical royalties of zero, according to Dr. Rysman's analysis of historic data.

APL-F159. The Copyright Owners' first argument is erroneous as the CRB has the statutory authority to adopt an all-in rate, and has done so in the past. *See infra* APL-C2–5.

APL-F160. Their second argument is similarly without merit. The only reason publishers recoup advances against mechanical royalties, and not performance royalties, is because that is what the contracts that they have negotiated mandate. *See* 3/13 Tr. (Katz) 607:12-608:13. There is nothing preventing publishers from renegotiating contracts under which advances are recouped against performance royalties as well as mechanical royalties. *See* 3/13 Tr. (Katz) 607:12-608:13. Indeed, given the shift in the music industry toward interactive streaming, *see supra* APL-F46–51, APL-F94–99, it would make sense for the Copyright Owners to update their business practices to account for this new form of distribution. Instead, the Copyright Owners are asking the CRB to entrench their outdated business practices.

APL-F161. Lastly, their third argument, namely, that Apple's all-in proposal is inappropriate because it could result in services paying nothing in mechanical royalties, also fails. The Copyright Owners' argument ignores the economic reality that publishers and songwriters receive both performance and mechanical royalties from interactive streaming services. Thus, under Apple's proposal, publishers and songwriters will <u>always</u> receive at least \$0.00091 per play in royalties. Whether the royalty is called a performance royalty or a mechanical royalty, the copyright holders are fairly compensated and determine among themselves how to allocate those royalties. Ex. 1618 (Ghose WRT) ¶ 66; Ex. 1616 (Ramaprasad) 2746:9-2747:10; 3/23 Tr. (Ghose) 2902:7-19.

APL-F162. Further, the Copyright Owners' only support for this argument is the data analysis by their expert, Dr. Rysman. But as described in detail below, Dr. Rysman's data

analysis is suspect given the myriad flaws in his testimony and should be given no weight. *See infra* APL-F402–409.

APL-F163. In any case, contrary to the Copyright Owners' argument, the CRB has found that there is nothing inherently improper about a mechanical royalty rate of zero. *Phonorecords II*, 78 Fed. Reg. at 67942 ("Accordingly, the Judges conclude that nothing in the Copyright Act indicates that adoption of a zero royalty rate is contrary to section 115 of the Copyright Act."); *see also* 3/15 Tr. (Leonard) 1237:23-1238:10 (an all-in rate is <u>consistent</u> with the 801(b) factors <u>even if</u> it results in services paying no mechanical royalties). Indeed, the CRB has adopted zero royalty rates for mechanical licenses in past proceedings. *Id*.

# D. An All-In Rate with a Mechanical Floor Defeats the Benefits of an All-In Rate

APL-F164. For the reasons described above, an all-in rate best promotes predictability and efficient pricing for interactive streaming royalties. *See supra* APL-F139–144, 148–149. Adding a mechanical floor to the all-in rate, however, will undermine these benefits and defeat the purpose of an all-in rate. *See* Ex. 695 (Leonard WDT) ¶¶ 56, 82-83; Ex. 885 (Katz WDT) ¶¶ 87-94, Ex. 880 (Herring WDT) ¶ 59.

APL-F165. This is because of the very nature of a mechanical floor. With a mechanical floor, performance royalties always will be added on top of whatever that floor is and there will be no cap on the total royalty payment for streaming. Mechanical royalties will not decrease in proportion to the increase of performance royalties, which is the way these complementary rights should relate in an economically efficient market. Ex. 885 (Katz WDT) ¶¶ 10, 43, 88; Ex. 695 (Leonard WDT) ¶¶ 56, 76; 3/13 Tr. (Katz) 561:21-562:9, 587:8-588:9. Rather, this combined rate (mechanical floor + performance royalties) could greatly exceed the all-in royalty rate, thereby resulting in exorbitant costs for the services and an improper windfall

for the Copyright Owners. *See* Ex. 885 (Katz WDT) ¶¶ 87-94; Ex. 880 (Herring WDT) ¶ 59; Ex. 1060 (McCarthy WDT) ¶ 65. Without a mechanical floor, services are ensured at least that their mechanical royalty fees will not be stacked on top of such high performance royalty costs. *See* Ex. 695 (Leonard WDT) ¶¶ 56, 82-83; Ex. 885 (Katz WDT) ¶¶ 87-94, Ex. 880 (Herring WDT) ¶ 59.

APL-F166. Moreover, to the extent publishers want to protect the mechanical royalty portion of the streaming royalties, *see supra* APL-F158, APL-F160, an all-in rate without a floor will incentivize the publishers to put pressure on their PROs to keep performance royalties in check so that the performance rates do not eat up the entire all-in amount and cannibalize mechanical royalties.

APL-F167. Finally, an all-in rate without a mechanical floor is consistent with the current statute and private agreements. The current royalty for the majority of categories of services in Subparts B and C <u>do not have a mechanical floor</u>. 37 C.F.R. §§ 385.10-385.13, 385.20-22; *see also* Ex. 885 (Katz WDT) Tables 2 & 3. Specifically, there is no mechanical-only floor for Free Nonsubscription/Ad-supported Services, Limited Offerings, Mixed Service Bundles, Music Bundles, Paid Locker Services and Purchased Content Locker Services. 37 C.F.R. §§ 385.13(a)(5), 385.22; *see also* Ex. 885 (Katz WDT) Tables 2 & 3. Similarly,

*E.g.*,

#### VIII. APPLE'S BENCHMARKS ARE COMPARABLE AND RELIABLE

#### A. Apple's Proposed Rate Is Based on the Statutory Digital Download Rate, Which Is a Comparable Benchmark That Has Near-Universal Support

## 1. The Digital Download Rate is a Comparable Benchmark for Interactive Streaming Because They Are Substitutes for Each Other

APL-F168. The starting point for Apple's proposed rate is the \$0.091 statutory rate for digital downloads. 3/22 Tr. (Dorn) 2494:14-2495:7; *see also* 3/22 Tr. (Ramaprasad) 2604:17-2605:18. It makes sense to base the rate for interactive streaming on the digital download rate because interactive streaming and downloads are comparable. 3/15 Tr. (Leonard) 1098:2-1100:7 (explaining why downloads are comparable to interactive streaming and make a good benchmark); 3/20 Tr. (Marx) 1840:20-1841:16, 1845:12-25 ("downloads are comparable to subscription streaming"); *see also* 3/22 Tr. (Ramaprasad) 2590:20-2591:21 (explaining the ways in which downloads and interactive streams are similar).

APL-F169. Both forms allow users to consume music in the same way. Interactive streaming and digital downloads allow users to listen to a particular song on demand. *Id.* Moreover, neither interactive streaming nor digital downloads are typically accompanied by video content. *Id.*; 3/23 Tr. (Ramaprasad) 2687:19-23, 2801:11-17; 3/27 Tr. (Kokakis) 3236:1-9. Further, with both interactive streaming and downloads, music is distributed to users in the same way—namely, over the Internet. 3/22 Tr. (Ramaprasad) 2591:7-20, 2604:17-2605:13; 3/15 Tr. (Leonard) 1080:16-20, 1098:11-1100:7. It also typically is consumed in similar ways, i.e., via digital, often mobile, devices. Ex. 1611 (Dorn WDT) ¶¶ 17-18 (describing availability of iTunes

and Apple Music on the same mobile platforms); Ex. 692 (Levine WDT) ¶¶ 43-44 (describing availability of Google Play's download and streaming features on the same mobile platforms).

APL-F170. Given these similarities, in economic terms, interactive streams and digital downloads are considered substitutes for each other. 3/22 Tr. (Ramaprasad) 2590:20-23; 2605:14-18; Ex. 1615 (Ramaprasad WDT) ¶ 56; 3/13 Tr. (Katz) 709:18-25 ("[M]y opinion at the aggregate level is that [interactive streaming] is a substitute [for other types of consumption of music such as CDs and PDDs]."); 3/20 Tr. (Marx) 1952:13-20 (same).

APL-F171. This conclusion that they are substitutes for each other is supported by academic research. *See* Ex. 1615 (Ramaprasad WDT) ¶ 56; 3/22 Tr. (Ramaprasad) 2590:24-2591:6, 2601:18-24 (opining that interactive streaming is a substitute for downloads, testifying as to support in academic research and in the music industry); 3/13 Tr. (Katz) 710:17-22 (describing academic researchers' conclusion that interactive streaming substitutes for digital downloads); 3/20 Tr. (Marx) 1951:19-1952:20; Ex. 909 at pp. 1, 2-3, 6, 15 ("We find that Spotify use displaces permanent downloads.").

APL-F172. It is also supported by the trend in the music industry over the last few years, which shows there has been a shift in music consumption from digital downloads to interactive streaming. Ex. 1615 (Ramaprasad WDT) ¶ 56-57; 3/22 Tr. (Ramaprasad) 2590:3-19; 3/16 Tr. (Mirchandani) 1460:2-10 (observing migration from digital downloads to streaming in Amazon's customers and as a general trend); 3/23 Tr. (Herbison) 2937:2-5 (attributing decreased mechanical royalties "to the shift in music consumption to interactive streaming"); Ex. 1489 at 3 (Official Charts Company noting that the "growth in streaming has taken place in parallel with a decline in single track sales.").

APL-F173. In fact, as illustrated below in Figure 1 from Professor Ramaprasad's written direct testimony, revenues from digital downloads have been declining since 2013, while revenues from interactive streaming have been simultaneously increasing—which again supports the concept that interactive streaming is a substitute for digital downloads.





Source: Recording Industry Association of America Year-End Revenue and Shipment Reports

Notes: The Physical Distribution category includes LP/EP, Vinyl Single, 8-Track, Cassette, Cassette Single, Other Tapes, CD, CD Single, DVD Audio, and SACD; the Download category includes Download Single, Download Album, and Download Music Video; and the Streaming category includes revenue from interactive streaming services, which is reported as revenue from Paid Subscriptions and On-Demand (Ad-Supported) streaming. The Streaming category excludes non-interactive streaming revenue, which is separately reported by the RIAA as "Revenues from SoundExchange distribution." The Physical Distribution category data include three instances of negative annual revenue.

Ex. 1615 (Ramaprasad WDT) ¶ 55; 3/22 Tr. (Ramaprasad) 2590:3-19.

APL-F174. In addition, the Copyright Owners' witnesses have admitted to recent trends in the market that demonstrate that interactive streaming is a substitute for downloads. *See* Ex. 3019 (Sammis WDT) ¶ 39 (noting "the changes in the music industry, specifically the migration from physical products and digital downloads to on-demand streaming"); Ex. 3024 (Rose WDT) ¶ 29 ("Now, streaming has become the most popular way to consume music and is. . . . replacing sales of digital downloads."); Ex. 3021 (Yocum WDT) ¶ 34 (noting

); Ex. 3015 (Herbison WDT) ¶ 6 "([I]nteractive streaming is cannibalizing physical sales and downloads.").

APL-F175. Given the fact that digital downloads and interactive streaming are substitutes for each other, the rate for interactive streaming should provide songwriters with royalty payments that are consistent with royalty payments for digital downloads. Ex. 1615 (Ramaprasad WDT) ¶ 57. *See also* Ex. 1065 (Marx WDT) ¶ 104 ("The underlying principle of using PDD/CD rates as a benchmark for interactive streaming rates is that compensation to musical works rights holders for comparable channels of distribution should be comparable, so that the statutory royalty rate structure does not create artificially favored or disfavored forms of distribution that are out of line with underlying demand.").

APL-F176. The digital download rate also is a comparable benchmark for interactive streaming because both pertain to distribution and consumption of the same musical works, and the rates for both are paid to the same licensors of rights to those musical works. 3/15 Tr. (Leonard) 1098:11-1100:7. In contrast, benchmarks for musical work royalty rates that are based on sound recording royalty rates (like the benchmarks used by the Copyright Owners' expert, Dr. Jeffrey Eisenach, discussed below) are not comparable because musical works and

sound recordings are very different products. Ex. 1616 (Ramaprasad WRT) ¶¶ 5, 18; 3/22 Tr. (Dorn) 2551:12-17; 3/23 Tr. (Ramaprasad) 2672:5-25. *See infra* APL-F330–338.

## 2. The Statutory Digital Download Rate of \$0.091 Satisfies the Section 801(b) Factors and Has Near Universal Support

APL-F177. The digital download rate of \$0.091 meets the objectives of the Section 801(b) factors, which also apply to interactive streaming. The CRB originally set this rate following a proceeding that was based on an analysis of these objectives. *Phonorecords I*, 74 Fed. Reg. at 4510; *see also* 3/22 Tr. (Ramaprasad) 2604:17-2605:7; 3/23 Tr. (Ramaprasad) 2660:16-2661:9.

APL-F178. Moreover, as explained below, there is near universal agreement among the participants that the current \$0.091 royalty rate for digital downloads is fair and appropriate. *See infra* APL-F179–186.

APL-F179. At the outset of this proceeding, when the parties exchanged their initial proposals regarding the Subpart A rates for physical phonorecord deliveries and permanent digital downloads, Apple, Amazon and Google each proposed that the rate for digital downloads should remain at the \$0.091 rate previously set by the CRB. Ex. 1615 (Ramaprasad WDT) ¶ 41.

APL-F180. Later in this proceeding, the Copyright Owners entered into a settlement (the "Subpart A Settlement") with several Services, which proposed to continue the \$0.091 rate for digital downloads. *See Determination of Royalty Rates & Terms for Making & Distrib. Phonorecords (Phonorecords III)*, 82 Fed. Reg. 15297-01 (Mar. 28, 2017) ("2017 Subpart A Settlement Determination"); *see also* 3/22 Tr. (Dorn) 2486:23-2487:15 ("[C]learly the industry at large has no problem with this particular rate or at least there is a collective agreement that it is good enough for the next five years, so we figure it is a good starting point because . . . there is

already a value at the song level when something is purchased for what the content creator is compensated.").

APL-F181. Only one participant, George Johnson, opposed the Subpart A Settlement when it was submitted to the CRB's for approval. *See* 2017 Subpart A Settlement Determination, 15297-98. The CRB ultimately adopted the Subpart A Settlement, expressly rejecting arguments that the rate was unreasonable. *Id.* at 15297-99. The Librarian of Congress also approved the settlement. *Id.* 

APL-F182. This Subpart A Settlement rate of \$0.091 also reflects the objectives of the Section 801(b) factors because it was negotiated by the participants "in the shadow" of the compulsory license. In other words, the parties were aware that if they did not agree, this rate would have been determined in this proceeding in accordance with the Section 801(b) factors, and this further confirms it is an appropriate benchmark for this proceeding. 3/20 Tr. (Marx) 1842:21-1844:25; *see also* 3/15 Tr. (Leonard) 1182:6-1187:3.

APL-F183. Further, in the course of this proceeding, multiple witnesses and experts testified that the \$0.091 rate for digital downloads is reasonable and meets the statutory objectives of Section 801(b). Ex. 1615 (Ramaprasad WDT) ¶ 41; 3/8 Tr. (Levine) 231:7-12, 238:24-239:15; 3/13 Tr. (Katz) 552:2-56, 626:6-629:10; 3/15 Tr. (Leonard) 1080:8-20, 1098:3-1100:7, 1103:24-1105:15; 3/22 Tr. (Dorn) 2494:14-2495:7; 3/22 Tr. (Ramaprasad) 2604:17-2605:18.

APL-F184. In addition, Google's economic expert, Dr. Gregory Leonard, testified that

. 3/15 Tr. (Leonard) 1080:16-20; 1098:11-1100:7. Further, Pandora's economic

expert, Dr. Michael Katz,

#### . 3/13 Tr. (Katz) 626:6-629:10.

APL-F185. The Copyright Owners try to argue that the Subpart A Settlement rate for digital downloads is not an appropriate benchmark because they claim they were indifferent to it because it was not as important as interactive streaming. Specifically, the Copyright Owners' witness, David Israelite, testified that because "the mechanical income from permanent digital downloads and physical product will become increasingly inconsequential during the 2018-2022 period as music consumers continue to shift to the interactive streaming model," the Copyright Owners chose to settle on the Subpart A rate and roll it forward rather than "[e]xpend[] [their] precious resources in fighting for a higher rate in a declining business[.]" Ex. 3030 (Israelite WRT) ¶ 49-50; *see also* 3/29 Tr. (Israelite) 3717:6-14 ("[E]conomically in the five-year period it is the streaming rate that will matter, not the physical or download rate.").

APL-F186. There is no evidence in the record, however, that supports Mr. Israelite's testimony that the Copyright Owners were indifferent to the Subpart A rate for this proceeding. Moreover, his testimony is contradicted by the record, which shows the digital download market remains "robust," and is still an important part of the music industry. 3/22 Tr. (Ramaprasad) 2591:21-2592:5; *see also* 3/20 Tr. (Marx) 1845:12-1846:2. In fact, revenues from digital downloads totaled approximately \$3 billion in 2015. 3/22 Tr. (Ramaprasad) 2591:21-2592:5; Ex. 1615 (Ramaprasad WDT) ¶ 55. Further,



## B. Apple's Proposed Rate Is Also Based on a Conversion Ratio of Streams to Downloads That Is Supported by Industry-Accepted and Academic Benchmarks

APL-F187. Apple derived its all-in per-play rate for interactive streaming by taking the all-in download rate of \$0.091 and multiplying it by a conversion rate that equates 100 interactive streams to one download. 3/22 Tr. (Dorn) 2494:14-2495:7; Ex. 1611 (Dorn WDT) ¶ 78; Ex. 1612 (Dorn WRT) ¶ 20; *see also* 3/22 Tr. (Ramaprasad) 2604:17-2605:18.

APL-F188. In order to determine the conversion rate for equating downloads to interactive streams, Apple looked to the work of well-respected music industry participants and academics, who have grappled with the same issue of finding the equivalent number of streams to downloads. Ex. 1615 (Ramaprasad WDT) ¶ 82; 3/22 Tr. (Ramaprasad) 2609:17-2611:19. As discussed below, the recent conversion rates determined by these music industry participants and academics indicate that one download equals 100-150 streams. *See infra* APL-F 189–236. To formulate its proposed rate for interactive streaming, Apple chose the conversion rate of 1:100 because it was the most conservative rate in that range, as it was the most favorable to the Copyright Owners. 3/22 Tr. (Ramaprasad) 2643:17-2644:10, 2601:25-2602:6; 2603:20-2604:15; 2625:11-24; Ex. 1611 (Dorn WDT) ¶¶ 14, 81. The result is an all-in per-play rate of \$0.00091 for interactive streaming.

#### 1. Apple's Proposed Rate Is Supported by Music Industry Benchmarks

APL-F189. The music industry has long measured music consumption in order to, among other things, track sales, create sales awards, and create charts of sales success and popularity. *See, e.g.*, Ex. 1615 (Ramaprasad WDT) ¶ 82-83; 3/22 Tr. (Ramaprasad) 2609:12-2610:22; 3/22 Tr. (Dorn) 2487:16-2491:8.

APL-F190. Historically, music consumption was measured by the number of physical albums or singles sold; however, the rise in popularity of internet-based digital sales prompted

the music industry to account for digital downloads in these measures of music consumption. Ex. 1615 (Ramaprasad WDT) ¶ 82; 3/22 Tr. (Ramaprasad) 2609:17-2610:22. Unlike physical album sales, digital downloads allow consumers to purchase and own individual songs from an album, without purchasing the entire album. Ex. 1615 (Ramaprasad WDT) ¶ 82. For the purposes of measuring consumption of downloads in tracking the success and sales of albums, the "common industry yardstick" was adopted, which equates the sale of 10 downloads of any song from an album with one album sale. Ex. 1615 (Ramaprasad WDT) ¶ 82 (*citing* Ex. 1560); *see also* 3/22 Tr. (Dorn) 2493:13-21; 3/22 Tr. (Ramaprasad) 2614:5-18; 3/23 Tr. (Ramaprasad) 2759:25-2760:9; Ex. 1441.

APL-F191. Similarly, the rise in popularity of interactive streaming has prompted the music industry to develop methods to also incorporate interactive streaming into their calculations of charts and awards. Ex. 1615 (Ramaprasad WDT) ¶ 82; 3/22 Tr. (Ramaprasad) 2609:17-2611:21. Incorporating interactive streaming activity into charts based on album sales, however, is not as straightforward as it was to incorporate digital downloads. With streaming, consumers do not pay for permanent ownership of a particular song or album, but instead they pay for subscriptions to an entire music library that allows them the ability to stream particular songs or albums on demand. Ex. 1615 (Ramaprasad WDT) ¶ 82; 3/22 Tr. (Ramaprasad) 2609:17-2611:21. To address this complication, the music industry devised certain methodologies, such as conversion rates, to equate streams to downloads in order to measure total music consumption across various forms of music. Ex. 1615 (Ramaprasad WDT) ¶ 83; 3/22 Tr. (Ramaprasad) 2609:17-2611:21.

APL-F192. As discussed below, Billboard, the RIAA, and the Official Charts Company have each formulated conversion rates for downloads and interactive streaming that

they use to compile their sales charts and awards, which are critical to the music industry. All of their rates fall within the same range, namely one download equals 100-150 streams. *See infra* APL-F193–207.

APL-F193. **Billboard Conversion Rate (1:150):** One conversion rate that Apple considered in formulating its proposal was formulated by Billboard. 3/22 Tr. (Dorn) 2488:7-2489:4; Ex. 1611 (Dorn WDT) ¶ 79. Billboard is the premier music charting company in the United States and is well respected. 3/22 Tr. (Ramaprasad) 2612:6-9; 3/22 Tr. (Dorn) 2488:17-2489:4; Ex. 1611 (Dorn WDT) ¶ 79. Billboard publishes the Billboard 200 chart, which is a weekly chart of the top 200 albums, measured by sales. 3/22 Tr. (Ramaprasad) 2612:10-17. The sales data used for the Billboard 200 chart is provided by Nielsen SoundScan, a company which provides reliable data used widely in the music industry. *Id.* at 2614:19-2615:4. The Billboard 200 chart is considered the "bible" of the industry and "rising to the top of the chart is the benchmark of success." 3/22 Tr. (Dorn) 2488:17-2489:4.

APL-F194. In November 2014, Billboard announced that it would include "ondemand streaming and digital track sales (as measured by Nielsen Entertainment)" to compile its Billboard 200 sales chart, along with the sales of physical albums. Ex. 1441; 3/22 Tr. (Ramaprasad) 2612:18-2613:2. To figure out a methodology to incorporate them into the Billboard 200 album chart, Billboard "took into account feedback from key executives in the music industry," and used "accepted industry benchmarks for digital and streaming data," and data from "[a]ll of the major on-demand audio subscription services[.]" Ex. 1441 at 2.

APL-F195. As a result of this analysis, Billboard concluded that one download equates to 150 interactive streams, and it has used that conversion rate in its Billboard 200 chart

since 2014. 3/22 Tr. (Ramaprasad) 2614:7-14, 2616:24-2617:15; 3/23 Tr. (Ramaprasad) 2824:25-2825:2; Ex. 1441.

APL-F196. <u>The RIAA (1:100 and 1:150):</u> The RIAA also has adopted ratios that convert downloads to interactive streams, which were considered by Apple. The RIAA is a trade organization of record labels, which account for "[n]early 85% of all legitimate recorded music produced and sold in the United States." Ex. 903 at 3. RIAA represents the interests of record labels in administrative mechanical rate-setting proceedings. Ex. 3013 (Israelite WDT) ¶ 83. *See Phonorecords I*, 74 Fed. Reg. at 4513.

APL-F197. As part of its work, RIAA bestows Gold and Platinum certification for albums and singles, which are "iconic benchmarks" based on units sold. Specifically, an album or single is certified "Gold" when 500,000 units are sold, "Platinum" when 1,000,000 units are sold, and "Multi-Platinum" when 2,000,000 units are sold. Ex. 903.

APL-F198. In May 2013, the RIAA announced that it would use interactive streaming in its calculations for Gold and Platinum certification of singles. 3/22 Tr. (Ramaprasad) 2618:10-2619:14; Ex. 1469. The RIAA spent "a year to work out" the appropriate ratio. *Id.* As a result of this work, the RIAA determined one download equals 100 streams. *Id.* 

APL-F199. Several years after it began including interactive streaming for Gold and Platinum certification of singles, on February 1, 2016, the RIAA announced it would include interactive streaming in its calculations for Gold and Platinum certification of albums. Ex. 903; *see also* Pandora Tr. Ex. 885 (Katz WDT) ¶ 110 & n.154 (citing RIAA News Release, "RIAA Debuts Album Award with Streams," February 1, 2016, available at <u>http://www.riaa.com/riaa-</u> <u>debuts-album-award-streams/</u>); Google Tr. Ex. 698 (Leonard WRT) n.256 (citing same); Spotify

Tr. Ex. 1065 (Marx WDT) ¶ 108 & n.121 (citing same); 3/22 Tr. (Ramaprasad) 2617:19-24, 2619:15-17; 3/29 Tr. (Israelite) 3869:10-15.

APL-F200. To determine the appropriate conversion rate, the RIAA conducted "a comprehensive analysis of a variety of factors - including streaming and download consumption patterns and historical impact on the program - and also consult[ed] with a myriad of industry colleagues[.]" Pandora Tr. Ex. 903 at 2. As a result of this analysis, the RIAA concluded that it would use a conversion rate going forward for both its album and single certifications that equates one download to 150 streams. Ex. 903; 3/22 Tr. (Ramaprasad) 2618:6-2619:17; *see also* Ex. 885 (Katz WDT) ¶ 110 & n.154; Ex. 698 (Leonard WRT) n.256; Ex. 1065 (Marx WDT) ¶ 108 & n.121; 3/13 Tr. (Katz) 637:4-9 (describing RIAA's use of a conversion of 100 and 150 streams to 1 download); 3/20 Tr. (Marx) 1849:11-15; 3/29 Tr. (Israelite) 3869:10-15.

APL-F201. <u>Official Charts Company (1:100 and 1:150):</u> Apple also considered the conversion ratios formulated by the Official Charts Company. The Official Charts Company measures music popularity in the United Kingdom similar to the way Billboard does in the United States. 3/22 Tr. (Ramaprasad) 2620:7-12; 3/22 Tr. (Dorn) 2490:22-2491:7; Ex. 1611 (Dorn WDT) ¶ 80. Official Charts Company's Official Singles Chart "is arguably the most influential and highly regarded chart in the world, with a huge amount of history and heritage attached[.]" Ex. 1489 at 5.

APL-F202. In June 2014, the Official Charts Company announced that it would begin including interactive streaming in compiling its music charts, starting in July 2014. 3/22 Tr. (Ramaprasad) 2620:17-2621:2; Ex. 1489 at 1-2. It made this decision because of the rapid growth of interactive streaming and "to ensure that the new generation of music consumption is also reflected" in its charts. Ex. 1489 at 3.

APL-F203. Because of the prominence of its Official Singles Chart, "there [were] a larger number of interested parties and stakeholders with a view on this change" and the Official Charts Company "spent a lot of time taking views from across the industry because [it] wanted to ensure that this change was made with the broadest possible support and without any key issues being overlooked." *Id.* at 5. For six months, the company "conducted a comprehensive consultation process to ensure that everyone underst[ood] the reason for this change and support[ed] the method, and also to take on as many views as possible." *Id.* at 5.

APL-F204. In order to account for interactive streams in its charts, the Official Charts Company "recognised the need for a logical conversion rate" between downloads and streams. *Id.* at 3. To determine this conversion rate, the Official Charts Company used "value (in terms of royalties paid to the rights owners) to calculate [an] average rate," and noted that "[t]his broad methodology is the same as that used in other markets which have added streams to their singles charts." *Id.* at 4. To determine the appropriate rate, it conducted "an extensive investigation of royalty rates paid and sense-checked [it] in consultation with independent and major labels, digital retailers and streaming services." *Id.* 

APL-F205. As a result of this extensive analysis and industry input, the Official Charts Company determined that it would adopt a conversion rate that equated one download with 100 interactive streams. *Id.* at 3. The Official Charts Company's decision had "broad support from across the industry, spanning independent and major labels, physical and digital retailers, managers, artists, as well as [its] key media partners such as BBC Radio 1, MTV, Music Week and many more." *Id.* at 5.

APL-F206. In December 2016, the Official Charts Company announced that, starting in January 2017, it would use an updated conversion rate: one download equals 150 streams.

Ex. 698 (Leonard WRT) ¶ 178 & n.254. An Official Charts Company representative explained that the change was "testament to the rapidly changing nature of music consumption in the UK - and the huge shift we are seeing towards streaming - that we are updating the way we measure the contribution of streams to the make-up of the official charts as quickly as we are." *Id.* 

APL-F207. In sum, the above-referenced industry conversion rates determined by Billboard, the RIAA and the Official Charts Company all fall within the same range (one download equals 100-150 interactive streams), and there are no other reported industry rates that are different. An article published in Billboard magazine, dated July 3, 2014, reports on a methodology for a stream-to-download conversion rate based on comparing royalties received by labels for streams and downloads. Ex. 1497. The reporter himself then applied this methodology to calculate ratios that would have theoretically applied in to the music industry in 2013 (one download equals 200 streams) and in mid-2014 (one download equals 150 streams). *Id.* While there is no evidence as to whether this methodology was ever accepted in the industry (and if so, for what purpose) or that Billboard, the RIAA, or Official Charts Company used it when coming up with their own conversion rates, the rates reported in the article are consistent with the industry rates that have been adopted to calculate charts and awards.

## 2. The Music Industry (Including the Copyright Owners) and Academics Rely on and Accept the Billboard, the RIAA, and the Official Charts Company Conversion Rates

APL-F208. These industry conversion rates are reliable. Billboard, the RIAA, and the Official Charts Company are well-respected entities in the music industry and have the requisite expertise and resources to determine these stream-to-download conversion rates. 3/22 Tr. (Ramaprasad) 2619:25-2620:12, 2628:18-2629:5, 2630:5-2631:13; 3/22 Tr. (Dorn) 2492:13-23; Ex. 1611 (Dorn WDT) ¶¶ 79-80; Ex. 1612 (Dorn WRT) ¶¶ 20-21.

APL-F209. In fact, the Copyright Owners agree that these entities are well respected and reliable given that their own witnesses relied on data from Billboard, Nielsen, and RIAA to prepare their written testimony in this proceeding. *See, e.g.*, Ex. 3027 (Eisenach WDT) ¶¶ 42, 44-45, 56, 62, 66 n.57, 67, 102 n.96, 113 n.108, 110, 116, Figure 3-5, Table 4-5, Ex. 3036 (Timmins WRT) ¶¶ 19 n. 3, 20 & n.3, 83 n. 103; Ex. 3020 (Barron WDT) ¶¶ 5, 10, 24, 25; Ex. 3025 (Bogard WDT) ¶¶ 10, 13, 15; Ex. 3016 (Brodsky WDT) ¶ 45, 77; Ex. 3018 (Kokakis WDT) ¶¶ 25, 31, 50-53. 62, 66 n. 57, 67 Table 4, 102 n. 96, 113 n. 108 & 110, 116 Table 5; Ex. 3033 (Eisenach WRT) ¶¶ 32-33, 36, 86 n.110, 87 n.114, 110 n.151; Ex. 3028 (Gans WDT) ¶ 13 Table 1; Ex. 3035 (Gans WRT) ¶¶ 43, 45; Ex. 3015 (Herbison WDT) ¶¶ 20, 22 n.2, 24 n.4, 30 n.7, 34 n.9; Ex. 3014 (Israelite WDT) ¶¶ 7, 70 n.27-29; Ex. 3022 (Kalifowitz WDT) ¶¶ 2, 4; Ex. 3026 (Rysman WDT) ¶¶ 103 n.88, 107 n. 95; Ex. 3032 (Rysman WRT) ¶¶ 34, 36 n.39, 73 n.93.

APL-F210. Further, there is no evidence in the record that Billboard, RIAA and the Official Charts Company are biased in favor of any particular industry player, or have a reason to skew their stream-to-download conversion rates one way or the other. 3/22 Tr. (Ramaprasad) 2629:6-13. In fact, as noted above, each of these entities consulted with a wide range of industry players in order to come up with their conversion rates. *See* Ex. 1441 at 2; Ex. 903 at 2; Ex. 1489 at 4. There is no evidence that any industry player has objected to these conversion rates or claimed they are skewed to favor anyone.

APL-F211. In addition, there is no evidence that the industry benchmarks adopted by Billboard, RIAA, and the Official Charts Company were devised for the purposes of litigation. 3/22 Tr. (Ramaprasad) 2630:13-15. Rather, the evidence shows that they are the product of a good faith effort to convert streams to downloads for their charting and award purposes—not for litigation. *See, e.g.*, Exs. 903, 1441, 1469, 1489.

APL-F212. Numerous experts in this proceeding, many of whom are academics, relied on these industry benchmarks in their own analyses. Ex. 1615 (Ramaprasad WDT) ¶¶ 82-91; Ex. 698 (Leonard WRT) ¶ 178 & n.254. Ex. 885 (Katz WDT) ¶ 110 & n.154; Ex. 698 (Leonard WRT) n.256; Ex. 1065 (Marx WDT) ¶ 108 & n.121; 3/13 Tr. (Katz) 637:4-9; *see* 3/22 Tr. (Ramaprasad) 2630:16-22 (explaining that she relies on these sources in her research and would not question their validity if they appeared in an academic paper); 3/21 Tr. (Marx) 2032:2-2033:8.

APL-F213. In addition, the Copyright Owners use and rely on these conversion rates for key aspects of their businesses. For example, the NMPA uses the RIAA's conversion rate to give important awards to songwriters. According to David Israelite, President of the NMPA, his organization is "most known" for certifying songwriters as "reaching gold and platinum status" and giving out "awards for gold and platinum achievements." 3/28 Tr. (Israelite) 3555:7-11. During his cross-examination at the hearing, Mr. Israelite admitted that as part of this program, the NMPA chose in 2014 to use (and continues to use) the RIAA's metrics—which, as discussed above, previously equated one download with 100 streams, and now equates one download to 150 streams, *supra* APL-F196–200—in order to award the Gold and Platinum certifications to songwriters:

Q. But the NMPA does certify songwriters for those [Gold and Platinum] awards based on the RIAA metrics, correct?

A. Yes. Our agreement [with the RIAA] is that whatever metric they use, we just get to follow with our own certification but it is their metric.

Q. And you understand that the RIAA uses a 150-to-1 ratio for streams to downloads, correct?

A. Yes, I believe that when they decided to start incorporating streaming into the model, that they started using 150 streams as an equivalent of a unit for the purpose of their counting.

Q. And that's the basis on which the NMPA is willing to certify these awards to your songwriter members, correct?

A. We have no say. We are happy to certify the writers for whatever the RIAA does in their certification program.

JUDGE STRICKLER: Well you have the right to just stop doing it if you disagreed with the 150-to-1 ratio, you could say, forget it, we're not going to continue on in this venture utilizing the RIAA's formula?

A: Oh, yes, Judge. It is a voluntary program. We choose to do it.

3/29 Tr. (Israelite) 3869:5-3870:3.

APL-F214. In addition, one of NMPA's most prominent members, UMPG, uses the

conversion rate that one download equals 150 streams when comparing mechanical rates paid for

CDs and interactive streams.

(Katz) 638:2-9.

APL-F215. In addition to relying on the conversion rates themselves, NMPA members—along with virtually everyone in the music industry—rely on and cite to the charts and album sales certifications that incorporate these benchmarks to promote their recording artists and performers. 3/22 Tr. (Ramaprasad) 2631:1-7 ("[A]rtists, music publishers [including NMPA members], [and] a variety of different members of the music industry refer to . . . these

charts . . . to tout, to promote, to market their artists and market their songwriters."); 3/22 Tr. (Dorn) 2489:9-2490:21; Exs. 1593-94.

APL-F216. For example, in a January 5, 2017 press release, Sony/ATV touted that Drake's album *Views* "generated 4.14 million equivalent album units during [2016], comprising traditional album sales, track equivalent albums, and streaming equivalent albums," and promoting the fact that the album "spent 13 weeks at No. 1 on the Billboard 200 chart" and the single *One Dance* "top[ped] the Official Charts Company's year-end chart." Ex. 1593.

APL-F217. Similarly, on its website, Sony/ATV promotes its songwriter Ed Sheeran by stating that his first album's "No. 5 debut on the Billboard 200 was the best start in history by a British male solo artist" and his subsequent album "delivered [Sheeran] a first ever Billboard 200 chart-topper." Ex. 1594.

APL-F218. As another example, in an August 27, 2015 press release,

Warner/Chappell Music publicized that Melanie Martinez's debut album "arrive[d] on th[at] week's Billboard 200 at #6." Ex. 1595.

APL-F219. In addition, in a December 21, 2016 press release, UMPG stated that country artist and UMPG writer Kane Brown's album debuted within the Top 10 on the Billboard 200 chart. Ex. 1596.

APL-F220. There is no evidence that, prior to this proceeding, any songwriter or publisher had either criticized the industry's conversion rates of 1:100 or 1:150 or complained about the change in the conversion rate from 1:100 to 1:150. 3/23 Tr. (Ramaprasad) 2826:4-19.

## 3. Apple's Proposed Rate (and the Industry Benchmarks) Are Confirmed and Corroborated by Independent Academic Research by Drs. Waldfogel and Aguiar

APL-F221. Academic research on the impact of interactive streaming on music sales has found an equivalence ratio of streams to downloads that is consistent with the industry

benchmarks that Billboard, RIAA, and the Official Charts Company use. Ex. 1615 (Ramaprasad WDT) ¶ 89; Ex. 885 (Katz WDT) ¶ 110; Ex. 1065 (Marx WDT) ¶ 108; 3/13 Tr. (Katz) 634:7-24; Ex. 111 (Mirchandani WRT) ¶ 40 n.37.

APL-F222. Specifically, Dr. Joel Waldfogel and Dr. Luis Aguiar conducted research to investigate how the sales of singles or CDs change with an increase in interactive streaming, *i.e.*, whether and to what extent interactive streaming substitutes for individual track sales (the "Academic Conversion Research"). *Id.*; Ex. 909. They concluded that for every increase of 137 streams, there is a decrease of one song purchased, *i.e.*, 137 streams are equivalent to one single. *Id.*; 3/22 Tr. (Ramaprasad) 2636:13-20.

APL-F223. These researchers are well qualified to conduct the Academic Conversion Research. 3/22 Tr. (Ramaprasad) 2635:25-2636:5. Dr. Joel Waldfogel is a well-respected academic and economics professor at the University of Minnesota who studies the digital music industry. 3/22 Tr. (Ramaprasad) 2634:6-21. He is also a researcher at the National Bureau of Economic Research (NBER). Ex. 909 at PAN-CRB115\_00094259. Experts in this proceeding cite to and rely on at least three other articles written by Dr. Waldfogel, including two that were published in *Information Economics & Policy* and *The Journal of Industrial Economics. See, e.g.*, Ex. 132 (Hubbard WRT) ¶¶ 2.3 n.8, 2.8 n.19; Ex. 885 (Katz WDT) ¶ 55 n.78. The Copyright Owners' own witness, Dr. Joshua Gans, admitted that Dr. Waldfogel has a reputation for "careful empirical analysis" and authored a paper motivated by one of Dr. Waldfogel's analyses. 3/30 Tr. (Gans) 4172:22-4173:15.

APL-F224. Recognizing that Dr. Waldfogel is a well-qualified expert in this area, the Copyright Owners themselves identified him as their potential economics expert in this

Proceeding. In their anticipated witness list, dated July 15, 2016, the Copyright Owners described him as follows:

**Joel Waldfogel, Ph.D.** Frederick R. Kappel Chair in Applied Economics and Affiliated Faculty Member, Carlson School of Management, University of Minnesota; Research Associate, Industrial Organization and Law and Economics Programs, National Bureau of Economic Research. Dr. Waldfogel will be providing economic testimony supporting the Copyright Owners' proposed rates and terms. His testimony will include an analysis of data on streaming and downloading activity to evaluate economic implications of the growth in streaming on relevant stakeholders.

Ex. 1624 at p. 3. The Copyright Owners, however, did not submit any testimony from him. 3/22 Tr. (Ramaprasad) 2636:6-10; 3/23 Tr. (Ramaprasad) 2828:9-12.

APL-F225. In addition, Dr. Luis Aguiar is an economist affiliated with the Institute for Prospective Technology Studies (IPTS) in Europe. Ex. 909 at 1. Experts in this proceeding cite to and rely on at least two other articles written by Dr. Aguiar, including one that was published in *Information Economics & Policy. See, e.g.*, Ex. 22 (Hubbard WDT) ¶ 2.3 n.6, 2.4 n.9; Ex. 1615 (Ramaprasad WDT) n.102; Ex. 1617 (Ghose WDT) n.35; Ex. 885 (Katz WDT) n.78.

APL-F226. The Academic Conversion Research was presented at the National Bureau of Economics Research Conference on IT. 3/22 Tr. (Ramaprasad) 2637:2-18. The Academic Conversion Research was also presented in 2015 as a Technical Report by the Joint Research Centre, the European Commission's in-house scientific service. *Id.* at 2637:2-18; Ex. 909 at PAN CRB115 00094259.

APL-F227. Dr. Waldfogel and Dr. Aguiar used sound methodology and extensive data that was collected over more than two years to conduct their Academic Conversion Research. Specifically, they looked at data from Spotify and Nielsen of the weekly Top 50 songs streamed on Spotify from April 2013 to March 2015, the weekly Top 200 songs streamed on Spotify from

October 2014 to March 2015, and Nielsen data for music sales for that more than two-year period. Ex. 909 at 14.

APL-F228. The data analyzed is robust and can be generalized to the interactive streaming industry as a whole. 3/22 Tr. (Ramaprasad) 2638:20-2639:10; 3/23 Tr. (Ramaprasad) 2777:1-2778:22; 2780:5-18. Spotify is a prominent streaming service and thus the results in the Academic Conversion Research based on data from Spotify can be generalized across services for purposes of determining the impact of interactive streaming on the sales of recorded music. 3/22 Tr. (Ramaprasad) 2638:20-2639:10; 3/23 Tr. (Ramaprasad) 2777:1-2778:22; 2780:5-18.

APL-F229. In his written rebuttal testimony, the Copyright Owners' expert, Dr. Marc Rysman, criticizes the Academic Conversion Research because "the consumption of individual songs could reasonably be expected to be very different from songs outside the top 50, which represent about 90 percent of total streaming volume." Ex. 3032 (Rysman WRT) ¶ 97. But, as discussed *supra* APL-F227–228, the Academic Conversion Research was not limited to the steaming activity of just 50 songs, rather it looked at each song that was in the Top 50 each week from April 2013 to March 2015, and the songs that comprised each week's Top 50 varied over the two-year period. *Id.* In other words, the Top 50 songs over this more-than two year period consisted of many more than just 50 songs. For example, in just nine months (April to December 2013), there were <u>1,241</u> songs in the Top 50. Ex. 909 at 19. Further, Dr. Rysman's criticism is additionally baseless because Dr. Waldfogel and Dr. Aguiar expressly found that there was a very high correlation of 0.99 between the Top 50 weekly streams and the Top 200 weekly streams, which means "the top-50 index is a valid measure of total Spotify use." Ex. 909 at 14 (emphasis added).

APL-F230. Further, as part of their methodology in the Academic Conversion Research, Dr. Waldfogel and Dr. Aguiar ran many regressions using this data (or portions of the data), which resulted in various rates for various purposes. 3/22 Tr. (Ramaprasad) 2640:17-2641:8. After analyzing all of their data and the multiple calculations, the authors expressly and repeatedly concluded: "Our best estimate indicates that an additional 137 streams displaced one track sale"; and (2) "We find that Spotify use displaces permanent downloads. In particular, 137 Spotify streams appear to reduce track sales by 1 unit." *E.g.*, Ex. 909 at 1, 22; 3/22 Tr. (Ramaprasad) 2641:4-8.

APL-F231. Dr. Rysman cites the other calculations shown in the Academic Conversion Research to question whether "we should use the number 137" and stated that when the researchers "expand the data to include countries beyond the US, they find a conversion rate of 43 [streams] to 1 [download]." Ex. 3032 (Rysman WRT) ¶ 100. But Dr. Rysman's reference to this calculation (which was one of many) does not make it a reliable benchmark in this proceeding. The 1:137 conversion rate that the researchers state is their "best estimate" is based on data collected in the United States, where Spotify is a major player, over a period of more than two years. By contrast, the 1:43 calculation to which Dr. Rysman refers is based on a more limited set of older data collected over only nine months in 2013, which includes data from 20 foreign nations, in which it is unclear whether Spotify was a dominant player. Ex. 909 at 15, 19, 35; 3/22 Tr. (Ramaprasad) 2640:17-2641:3.

APL-F232. For these and other reasons, Dr. Waldfogel and Dr. Aguiar did not conclude that one download is displaced by 43 streams. 1:43 "is not ... the right number to refer to." 3/22 Tr. (Ramaprasad) 2641:4-5. Rather, after analyzing all of their data, the authors expressly and repeatedly concluded: "Our best estimate indicates that an additional 137 streams
<u>displaced one track sale.</u>" *E.g.*, Ex. 909 at 22 (emphasis added); 3/22 Tr. (Ramaprasad) 2641:4-8; 3/20 Tr. (Marx) 1949:2-8 (explaining that the 137:1 ratio is the one the authors "highlight in the abstract and throughout the paper").

APL-F233. The Copyright Owners repeatedly attempted at trial to diminish the value of the Academic Conversion Research by calling it a "working paper," but their own expert Professor Gans testified that "working papers" are an important part of his academic research and listed at least 12 such papers on his CV. 3/30 Tr. (Gans) 4173:19-4174:12; Ex. 3028 (Gans WDT) at Appendix B page B-7 and B-13. Further, Professor Gans is affiliated with the National Bureau of Economic Research and has submitted many of his own working papers to this organization. 3/30 Tr. (Gans) 4174:13-22.

APL-F234. Dr. Rysman also cites language in the Academic Conversion Research stating that "additional work would be helpful to provide more confidence in the answer" and that the "actual data available to us fall short of the ideal[.]" Ex. 3032 (Rysman WRT) ¶ 99; Ex. 909 at 14, 26. But this language does not diminish the reliability of the research or conclusions because such language is "standard boilerplate language" that academic researchers include in most papers because all research is ongoing by its nature. 3/22 Tr. (Ramaprasad) 2639:24-2640:16.

APL-F235. The Copyright Owners presented no evidence of any academic research criticizing the Academic Conversion Research. Nor does the record contain any evidence of other academic research that attempts to determine a conversion ratio of streams to downloads.

APL-F236. Dr. Rysman misleadingly refers to research by Hannes Datta, George Knox, and Bart J. Bronnenberg (the "Datta, Knox and Bronnenberg Research") as support for a conversion rate of 2:1. Ex. 3032 (Rysman WRT) ¶ 101; Ex. 201. The Datta, Knox and

Bronnenberg Research, however, did not investigate how many interactive streams replaced or substituted for one download purchase. 3/22 Tr. (Ramaprasad) 2641:9-2642:1. Datta, Knox and Bronnenberg were merely trying to determine how streaming affected consumers' listening habits, specifically the number of times that consumers listened to a download they had previously purchased. 3/22 Tr. (Ramaprasad) at 2641:21-2642:8. The Datta, Knox and Bronnenberg Research did not conclude that the conversion rate of streams to downloads was 2:1 (or any other metric). *Id.* at 2642:25-2643:3.

# 4. Apple Applies the Conversion Ratios to the Comparable Download Rate to Derive a Per-Play Rate of \$0.00091

APL-F237. In sum, as discussed *supra* APL-F189–236, the recent methodologies used in the music industry and academic research to find the conversion rate of streams to downloads have found that conversion rates that ranged from 100 to 150 streams to one download. 3/22 Tr. (Ramaprasad) 2643:17-2644:10. As illustrated in Apple Demonstrative No. 29 below, applying the range of conversion rates from 100 to 150 streams per download to the \$0.091 digital download rate results in per-play rates of \$0.00061 and \$0.00091. *Id*.



3/22 Tr. (Ramaprasad) 2643:21-2644:3.

APL-F238. Apple's proposal of a per-stream royalty rate of \$0.00091 falls within the range of 100 to 150 streams per download, on the conservative end that is most favorable to the Copyright Owners. *Id.*; *see also id.* at 2601:25-2602:6; 2603:20-2604:9; 2625:11-24.

## IX. IT IS APPROPRIATE TO ADOPT A ZERO-ROYALTY RATE FOR STREAMS UNDER 30 SECONDS AND FRAUDULENT STREAMS

#### A. The CRB is Authorized to Set a Zero Royalty Rate

APL-F239. As a threshold matter, as discussed in detail below, the CRB has the statutory authority to set a zero royalty rate such as that Apple is proposing for streams under 30 seconds and fraudulent streams. *See infra* APL-C6–7; *Phonorecords II*, 78 Fed. Reg. at 67941 (finding CRB had authority to set a zero royalty for promotional plays).

# B. Streams under 30 Seconds Do Not Reflect True Consumer Demand

APL-F240. The CRB should adopt a zero-royalty rate for plays under 30 seconds because (1) such plays do not reflect true consumer demand, (2) services currently do not pay for such plays, both under the statute and **second second**, and (3) failing to adopt a zeroroyalty creates the perverse incentive for services to limit music recommendations and other innovation.

APL-F241. A zero-royalty for plays under 30 seconds is appropriate because such plays do not reflect true consumer demand. Ex. 1617 (Ghose WDT) ¶ 54, 60; Ex. 1611 (Dorn WDT) ¶ 87; 3/22 Tr. (Dorn) 2505:23-2506:22; 3/23 Tr. (Ghose) 2869:24-2870:15 (when a consumer plays a song less than 30 seconds, "there could be any number of reasons [for it], not linked to accurate demand."). Rather, when a song is played for less than 30 seconds, the user typically is "skipping through music, trying to find something," hit the play button "by accident," or is "sampling" music. 3/22 Tr. (Dorn) 2505:23-2506:22 (anything below 30 seconds is "not really a listening experience"); *see also* Ex. 1617 (Ghose WDT) ¶ 54, 60; Ex. 1066 (McCarthy

WRT) ¶ 61. That likely is why these brief plays commonly are referred to as "skips." Ex. 886 (Katz WRT) ¶ 4 n. 3 (short plays are "known as 'skips"); *see also* Ex. 1069 (Marx WRT) ¶ 4 n. 3 (referring to short plays as skips); Ex. 1066 (McCarthy WRT) ¶ 61 (

).
APL-F242. Counting these brief plays in a per-play royalty calculation
. Ex. 1068 (Vogel WRT) ¶ 39-40. Such a result is clearly unreasonable. <i>Id</i> .
APL-F243. A zero-royalty for plays under 30 seconds also is appropriate because
. See, e.g., Exs. 1432 at 2 (musical works license), 1434 at 2 (same), 1435 at 2
(same); Ex. 886 (Katz WRT) ¶ 4 n. 3 (the Copyright Owners' proposal would "expand the scope
of compensable plays to include all plays, in contrast to
").
APL-F244. Similarly,
. Ex. 132 (Hubbard WRT) ¶ 69 n. 149
; 3/20
4/7 Tr. (Marx) 5634:11-5635:12 ( ); Ex. 1069
(Marx WRT) ¶ 4 n. 3 (defining streams to would be a
"departure[] from current practice"). Rather, such plays generally are considered
. See Ex. 132 (Hubbard WRT) ¶

6.9 n. 149; 37 § 385.14. There is no evidence in the record that the Copyright Owners have objected to this practice.

APL-F245. Requiring services to pay for plays under 30 seconds also would reduce incentives for services to encourage music exploration and promote lesser known artists and songwriters, thereby undermining music discovery and availability. 4/6 Tr. (Vogel) 5327:15-5329:2; Ex. 1066 (McCarthy WRT) ¶ 61; Ex. 1068 (Vogel WRT) ¶ 41. As Paul Vogel, Spotify's Vice President, Head of Global Financial Planning, and Analysis and Investor Relations,

explained, "		
	." 4/6 Tr. (Vogel) 5327:15-5329:2.	
APL-F246.	Similarly,	
	. Cf.	,

3/16 Tr. (Mirchandani) 1410:25-1411:5. Because such a feature is likely to generate an increase in "skips," services would not want to offer such a feature.

APL-F247. For the foregoing reasons, plays under 30 seconds should have a zero royalty rate. *See* APL-F240–F246.

#### C. Fraudulent Streams Do Not Reflect True Consumer Demand

APL-F248. The CRB also should adopt a zero royalty rate for fraudulent streams because (1) these streams do not reflect consumer demand, and (2) including such streams in the royalty calculation creates incentives for publishers and songwriters to use illicit methods to increase their royalty payments.

APL-F249. "Fraudulent" plays do not reflect consumer demand for a song. *See* Ex. 1611 (Dorn WDT) ¶ 88; 3/23 Tr. (Ghose) 2870:16-21. Rather, fraudulent plays occur when a "bot" or software program streams a song from multiple computers, or, when a room full of people is hired to listen to a song on repeat. 3/22 Tr. (Dorn) 2500:15-2501:13. Copyright

owners should not be compensated for such illegitimate plays. *See* Ex. 1611 (Dorn WDT) ¶ 88; 3/23 Tr. (Ghose) 2870:16-21; 3/22 Tr. (Dorn) 500:15-2501:13, 2504:18-2505:1. Adopting a different rule would incentivize publishers and songwriters to use improper tactics to "game the system" and fraudulently increase their royalty payments. *See* 3/22 Tr. (Dorn) 2500:15-2501:13.

APL-F250. Moreover, there are several methods that can be implemented to determine whether plays are fraudulent. For example, one sign that a play is fraudulent is if a song is streamed more than 50 consecutive times. 3/23 Tr. (Ghose) 2870:16-21 ("when you see 50 continuous replications of the same stream from the same device, that would give me pause also."). Software also can be used to identify fraudulent plays. 3/22 Tr. (Dorn) 2502:18-21.

APL-F251. Thus, in order to maintain the integrity of the system, and ensure that copyright holders are compensated only for legitimate plays of their music, fraudulent plays should be excluded from the royalty calculation. APL-F248–250.

# X. APPLE'S PROPOSED RATE OF \$0.00091 IS

APL-F252. Although Apple is proposing a shift from a percentage of revenue royalty structure with various minima to a per-play rate, this change is unlikely to be disruptive. Ex. 1618 (Ghose WRT) ¶ 84; 3/23 Tr. (Ramaprasad) 2664:16-2665:10; 3/23 Tr. (Ghose) 2873:12-2874:2; 2878:1-25. That is because Apple's proposed rate is

APL-F253.

. Ex. 1618 (Ghose WRT) Chart 2

Ex. 1618 (Ghose WRT) Chart 2.
APL-F254. According to Dr. Ghose's analysis,
. Ex.
1618 (Ghose WRT) ¶¶ 6, 25-26, 74; 4/12 Tr. (Ghose) 5698:10-5699:5. Further,
. Ex. 1618 (Ghose WRT) Chart
2.
. Ex. 3026
(Rysman WDT) ¶ 64; <i>see also</i> Ex. 1618 (Ghose WRT) ¶¶ 34-35 (
); Ex. 886 (Katz WRT) ¶ 180.
APL-F255.
. See supra APL-F52–64.
APL-F256.
. Ex. 3032
(Rysman WRT) Tables 1 & 2. Not so. See Ex. 1618 (Ghose WRT) Chart 2 (showing that the
effective all-in rates that services have paid from 2012 through 2016 range
); see also Ex. 1611 (Dorn WDT) ¶¶
82-85 (explaining that the rate Apple is proposing is a middle ground in historic rates based on

knowledge from public sources; some services would pay more and others would pay

less). Rather, under Apple's proposed rate,

reported in Chart

2 from Dr. Ghose's written rebuttal testimony:

Ex. 1618 (Ghose WRT) Chart 2.

APL-F257.	For example, as indicated in Chart 2,
	. <i>Id</i> .
APL-F258.	There are three reasons that Dr. Rysman's analysis in Tables 1 and 2 of his
rebuttal testimony su	ggests a different result.
	. Ex. 3032 (Rysman WRT) Tables 1 and 2.
	. <i>Id.</i> ; <i>see also</i> 4/3 Tr. (Rysman) 4468:21-4469:10.
	See $4/3$ Tr (Rysman) $4469.5-20$
	See $1/3$ Tr (Pusman)
1165.12 1169.1	. See 4/5 11. (Ryshian)
4403:13-4408:1.	
	4/2 Tr (Decome) $4466/2$ $4469/1$ F 2022
	. 4/3 Ir. (Kysman) 4400:3-4408:1; Ex. 3032.
APL-F259.	Because Apple's proposed all-in rate of \$0.00091 is

any potential disruption from a per-play rate is "minimize[d] or

alleviate[d]." 4/12 Tr. (Ghose) 5742:12-5742:22.

# XI. APPLE'S RATE PROPOSAL FOR MUSIC LOCKERS

# A. Apple Proposes a Different Rate for Music Lockers Because They Are Different from Interactive Streaming Services

APL-F260. Music lockers function differently from interactive streaming services: they allow consumers to <u>store</u> music they <u>own</u>. *See* 4/12 Tr. (Ghose) 5728:23-5729:16; Ex. 1611 (Dorn WDT) ¶¶ 39-40; Ex. 692 (Levine WDT) ¶ 11 (explaining that Google's "scan-and-match" locker service allows "consumers to store copies of already-owned music in the cloud and to access that content from remote devices"); Ex. 1 (Mirchandani WDT) ¶ 16 ("Amazon's purchased content locker service stores all of a customer's music files purchased from Amazon free of charge"); *see also* Ex. 1616 (Ramaprasad WRT), ¶ 59 (emphasis added) (As a practical matter, a locker service "cannot provide the same access to a catalog of songs as an interactive streaming service unless the user purchases *all* those songs available on the interactive streaming service and then puts them on the locker service.").

APL-F261.

. *See* 3/13 Tr. (Joyce) 829:17-830:10. Others allow a user to listen to a song he or she owns from a central server, or to redownload a song he or she purchased previously. *See* 3/22 Tr. (Dorn) 2520:13-2521:5; 3/13 Tr. (Joyce) 829:17-830:2. Regardless of the particular mechanics whereby a user is able to access a song, however, every music locker service is functionally equivalent to <u>storing</u> music a user owns in the cloud, rather than on any particular device or CD. *See* Ex. 1612 (Dorn WRT) ¶ 40.

APL-F262. Given their different functionality, music lockers also are priced differently from interactive streaming services. For example, Apple's and Amazon's paid locker

services cost \$24.99 per year. Ex. 1612 (Dorn WRT) ¶ 40; Ex. 1 (Mirchandani WDT) ¶ 16. Even Amazon's most inexpensive interactive streaming service, Unlimited for Echo, costs \$3.99 per month, or \$47.88 per year. Ex. 1 (Mirchandani WDT) ¶ 25.

APL-F263. Because of the differences between interactive streaming and music locker services, it is appropriate to set a different royalty for each. 3/22 Tr. (Dorn) 2519:14-2521:52, 2523:10-13, 2525:2-2526:1; Ex. 1612 (Dorn WRT) ¶¶ 8, 39-43; 4/12 Tr. (Ghose) 5730:6-19, 5732:4-24; Ex. 1616 (Ramaprasad WRT) ¶¶ 12, 57-60. That is why Apple is proposing the following royalties for music locker services, distinct from its royalty for interactive streaming.

APL-F264. In addition, as discussed *infra* APL-265–274, Apple proposes two different rates for the different types of locker services—paid locker services and purchased content locker services.

#### 1. Apple's Proposed Rate for Paid Locker Services

APL-F265. Apple is proposing an all-in royalty rate of \$0.17 per month per subscriber for paid locker services. Ex. 1611 (Dorn WDT) ¶ 90; 3/22 Tr. (Dorn) 2519:2-6. This rate makes sense.

APL-F266. First, it is derived from the current statutory minimum for paid locker services. See 3/22 Tr. (Dorn) 2519:7-9; see also Ex. 1611 (Dorn WDT) ¶ 93.

APL-F267. Second, all paid locker services are subscription services. 37 C.F.R. § 385.21. Thus, from an administrative perspective, it makes sense to link the royalties services pay to a per-subscription fee. Ex. 1611 (Dorn WDT) ¶ 92.

APL-F268. Third, a single per-subscriber rate simplifies the current structure, and thus adds predictability for services. *See* Ex. 1615 (Ramaprasad WDT) ¶ 92.

APL-F269. Fourth, a per-user rate "creates the proper incentives for [music locker] services as services that are able to increase their revenue above [the per-user] rate by, for

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example, developing an attractive user interface[] that allows one service to charge higher subscription prices than other services, [are able to] keep all of the increased revenue." See Ex. 1611 (Dorn WDT) ¶ 92; *see also* Ex. 1617 (Ghose WDT) ¶ 91.

APL-F270. Fifth, a per-subscriber fee links the royalties services pay to the value consumers derive from music lockers, *i.e.*, the opportunity to store music, as opposed to the opportunity to play it. Ex. 1617 (Ghose WDT)  $\P$  89.

# 2. Apple's Proposed Rate for Purchased Content Locker Services

APL-F271. Apple is proposing a zero royalty rate for purchased content locker services. 3/22 Tr. (Dorn) 2519:10-1. There are three key differences between paid locker services and purchased content locker services that make a zero royalty appropriate.

APL-F272. First, purchased content locker services are free services. 37 C.F.R. § 385.21. Thus, services do not earn any revenue directly from these products.

APL-F273. Second, purchased content locker services allow consumers to store only music purchased from the company offering the locker. *See* 37 C.F.R. § 385.21; 3/22/17 Tr. (Dorn) 2520:13-2521:5; 2524:25-2525:22; *see* Ex. 1611 (Dorn WDT) ¶¶ 40-41, 92. Thus, the company offering the locker knows that the publishers and songwriters already were paid their royalties at the time the song was purchased. *See* Ex. 1612 (Dorn WRT) ¶ 41 (Songwriters and publishers are "fully compensated" for music stored through purchased content locker services at the time of the original purchase). As Dr. Ghose explained, "[b]ecause the only purpose of the service is to allow users to continue to access the music they have already purchased from that service, an additional royalty for purchased content locker service is not justifiable." Ex. 1617 (Ghose WDT) ¶ 93.

APL-F274. Finally, a purchased content locker is a benefit that services automatically give to consumers when they purchase a download. *See* 3/22 Tr. (Dorn) 2525:2-17; 3/13 Tr. (Joyce) 774:4-12. A separate subscription is not required.

## B. A Per-Play Rate Does Not Translate to a Music Locker Service Because, Ordinarily, When Consumers Purchase a Song, a Royalty Is Not Paid Each Time the Consumer Listens to It

APL-F275. Although Apple is proposing a per-play rate for interactive streaming, the same rate structure does not make sense for music lockers. That is because music lockers only allow users to store music they already own, and for which the copyright owner was fully compensated at the time of purchase. Ex. 1612 (Dorn WRT) ¶¶ 8, 40-42.

APL-F276. Normally, once a user purchases a song, he can listen to it as many times as he wants, without the copyright owner receiving any more royalty payments. *See* 3/22 Tr. (Dorn) 2519:14-2520:8; *see also* 4/3 Tr. (Rysman) 4371:6-10. The result should not be different just because a user is storing the song in a locker rather than on a CD or on his desktop. Ex. 1611 (Dorn WDT) ¶ 94 ("Songwriters and publishers are paid for these songs when they are purchased. Thus, they do not need to be paid again just because the purchaser chooses to store the song in a cloud storage space rather than on a hard drive."); *see also* Ex. 1617 (Ghose WDT), ¶ 90 ("applying a per-play rate for songs streamed through a paid locker service would not be justifiable because consumers own those songs and royalties have already been paid for those songs"). Thus, a per-play rate is not a proper rate model for music lockers. 3/23 Tr. Ramaprasad 2708:22-2709:13. It would be

3/23 Tr. Ramaprasad 2708:22-2709:13; see

also Ex. 1616 (Ramaprasad WRT), ¶ 57.

APL-F277. A per-subscriber rate also is more appropriate for music lockers than a per-play rate because what consumers are paying for when they sign up for a music locker is the

ability to <u>store</u> music. 4/12 Tr. (Ghose) 5731:18-5732:24; *see supra* APL-F260–261, 270. This is not the same as paying to stream music. 4/12 Tr. (Ghose) 5731:18-5732:24; *see supra* APL-F270. Thus, as the value a consumer is paying for when he purchases a music locker is different from the value he is paying for when he signs up for a streaming service, it is appropriate for the royalties to differ as well. 4/12 Tr. (Ghose) 5731:18-5732:24; *see supra* APL-F260–263, 270.

APL-F278. Finally, as noted above, all paid locker services are subscription services. APL-F267. Thus, from an administrative standpoint a per-user rate also is more appropriate in the paid locker content context than it is in the interactive streaming environment where there are non-subscription and bundled services. Ex. 1611 (Dorn WDT) ¶ 92 (Whereas some interactive streaming services "earn revenue based on ads, others based on subscribers, and others based on a combination of the two," the same is not true of paid locker services, all of which "are subscription-supported rather than ad-supported.")

# XII. THE COPYRIGHT OWNERS' RATE PROPOSAL FOR INTERACTIVE STREAMING AND MUSIC LOCKERS

APL-F279. The Copyright Owners are proposing a mechanical-only royalty equal to the greater of (a) \$0.0015 per play or (b) \$1.06 per user per month for all interactive streaming, limited download and music locker services. They also are proposing a 1.5% late fee. Ex. 1677.

APL-F280. Apple and the Copyright Owners agree that a per-play rate is appropriate. But, several other aspects of the Copyright Owners' proposal are improper. Specifically,

- 1. It contains a per-user prong;
- 2. It is a mechanical-only rate as opposed to an all-in rate;
- 3. The proposed rates are too high and the benchmarking analyses supporting them are severely flawed and unreliable;
- 4. It is not limited to plays over 30 seconds or non-fraudulent plays;

- 5. It subjects music lockers to the same royalties as interactive streaming services; and
- 6. The late fee is improper.

# XIII. THE COPYRIGHT OWNERS' RATE PROPOSAL IS FUNDAMENTALLY FLAWED BECAUSE IT INCLUDES A PER-USER PRONG AND IS A MECHANICAL-ONLY RATE

## A. A Per-User Rate Structure Is Inappropriate

APL-F281. As a preliminary matter, the CRB has rejected a royalty structure consisting of a per-user and per-play prong because the per-user prong is "duplicative" of the per-play prong and provides no administrative benefits. *See Web II*, 72 Fed. Reg. at n. 14. A similar result is appropriate here.

# 1. The Copyright Owners' Per-User Prong Leads to Exorbitant Costs, Well Above the Copyright Owners' Proposed Per-Play Rate

APL-F282. The Copyright Owners' proposal for a per-user prong would lead to

exorbitant rates. As Dr. Ghose testified using Apple Demonstrative 71 below, interactive streaming services would have to pay under this per-user prong any time the average number of streams per user per month was less than 707. 4/12 Tr. (Ghose) 5686:16-5687:2; Ex. 1677. In other words, if a streaming service's average number of streams per user per month was less than 707, the service would have to pay \$1.06 per user rather than \$0.0015 per stream. 4/12 Tr. (Ghose) 5687:3-22.



<sup>4/12</sup> Tr. (Ghose) 5686:16-5687:2.

APL-F283. Because royalties are allocated per play regardless of whether the royalty pool is calculated using the per-play or per-stream prong, 3/29 Tr. (Israelite) 3793:12-3794:2; Ex. 1677, this proposed per-user prong effectively is an "instrument to increase the per-play rate." 4/12 Tr. (Ghose) 5687:7-22; *see also* Ex. 1612 (Dorn WRT) ¶¶ 7, 33-36; Ex. 1614 (Wheeler WRT) ¶ 4; Ex. 1618 (Ghose WRT) ¶¶ 5, 16. As Dr. Ghose illustrated using Apple Demonstrative 72 below, if a service had one user, and that user streamed 300 streams, the service would be paying an effective per-play rate of \$0.0035 in that month, rather than the Copyright Owners' proposed per-play rate of \$0.0015. 4/12 Tr. (Ghose) 5687:7-22.



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Source: Ghose WRT ¶ 16
4/12 Tr. (Ghose) 5687:3-22.
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Therefore, the per-user rate structure is nothing but a roundabout way to increase the per-play rate.



making the per-play rate illusory.

APL-F285. The analysis by Dr. Rysman, the Copyright Owners' own expert, of the
impact of the Copyright Owners' proposal
WRT) ¶ 87 Tables 1 & 2. Dr. Rysman analyzed the
. <i>Id.</i> While there are
reasons to be concerned that Dr. Rysman's data is skewed or erroneous—
, see infra APL-
F406,—
. Ex. 3032 (Rysman WRT) ¶ 87 Tables 1 & 2. Specifically, according to Table 1,
. <i>Id</i> , at Table 1.
. Id., at Table 2.

APL-F286. In other words, because of the inclusion of the per-user prong, many services will have to pay even more in royalties than they would if only the per-play prong were in place. *Id.* 

# 2. A Per-User Rate Decouples Compensation and Demand

APL-F287. A per-user rate also is inappropriate because it decouples compensation to publishers and songwriters from demand for their songs. 4/12 Tr. (Ghose) 5681:19-5683:20; Ex. 1612 (Dorn WRT) ¶ 7, 33; Ex. 1618 (Ghose WRT) ¶¶ 5, 13-15. A service must pay the same

amount for a user who plays very little music as for one who streams all day, even though the two users have different demands for music. Ex. 1618 (Ghose WRT) ¶¶ 5, 13-15.

APL-F288. As Dr. Ghose explained using Apple Demonstrative 70 reproduced below, the Copyright Owners' proposed per-user prong could lead to a range of absurd scenarios. For example, royalties paid to publishers and songwriters can increase even when demand for their songs goes down. 4/12 Tr. (Ghose) 5681:18-5683:20; Ex. 1618 (Ghose WRT) ¶¶ 13-14.



4/12 Tr. (Ghose) 5681:18-5683:20.

APL-F289. Indeed, under the Copyright Owners' proposal, the publishers and songwriters would receive \$1.06 per user even if the user streamed only one song. Ex. 1618 (Ghose WRT) ¶¶ 13-14; 3/22 Tr. (Dorn) 2515:4-12; Ex. 1677. Services would have to pay \$1.06 to publishers and songwriters even for a user who plays <u>no</u> songs in a given month, as Demonstrative 70 above also shows. 4/12 Tr. (Ghose) 5683:14-20; *See also* 3/29 Tr. (Israelite) 3783:16-3784:1; Ex. 1612 (Dorn WRT) ¶¶ 7, 33; Ex. 1618 (Ghose WRT) ¶ 15.

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# 3. The Per-User Proposal Is Overbroad and Raises Administrative Concerns

APL-F290. The Copyright Owners' per-user proposal is overbroad. It applies to "each unique individual or entity that <u>has access to</u> an offering whether by virtue of the purchase of a subscription to access the offering <u>or otherwise.</u>" Ex. 1677 at B-6 (emphasis added). Thus, for bundled services, it applies to anyone who has purchased the bundle, regardless of whether the consumer has streamed a single song. Ex. 1677 at B-6; *see* 3/16 Tr. (Mirchandani) 1441:23-1444:4.

APL-F291. The Copyright Owners' per-user proposal would also apply to locker

services, including purchased content lockers, even though purchased content lockers are free services that are given to consumers <u>automatically</u> when they purchase a download from Apple (or any other service with a purchased content locker). *See* 3/22 Tr. (Dorn) 2525:2-17, 2526:3-19. As Mr. Mirchandani, the Head of Content Acquisition and Catalog for the digital-music business of Amazon Digital Services LLC, explained:

Today, when a customer purchases a digital download from [a service] for \$0.99 and then accesses it from [the service's] purchased content locker service, [the service] 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.

Ex. 111 (Mirchandani WRT) ¶ 47; *see also* 3/22 Tr. (Dorn) 2526:3-19; 3/16 Tr. (Mirchandani) 1405:1-21. Historically, music purchasers have been able to listen to their purchased content as many times as they want without generating additional royalties from these plays. Ex. 1612 (Dorn WRT) ¶¶ 41-43. But the Copyright Owners are demanding \$1.06 per month just so that a user can listen to music she owns. *Id.* 

APL-F292. As the Copyright Owners' proposal is written, the \$1.06 per-user prong arguably would apply to anyone who has ever downloaded a song, as all of these consumers have "access" to the purchased content locker automatically. *See* Ex. 1677 at B-6; 3/22 Tr. (Dorn) 2525:2-17.

APL-F293. In addition, the entire \$1.06 per user rate applies regardless of whether a user joins or leaves a service mid-month. Ex. 1677; Ex. 1612 (Dorn WRT) ¶¶ 7, 38; Ex. 1614 (Wheeler WRT) ¶ 5.

APL-F294. The per-user prong also applies to free services, including ad-supported services and purchased content locker services, even though consumers do not pay a subscription fee to join such services. Ex. 1677.

APL-F295. Similarly, the Copyright Owners' proposal applies equally to a bundled service, like Prime Music, and a pure music service, like Spotify. Ex. 1677. Mr. Israelite, NMPA's President and CEO, admits, however, that publishers and songwriters should receive compensation from services only if the "economic transaction" is caused by the availability of music and that, in some circumstances, such as with Amazon Prime, it is "difficult" to make this determination. 3/29 Tr. (Israelite) 3780:23-3783:6.

APL-F296. The Copyright Owners' proposal would also apply to new business models, such as a service where users pay a fee per-stream. Ex. 1677.

APL-F297. The per-user prong also raises the administrative concern that because services pay based on the number of users, but the money is allocated based on the number of plays, a service could run into a situation where it has to pay \$1.06 per user, but there is no one to receive the payment because no songs were played that month. *Cf.* 3/29 Tr. (Israelite) 3787:18-3792:23 (identifying a similar problem with the current regulations).

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APL-F298. Further, a per-user prong also is inappropriate because "it adds more complexity to the overall equation [and] makes it harder for people to understand how they are being paid." 3/22 Tr. (Dorn) 2512:7-19; *see also* 4/12 Tr. (Ghose) 5684:18-5685:11; Ex. 1614 (Wheeler WRT) ¶¶ 6-9; Ex. 1618 (Ghose WRT) ¶ 5. By having a per-user prong in addition to a per-play prong, services have to engage in a multi-step calculation to determine the royalties they owe. Ex. 1677; Ex. 1614 (Wheeler WRT) ¶ 4.

APL-F299. In addition, just like with the current system, with a per-user prong, the per-play rate that services pay can vary across services. Ex. 1612 (Dorn WRT) ¶¶33, 37. A single service's per-play rate also can vary from month-to-month if a per-user royalty is adopted. Ex. 1612 (Dorn WRT) ¶ 37; Ex. 1611 (Dorn WDT) ¶ 33. This creates uncertainty for songwriters and publishers as to why they are being paid what they are being paid, and is unfair to services because it results in some services paying different per-play rates than others. Ex. 1611 (Dorn WDT) ¶ 33. The per-user prong also leads to unpredictable costs for services because they cannot know from month to month which prong of the proposal will apply. Ex. 1612 (Dorn WRT) ¶ 37.

APL-F300. As Dr. Ghose testified, "if you're going to end up paying [songwriters and publishers] based on the number of plays, the actual streams, a per-play rate is far more simple[] and transparent." 4/12 Tr. (Ghose) 5684:18-5685:11; *see also* Ex. 1618 (Ghose WRT) ¶ 17.

# 4. There Is No Basis for the Copyright Owners' Argument That a Per-User Prong Is Necessary to Compensate Songwriters and Publishers for "Access" to Music

APL-F301. There is no basis for the Copyright Owners' argument that a per-user rate is appropriate in order to compensate publishers and songwriters for the value of access to music. As a preliminary matter, access is something interactive streaming services provide to users, not something publishers and songwriters provide. 3/23 Tr. (Ghose) 2843:21-25; 4/12 Tr. (Ghose)

5689:7-25; 3/15 Tr. (Leonard) 1101:24-1102:9, Ex. 698 (Leonard WRT) ¶ 161; Ex. 1065 (Marx WDT) ¶ 38; Ex. 885 (Katz WDT) ¶ 38. The interactive streaming services provide the infrastructure and the technology to make interactive streaming possible. 3/23 Tr. (Ghose) 2843:21-25.

Moreover, although the Copyright Owners claim that they are seeking a APL-F302. per-user rate because it captures the value of access to music, this argument is a red herring. Under the Copyright Owners' proposal, royalties are allocated per play, regardless of whether the service is paying under the per-user or per-play prong. Ex. 1677; see also 4/12 Tr. (Ghose) 5685:12-5686:8; Ex. 1612 (Dorn WRT) ¶¶ 7, 33-36; Ex. 1614 (Wheeler WRT) ¶ 4. Thus, even if a service is paying under the per-user prong, publishers and songwriters whose songs are in a service's catalog, and thus can be accessed, but are not played, will receive no royalty payment. Ex. 1677; see also 4/12 Tr. (Ghose) 5685:12-5686:8; Ex. 1612 (Dorn WRT) ¶¶ 7, 33-36; Ex. 1614 (Wheeler WRT)  $\P$  4. Those publishers and songwriters whose songs are streamed, on the other hand, will receive royalties per play well in excess of the Copyright Owners' proposed \$0.0015 per-play rate because, as described *supra* APL-F82–83, when the per-user prong is activated, the effective per-play rate for songs that are streamed ends up being greater than \$0.0015. 4/12 Tr. (Ghose) 5685:12-5686:8; Ex. 1612 (Dorn WRT) ¶¶ 7, 33-36; Ex. 1614 (Wheeler WRT) ¶ 4. This "inconsistency invalidates" the Copyright Owners' access argument. 4/12 Tr. (Ghose) 5685:12-5686:8.

APL-F303. Further, when a consumer subscribes to an interactive streaming service, he or she is not necessarily paying for access to music. 4/12 Tr. (Ghose) 5687:23-5688:10; Ex. 1612 (Dorn WRT) ¶¶ 7, 33. He may be paying for the myriad other features that the services offer. 3/22 Tr. (Dorn) 2515:24-2516:12; 4/12 Tr. (Ghose) 5687:23-5688:10; Ex. 1612 (Dorn

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WRT) ¶¶ 7, 33. Because it is impossible to ask every user why he or she joined a service, the only option is to look at the user's behavior, and that means looking at whether, and how often, a user streams a song and linking compensation directly to that variable. 4/12 Tr. (Ghose) 5690:1-5691:8 ("[I]t's hard to know without asking a user why they signed up, right? So we can only observe their behavior, right? And if their behavior, the real preference tells me that . . . certain users are accessing and streaming songs, certain other users are accessing the Services' features, that tells me that . . . the true access we're talking about is coming from the Services.")

### B. A Mechanical-Only Royalty Rate Is Inappropriate

APL-F304. As described in Findings of Fact Section VII above, services pay publishers and songwriters for both mechanical rights and performance rights in order to stream a musical work. These complementary rights are part of a unified whole, and should be considered together. *See supra* APL-F138–144. By proposing a mechanical-only rate in this proceeding (divorced from any consideration of the performance rate), the Copyright Owners are seeking a windfall that could result in exorbitant royalty payments. *Id.* In other words, the Copyright Owners ask that they get paid a mechanical-only rate (which, as discussed *infra* APL-F305–318, is unreasonably high), <u>plus</u> an additional amount for performance rights, with no flexibility for mechanical royalties to decrease if PROs exercise their market power to increase performance royalties, even though the same entities (publishers and songwriters) ultimately receive both the mechanical and performance royalty payments. *See supra* APL-F138–144, 148–157, 164–167. This is improper, unjustified, and economically inefficient, and thus should be rejected. *See supra* APL-F138–167.

# XIV. THE COPYRIGHT OWNERS' PROPOSED RATES ARE TOO HIGH

APL-F305. In addition to the fundamental structural flaws discussed above, *see supra* APL-F281–304, the Copyright Owners' proposal also is flawed because the particular rates the

Copyright Owners propose are simply too high. As described below, the rates (1) are

. See infra APL-F306–318. Moreover, contrary to the Copyright Owners' suggestion, if musical works royalties are set too high, neither free market negotiations between services and the musical works copyright holders, nor negotiations between services and labels to reduce sound recording royalties, can be counted on to correct the problem.

- A. The Copyright Owners' Proposed Rates Would Lead
  - 1. The Copyright Owners' Proposed Per-Play Rate Is Too High and Would Cause

APL-F306. The Copyright Owners' proposed per-play rate of \$0.0015 is too high and

likely to be highly disruptive to the industry as it is

. Ex. 1618 (Ghose WRT) ¶ 25; 4/12 Tr. (Ghose)

5742:23-5743:10. As shown in the analyses of Dr. Ghose and others,

		Ex.	1618 (	Ghose	WRT)	¶¶ 6	, 18-26.	Rebuttal	Table	1, Chart	1; see	also	Ex.	886
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(Katz WRT) ¶¶ 4, 179 & Figure 4. Indeed,

Ex. 1618 (Gl	hose WRT) ¶ 24	& Chart 1; 4/12 Tr	: (Ghose) 5707:5-11
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That is a nearly in the mechanical per-play rate.

APL-F307. This from the per-play rate alone would render many services

economically unsound. Ex. 132 (Hubbard WRT) ¶ 4.10-4.11 & Table 1 (

); *see also* Ex. 886

(Katz WRT) ¶ 4;. For example, according to Dr. Hubbard,

# . Ex. 132 (Hubbard WRT) ¶ 4.11 & Table 1.

Ex. 132 (Hubbard WRT) ¶ 4.11 &

Table 1.

APL-F308. Industry benchmarks also show that the Copyright Owners' proposed mechanical-only per-play rate is too high. Ex. 1612 (Dorn WRT) ¶¶ 5, 19-22; Ex. 1616 (Ramaprasad WRT) ¶ 11. Applying industry-standard conversion rates of 1 download to 100 to 150 streams to the Subpart A rate produces an <u>all-in</u> royalty ranging from \$0.00061 to \$0.00091 per-stream, but the Copyright Owner's <u>mechanical-only</u> proposal is between 164% and 246% greater than the rate supported by these benchmarks, and implies a <u>mechanical-only</u> conversion rate of 1 download to 61 streams, which has no support in the record. *See id*.

# 2. The Copyright Owners' Proposed Per-User Rate Also Is Too High and Would Cause

APL-F309. Compounding the problem, the Copyright Owners are proposing a peruser prong in addition to the per-play prong, which, as described above, would

. See supra APL-F282-286.

APL-F310.

. Ex. 132 (Hubbard WRT) ¶ 4.13-14 & Table 2; *see also* Ex. 698 (Leonard

WRT) ¶ 6; Ex. 886 (Katz WRT) ¶ 4.

. Ex. 1069 (Marx WRT) ¶ 5.

. Ex. 132 (Hubbard WRT) ¶ 4.12 & Table 2; see also Ex. 886 (Katz WRT) ¶ 4.

Ex. 132 (Hubbard WRT) ¶ 4.12 & Table 2.
APL-F311. Further,
. Ex. 698 (Leonard WRT) ¶ 107.
APL-F312. Dr. Rysman's analysis, while flawed in many ways, see infra APL-F401–
410, corroborates the extreme impact that the Copyright Owners' proposal would have on the
services.
. Ex. 3032 (Rysman WRT) Table 1 and Table 2.
. Id. Moreover,
. 4/3 Tr. (Rysman) 4464:13-4469:20; Ex. 1129.

3. The Increases in Royalties Caused By the Copyright Owners' Proposal Would Drastically Impact the Interactive Streaming and Music Locker Industries APL-F313. The dramatic

, are not sustainable for the industry and already have prompted some companies to say that they will close certain services, or that their services would have no value, if the Copyright Owners' proposal were adopted.

APL-F314. For example, Mr. Dorn testified that Apple would not offer its purchased content locker service if it were subject to the Copyright Owners' per-user proposal and that Apple would never offer a paid content locker again if the Copyright Owners' rates were in place. 3/22 Tr. (Dorn) 2526:3-19.

APL-F315.

. See 3/16 Tr. (Mirchandani) 1499:15-21.

." See 3/16 Tr. (Mirchandani) 1499:22-1500:10.

APL-F316. Mr. Herring, Pandora's President and Chief Financial Officer similarly testified that "Pandora could not operate a profitable interactive streaming service if the

Copyright Owners' rate proposal were adopted." Ex. 888 (Herring WRT) ¶¶ 2-14.

APL-F317.

	Ex. 1068 (Vogel WRT) ¶ 18; see also Ex. 1069 (Marx WRT)
¶ 6	; Ex. 698 (Leonard WRT)

¶ 6; Ex. 886 (Katz WRT) ¶ 6; Ex. 1066 (McCarthy WRT) ¶¶ 4-49.

APL-F318. For the foregoing reasons, it is clear that the Copyright Owners' proposed rates are too high. *See supra* APL-F305–317.

# B. The Evidence Shows That the CRB Cannot Assume that the Copyright Holders Would Negotiate Lower Rates If the Mechanical Royalty Were Set Too High

APL-F319. While the Copyright Owners acknowledge that the CRB should not set an "arbitrarily high" rate, they self-servingly assert that the CRB should err on setting a rate that is too high because statutory rates are a "ceiling" and "are subject to correction [in] the marketplace." Ex. 3027 (Eisenach WDT) ¶¶ 18, 29. To the contrary, several witnesses

Ex. 692 (Levine WDT) ¶ 49; Ex. 698 (Leonard WRT) ¶¶ 69-71; Ex. 132 (Hubbard WRT) ¶ 4.29; Ex. 111 (Mirchandani WRT) ¶¶ 53-54; Ex. 886 (Katz WRT) ¶¶ 134-37.

APL-F320. Witnesses testified that the statutory rates have functioned, and will function, as a floor in private rate negotiations. Ex. 692 (Levine WDT) ¶ 49 ("[T]he existing Section 115 rate structure looms large in Google's direct license negotiations and sets the floor."); Ex. 698 (Leonard WRT) ¶¶ 69-71; Ex. 132 (Hubbard WRT) ¶ 4.29; Ex. 886 (Katz WRT) ¶ 135. First, a high statutory rate necessarily skews upward the rates set by private negotiations, which leads to higher negotiated rates. Ex. 132 (Hubbard WRT) ¶ 4.29; Ex. 886 (Katz WRT) ¶ 135-36. Second, despite the compulsory nature of the mechanical license, music publishers can still force interactive streaming services to renegotiate upward because music publishers could threaten (and have threatened) to withdraw their public performance rights for the musical works they own, and also threaten to have their related record labels withdraw sound recording rights. Ex. 698 (Leonard WRT) ¶ 71; Ex. 132 (Hubbard WRT) ¶ 4.29.

APL-F321. Even NMPA's President, Mr. Israelite, acknowledges that the statutory rates are not a ceiling, such as where "the licensee requires other non-compulsory rights or has

other business reasons for paying more than the law may currently require[.]" Ex. 3014 (Israelite WDT) ¶ 60. For example, at trial, Mr. Israelite admitted that one service privately negotiated discounted rates for family and student plans, but had to agree to pay "rates that were above the statutory structure" for its standard individual plans "in order to get those concessions[.]" 3/28 Tr. (Israelite) 3595:6-3599:21. Thus, not only do the Copyright Owners admit that the statutory rates are not a ceiling, but also they admit that potential private negotiations do not alleviate high mechanical royalty burdens, and instead may simply lead to redistribution of an equivalent amount of costs. *See* 3/28 Tr. (Israelite) 3595:6-3599:21. In other words, services may be required either to accept increased mechanical rates, or to negotiate tradeoffs in an equivalent amount elsewhere. *See* 3/28 Tr. (Israelite) 3595:6-3599:21.

APL-F322. Similarly, Mr. Kokakis, UMPG's Executive Vice President and Head of Business & Legal Affairs, testified that



3/27 Tr. (Kokakis) 3222:1-3223:10.

APL-F323. Finally, even assuming that interactive streaming services could privately negotiate down from a high statutory rate, the myriad private negotiations necessary to do so creates significant externalities by imposing transaction costs on copyright holders and interactive streaming services. *See* Ex. 132 (Hubbard WRT) ¶ 4.29; Ex. 886 (Katz WRT) ¶ 135; Ex. 111 (Mirchandani WRT) ¶ 53 ("[I]t will effectively be impossible to license a full-catalog service."). Services would be forced to choose between taking the high statutory rate, or incurring added transaction costs in an attempt to privately negotiate, and either of these choices

would result in higher costs to the services. *See* Ex. 886 (Katz WRT) ¶ 135; Ex. 111 (Mirchandani WRT) ¶ 53. This eventuality would negate a lauded feature of compulsory licenses, *i.e.*, that they create efficiency and preserve value by avoiding the need to engage in myriad private negotiations. *See* Ex. 111 (Mirchandani WRT) ¶ 53.

# C. There Is No Evidence That an Increase in Musical Works Royalties Would Come at the Expense of Labels Rather than Services

APL-F324. The CRB also should not set a high royalty under the assumption,

suggested by the Copyright Owners, that any increase in royalty payments would come at the expense of labels rather than services. There is no evidence to support this theory.

APL-F325. As a preliminary matter, services do not have the opportunity to negotiate new deals with labels just because a new musical works royalty rate is set that causes substantial increases in services' total royalty obligations. For example,

	See, e.g., Ex. 1589 (
	); Ex. 1590 (
).	
. <i>See</i> , <i>e.g.</i> , Ex. 164 § 11.1 (	
); Ex. 162 § 2(a) (	
); Ex. 163 § 4 (	
). Services	are locked into these deals with

labels regardless of the rates the CRB sets.

APL-F326. Moreover, labels have considerable market power. Ex. 1069 (Marx WRT) ¶ 82 ("The inherent market power of publishers and labels comes about as a result of the aggregation of rights among the three major record labels and publishers—Sony, Universal, and Warner. These three entities collectively account for 58.2% of U.S. label revenues . . . . "). Thus, rather than accepting lower rates to accommodate an increase in musical works royalties, labels are just as likely to exert their market power to demand the same royalties that they have always received if musical works royalties increase.

. See 4/5 Tr. (Katz) 4945:11-17; 4/7 Tr.

(Marx) 5511:17-5512:5, 5513:6-5516:12. For the foregoing reasons, the CRB cannot assume that negotiations with labels for sound recording royalties will offset a musical works royalty rate that is set too high. *See supra* APL-F324-326.

# XV. THE COPYRIGHT OWNERS' PROPOSED RATES ARE NOT SUPPORTED BY RELIABLE EXPERT TESTIMONY

APL-F327. The reason the Copyright Owners insist their rates are reasonable despite the overwhelming evidence to the contrary, is that their experts conducted flawed and biased analyses to support this conclusion. *See infra* APL-F328–460.

## A. Dr. Jeffrey Eisenach's Analysis Is Not Based on Comparable Benchmarks and His Flawed Methodology and Calculations Resulted in Inflated Rates

APL-F328. The Copyright Owners' proposed rates for interactive streaming were derived from the analysis by their expert, Dr. Jeffrey Eisenach. Unlike the industry and academic benchmarks relied on by Apple and other services, *see supra* APL-F168–236, however, Dr. Eisenach's analysis is not based on converting the comparable products of digital downloads of musical works to streams of musical works. *See, e.g.*, 3/23 Tr. (Ramaprasad) 2671:14-2672:22; *see also id.* 2685:3-10, 2687:1-8, 2687:24-2688:7, 2688:18-2689:4, 2689:10-16, 2699:21-24, 2799:7-14. Instead, as discussed below, Dr. Eisenach's entire analysis is based on comparing sound recordings to musical works (not downloads to streams). *See, e.g.*, 3/23 Tr. (Ramaprasad) 2671:14-2672:22. His fundamentally flawed premise is that there is a "stable" "relative value" between sound recording royalties and musical works royalties that applies in all

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contexts, and therefore sound recording royalty rates can be used as a benchmark to derive a royalty rate for musical works in the context of interactive streaming. Ex. 3027 (Eisenach WDT) ¶ 79; Ex. 1616 (Ramaprasad WRT) ¶ 9.

APL-F329. As discussed below, the foundation of Dr. Eisenach's entire analysis is unreliable because sound recordings and musical works are not comparable, and thus sound recording royalty rates are not comparable benchmarks for musical work royalty rates for interactive streaming. *See, e.g.*, 3/23 Tr. (Ramaprasad) 2671:14-2672:22. Moreover, his own analysis demonstrates that there is no "stable" relative value between sound recording royalties and musical work royalties. *See, e.g.*, 3/23 Tr. (Ramaprasad) 2690:14-2691:3; 4/5 Tr. (Leonard) 5149:3-5150:1. Further, Dr. Eisenach's overall methodology and calculations are flawed and biased in favor of inflated rates for interactive streaming.

## 1. Sound Recordings Royalty Rates Are Not a Comparable Benchmark to Calculate Royalty Rates for Musical Works Because Sound Recordings and Musical Works Are Fundamentally Different

APL-F330. Sound recordings and musical works are not comparable to each other; rather they are fundamentally different in many ways. Ex. 1616 (Ramaprasad WRT) ¶¶ 5, 18; Ex. 698 (Leonard WRT) ¶¶ 115-118; 3/23 Tr. (Ramaprasad) 2672:5-25; 4/6 Tr. (Leonard) 5146:22-5148:2, 5269:20-5277:20; 3/22 Tr. (Dorn) 2551:12-17.

APL-F331. For one thing, they are different in nature. A musical work is reflected on a piece of paper, like sheet music. It is comprised of the underlying notes and composition of a song (including the melodies and harmonies), the written arrangement of the instruments, and the lyrics; whereas a sound recording is the actual recording of a song that someone can hear. Ex. 1616 (Ramaprasad WRT) ¶¶ 5, 18; 3/23 Tr. (Ramaprasad) 2672:17-22. Sound recordings of the same musical composition often do not sound the same, and they can vary widely in terms of style and sound. Ex. 1616 (Ramaprasad WRT) ¶¶ 5, 18; 3/23 Tr. (Ramaprasad) 2673:1-2675:3.

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APL-F332. In economic terms, sound recordings and musical works may be considered complements of each other (*e.g.*, a musical composition is part of a sound recording), but they are not substitutes for each other. Ex. 1616 (Ramaprasad WRT) ¶ 17. A musical work cannot be "consumed" by a listener unless it is part of a sound recording. *Id.* at ¶ 18.

APL-F333. Further, the value of a sound recording depends not only on the notes and lyrics of the musical work, but also on the musician who interprets and performs it. In other words, one sound recording of a particular musical work may be much more popular and commercially successful than another sound recording of the same musical work. Ex. 1616 (Ramaprasad WRT) ¶¶ 5, 18; 3/23 Tr. (Ramaprasad) 2673:1-2675:3. Consumers may want to purchase or listen to a particular sound recording of a musical work recorded by one performing artist (especially one that is famous and popular), but not a sound recording of the same work recorded by another artist. Ex. 1616 (Ramaprasad WRT) ¶ 18; 3/23 Tr. (Ramaprasad) 2673:1-2675:3.



APL-F335. Another difference between sound recordings and musical works is that they are typically created and owned by different entities and people. In other words, record

labels and performing artists generally create and own sound recordings, whereas music publishers and songwriters generally write and own musical works. Ex. 1616 (Ramaprasad WRT) ¶¶ 5, 18; 3/23 Tr. (Ramaprasad) 2673:16-22. In addition, in the United States, the scope of copyright protection in sound recordings differs from the copyrights in musical compositions. Ex. 1616 (Ramaprasad WRT) ¶ 20.

А	APL-F336.	Indeed,

3/15 Tr. (Zakarin) 1362:15-1363:22 (emphasis added).

APL-F337.

. 3/23

Tr. (Ramaprasad) 2828:13-2829:13; Exs. 909, 913, 1441-42, 1469, 1489, 1560, 1569. Nor does the music industry compare the potential royalties that may accrue to owners of sound recordings, on the one hand, and the royalties that may accrue owners of musical works, on the other hand, in order to convert streams to downloads. *Id*.

APL-F338. In conclusion, Dr. Eisenach's entire methodology of deriving a royalty rate for musical works from the royalty rate for sound recordings is fundamentally flawed because those products are not comparable. Ex. 1616 (Ramaprasad WRT) ¶ 9.

2. Dr. Eisenach Used Flawed Methodologies and Calculations in Both of His Methods ("Method 1" and "Method 2"), Resulting in an Inflated Mechanical Royalty Rate Range for Musical Works

APL-F339. In addition to his overall flawed premise, Dr. Eisenach's methodologies and calculations are riddled with errors, each of which renders his conclusions unreliable and biased in favor of the Copyright Owners. Ex. 1616 (Ramaprasad WRT) ¶ 9. Specifically, Dr. Eisenach used two "methods" to derive a range for mechanical royalties for musical compositions, both of which are unsound and lead to artificially inflated per-play and per-user rates. Ex. 1616 (Ramaprasad WRT) ¶ 43; Ex. 3027 (Eisenach WDT) ¶¶ 140-143.

# a. Dr. Eisenach's "Method 1" Results in an Artificially Inflated Range of Per-Play Mechanical Royalty Rates

APL-F340. Dr. Eisenach illustrates his "Method 1" in the following equation:

# All-InS. R.<sub>interactivestreaming</sub> – Performance-OnlyS. R.<sub>noninteractivestreaming</sub> S. R./M. W. Ratio

Ex. 3027 (Eisenach WDT) ¶¶ 140-141.

APL-F341. In "Method 1," Dr. Eisenach takes the all-in sound recording royalty rate for interactive streaming (which he values at \$0.77 per 100 streams) and subtracts the sound recording royalty rate for non-interactive streaming (\$0.20 per 100 streams) in order to derive the mechanical rate for sound recordings or what he calls the "incremental value of being able to stream the sound recordings interactively" (which he values at \$0.57 per 100 streams). Ex. 3027 (Eisenach WDT) ¶¶ 140-43; 3/23 Tr. (Ramaprasad) 2675:22-2677:24.

APL-F342. Dr. Eisenach assumes that this "incremental value of being able to stream the sound recordings interactively" (\$0.57 per 100 streams) is exactly equal to the mechanical rate for sound recordings. Ex. 1616 (Ramaprasad WRT) ¶ 46; *see also* 3/23 Tr. (Ramaprasad) 2675:22-2677:24; Ex. 3027 (Eisenach WDT) ¶ 137.
APL-F343. Dr. Eisenac	h then divides this "inherent value" ) by
the "relative value" of sound recor	dings to musical works. 3/23 Tr. (Ramaprasad) 2675:22-
2677:24.	
. 3	/23 Tr. (Ramaprasad) 2685:20-2691:10; Ex. 3027 (Eisenach
WDT) ¶¶ 130, 151-53 & Tables 9,	12.
APL-F344.	
3/	23 Tr. (Ramaprasad) 2702:9-2703:12; Ex. 3027 (Eisenach

WDT) ¶¶ 151-53 & Table 12.

APL-F345. As discussed below, leaving aside his erroneous premise, this range of mechanical royalties is improperly inflated due to multiple flaws in Dr. Eisenach's methodology and calculations: Dr. Eisenach (1) omits Spotify data from his calculations, (2) erroneously assumes that the difference between sound recording royalty rates for interactive streaming and non-interactive streaming is solely attributable to value of the mechanical rights; and (3) derives a flawed and unreliable "relative value" range between sound recordings and musical works that is not comparable to the interactive streaming context. *See infra* APL-F346–390.

#### i. Dr. Eisenach Improperly Omits Spotify Data in His All-In Sound Recording Royalty Rate for Interactive Streaming

APL-F346. First, Dr. Eisenach's estimate of the all-in sound recording royalty rate for interactive streaming (which he uses in the numerator of "Method 1") is erroneous because he excludes Spotify, a large and prominent service. Ex. 1616 (Ramaprasad WRT) ¶ 47; 3/23 Tr. (Ramaprasad) 2679:7-2680:19; *see also* Ex. 886 (Katz WRT) ¶¶ 73-80; Ex. 132 (Hubbard WRT) ¶¶ 6.45-6.48; Ex. 698 (Leonard WRT) ¶¶ 57-59. In fact,

. Ex. 1618 (Ghose
WRT) Chart 3.
APL-F347.
. Ex. 1616 (Ramaprasad WRT) ¶ 47; 3/23 Tr. (Ramaprasad) 2681:3-18.
Ex. 1616
(Ramaprasad WRT) ¶ 47; 3/23 Tr. (Ramaprasad) 2681:3-18.
APL-F348. There is no credible justification for Dr. Eisenach's decision to exclude
Spotify data from this rate. Ex. 1616 (Ramaprasad WRT) ¶¶ 48-49; 3/23 Tr. (Ramaprasad)
2679:7-2680:19; 4/5 Tr. (Katz) 4938:21-4939:12
APL-F349. Dr. Eisenach tries to justify his decision to exclude "Spotify Free" data
from his calculations.
Ex. 1616 (Ramaprasad WRT) ¶ 48; 3/23 Tr. (Ramaprasad) 2679:7-2680:19. But there
is nothing in the record to support Dr. Eisenach's speculation. Ex. 1616 (Ramaprasad WRT) $\P$
48. To the contrary,
. 4/4 Tr. (Eisenach) 4742:24-4753:23 (

). APL-F350. Moreover,
. <i>Id.</i> ; 3/23 Tr. (Ramaprasad) 2679:7- 2680:19; <i>see also</i> 4/5 Tr. (Katz) 4932:23-4935:17 (opining that
). Also, record labels would put themselves at risk of losing performing artists if
they agreed to lower royalty rates to the detriment of these performing artists, who do not share
an equity stake in Spotify.
APL-F351. Further,
Dr. Eisenach puts forth no justification at all for this exclusion. Ex. 1616
(Ramaprasad WRT) ¶ 49; 3/23 Tr. (Ramaprasad) 2679:7-2680:19.
APL-F352.
. 3/23 Tr. (Ramaprasad) 2815:5-20.
APL-F353. Consequently,

3/23 Tr. (Ramaprasad) 2681:3-18. As explained further below, this exclusion ultimately resulted in an inflated proposed range of mechanical royalty rates for musical compositions. *Id*.

ii. Dr. Eisenach Erroneously Assumes That the Difference between Sound Recording Royalty Rates for Interactive and Non-Interactive Streaming Is Exactly Equal to the Mechanical Rate for Sound Recordings

APL-F354. The second flaw in Dr. Eisenach's "Method 1" is his assumption that the difference between interactive streaming sound recording royalties and non-interactive streaming sound recording royalties is exactly equal to the inherent value of "interactivity" or the mechanical rights for sound recordings. Ex. 1616 (Ramaprasad WRT) ¶ 46; 3/23 Tr. (Ramaprasad) 2682:3-12. This assumption is unfounded, and ignores other reasons that account for the difference in the rates.

APL-F355. Indeed,

. 3/23 Tr. (Ramaprasad) 2682:24-2683:10; Ex. 1616 (Ramaprasad WRT) ¶ 46; *see also* 4/5 Tr. (Katz) 4972:3-2974:9 (opining that PROs treat public performance royalties for musical works on streaming services differently depending on whether the stream is interactive or non-interactive); *id.* 4977:7-24 (discussing the possibility of "steering" in non-interactive streaming, which may affect the relative bargaining power between a streaming service and a copyright owner); 3/9 Tr. (Philips) 391:11-25 (describing additional features that Pandora's non-interactive service consumers want, including those unrelated to interactivity such as additional skips, off-line listening, and music sharing).

APL-F356. Notably, one important reason for the difference between the sound recording royalty rates for interactive and non-interactive streaming is the process by which they

are determined. Ex. 1616 (Ramaprasad WRT) ¶ 46 (citing United States Copyright Office, "Copyright and the Music Marketplace," Register of Copyrights Report, February 2015, NMPA00001047-1291 at 1190); 3/23 Tr. (Ramaprasad) 2682:13-2684:10. The royalty rate for non-interactive streaming of sound recordings is a compulsory rate set by the CRB, whereas the rates for interactive streaming of sound recordings are negotiated in the free market. Ex. 1616 (Ramaprasad WRT) ¶ 46 (citing United States Copyright Office, "Copyright and the Music Marketplace," Register of Copyrights Report, February 2015, NMPA00001047-1291 at 1190); 3/23 Tr. (Ramaprasad) 2682:13-2684:10.

APL-F357. The Copyright Owners' witnesses themselves assert that compulsory licenses tend to lead to lower royalty rates than those negotiated in the free market. Ex. 1616 (Ramaprasad WRT) ¶ 46; Ex. 3028 (Gans WDT) Section III, pp. 4-16; Ex. 85 at 159; Ex. 920 at 159; 3/23 Tr. (Ramaprasad) 2682:13-2684:10; Ex. 3027 (Eisenach WDT) ¶¶ 29-31, 83, 110; Ex. 3014 (Israelite WDT) ¶¶ 55-64; Ex. 3025 (Bogard WDT) ¶¶ 28-32; Ex. 3016 (Brodsky WDT) ¶ 97; Ex. 3015 (Herbison WDT) ¶ 4; Ex. 3016 (Kokakis WDT) ¶ 87.

APL-F358. Assuming the non-interactive streaming royalty rate for sound recordings is lower in relation to the interactive streaming rate because it is a compulsory rate (as the Copyright Owners argue), this would increase the difference between the two rates. This increased difference would have nothing to do with the inherent "value of interactivity" or "mechanical rights," but rather would be the result of the rate-setting process. Ex. 1616 (Ramaprasad WRT) ¶ 46; 3/23 Tr. (Ramaprasad) 2683:24-2684:9.

APL-F359. In short, by assuming that the sole difference between sound recording royalties payable for interactive and non-interactive streaming is the inherent "value of interactivity," and ignoring the other reasons that make interactive streaming rates higher than

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non-interactive rates, Dr. Eisenach inflates the value attributed to the mechanical right for streaming sound recordings. Ex. 1616 (Ramaprasad WRT) ¶ 46; 3/23 Tr. (Ramaprasad) 2682:13-2684:18; *see also* Ex. 1069 (Marx WRT) ¶¶ 161-169; 4/5 Tr. (Katz) 4972:3-2974:9.

#### iii. Dr. Eisenach's Use and Implementation of the "Relative Value" of Sound Recording to Musical Work Rights Is Flawed

APL-F360. A third flaw in Dr. Eisenach's methodology is the framework he uses to

establish a "relative value" between the rights to musical works and the rights to sound

recordings in the context of interactive streaming. Ex. 1616 (Ramaprasad WRT) ¶ 27. (To be

lear,	
	. 3/23 Tr.
Ramaprasad) 2684:19-2685:10.)	
(A)	Dr. Eisenach's Range of "Relative Values" Is Neither "Stable," Nor Applicable to Interactive Streaming
APL-F361. As discussed below,	
	. 3/23 Tr. (Ramaprasad)

2684:13-18; 2685:20-2691:10.

APL-F362. Dr. Eisenach's assertion that there is a "stable" relative value between sound recordings and musical works is unsupported. He "simply assume[s] that the relative values should be stable across similar or identical market contexts." Ex. 3027 (Eisenach WDT)

¶ 79.

4/5 Tr. (Katz) 4951:22-

4953:7; 3/23 Tr. (Ramaprasad) 2690:14-2691:3; Ex. 1616 (Ramaprasad WRT) ¶¶ 23, 70; Google

Tr. Ex. 698 (Leonard WRT) ¶ 30.

APL-F363. In fact,

4/5 Tr. (Katz)

4951:22-4953:7; 3/23 Tr. (Ramaprasad) 2690:14-2691:3; Ex. 1616 (Ramaprasad WRT) ¶¶ 23, 70; Google Tr. Ex. 698 (Leonard WRT) ¶ 30.

APL-F364. Moreover, Dr. Eisenach's relative value range cannot be applied to the interactive streaming context. It is based on synchronization license agreements, YouTube licenses, and non-interactive streaming licenses—none of which are applicable to the interactive streaming industry. Ex. 1616 (Ramaprasad WRT) ¶ 46.

APL-F365. Synchronization Licenses: First, as noted above, APL-F363,

3/23 Tr. (Ramaprasad) 2685:20-2687:12.

Ex. 3027 (Eisenach WDT) ¶ 94; 3/23 Tr.

(Ramaprasad) 2685:16-2687:12.

APL-F366. This relative value of 1:1 cannot be applied to interactive streaming because the nature of and market conditions for synchronization rights differ materially from the nature of and market conditions for interactive streaming services. Ex. 1616 (Ramaprasad WRT) ¶ 24; 3/23 Tr. (Ramaprasad) 2685:16-2687:12; *see also* Ex. 1069 (Marx WRT) ¶¶ 148-151; Ex.

132 (Hubbard WRT) ¶¶ 6.31-6.32; Ex. 698 (Leonard WRT) ¶¶ 37-40. They are not substitutes for each other. 3/23 Tr. (Ramaprasad) 2687:6-12.

APL-F367. Consumers' consumption of songs through a film or a television show are significantly different from their consumption of songs on an interactive streaming service. Ex. 1616 (Ramaprasad WRT)  $\P$  24; 3/23 Tr. (Ramaprasad) 2685:16-2687:12. In a film or a television show, the viewer is watching the video, with a portion of the recorded song playing in the background. Further, the viewer is not actively choosing to listen to the song, rather the producers have made the decision to include the song in the film or television show for a particular purpose (e.g., for a dramatic effect, to set a mood, etc.) and the viewer has no control over that decision. Ex. 1616 (Ramaprasad WRT)  $\P$  24; 3/23 Tr. (Ramaprasad) 2685:16-2687:12.

APL-F368. In contrast, users of an interactive streaming service choose to listen to a particular song at a particular time, and without looking at video content. Ex. 1616 (Ramaprasad WRT) ¶ 24; 3/23 Tr. (Ramaprasad) 2686:9-2686:25.

APL-F369. Moreover, the relative value of a particular sound recording and the musical work for the filmmaker who decides to use the song in a particular scene is significantly different from the relative value that a listener on an interactive streaming service may derive from listening to the song. Ex. 1616 (Ramaprasad WRT) ¶ 24.

APL-F370. YouTube Licenses: Second,

3/23 Tr. (Ramaprasad) 2684:13-18. This relative value cannot be applied to interactive streaming because the nature of and market conditions for YouTube and an interactive streaming service are different. Ex. 1616 (Ramaprasad WRT) ¶ 26; 3/23 Tr.

(Ramaprasad) 2687:13-2688:7; *see also* Ex. 1069 (Marx WRT) ¶¶ 152-153; Ex. 132 (Hubbard WRT) ¶¶ 6.33-6.36; Ex. 698 (Leonard WRT) ¶¶ 41-46.

APL-F371. YouTube allows users to play specific songs at specific times, and to create their own playlists, but songs on YouTube are typically paired with a video file, whereas interactive streaming services are typically audio-only. Ex. 1616 (Ramaprasad WRT) ¶ 26; 3/23 Tr. (Ramaprasad) 2687:19-23. Further, YouTube is primarily user-posted content: the service does not need to seek out this content and contract with the users who post the content. Ex. 1616 (Ramaprasad WRT) ¶ 26; 3/23 Tr. (Ramaprasad) 2687:19-23.

APL-F372. Pandora Non-Interactive Streaming Licenses: Third,

3/23 Tr. (Ramaprasad) 2688:8-2689:4.

See 3/23 Tr. (Ramaprasad) 2688:8-

2689:4; *see also* Ex. 1069 (Marx WRT) ¶¶ 154-156; Ex. 132 (Hubbard WRT) ¶¶ 6.37-6.39; Ex. 698 (Leonard WRT) ¶¶ 47-53. The nature of and market conditions for non-interactive streaming services, like Pandora, also are different from the nature of and market conditions for interactive streaming services. Ex. 1616 (Ramaprasad WRT) ¶ 25; 3/23 Tr. (Ramaprasad) 36:4-25.

APL-F373. Unlike interactive streaming services, users of non-interactive streaming services can neither play specific songs at specific times, nor can they create their own playlists. Ex. 1616 (Ramaprasad WRT) ¶ 25; 3/23 Tr. (Ramaprasad) 2688:8-2689:4.

APL-F374. **YouTube-Pandora Midpoint:** Dr. Eisenach also includes a relative value in his range of 3.2:1 (i.e., 3.2 musical works have an equivalent value of one sound

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recording), which he derived from setting the mid-point between the relative values he derived in the context of YouTube licenses (i.e., 2.67:1) and Pandora licenses (i.e., 3.7:1), and which he calls the "YouTube-Pandora Midpoint." Ex. 3027 (Eisenach WDT) ¶ 130 & Table 9.

APL-F375. As discussed above, YouTube licenses and Pandora licenses are for uses that are distinct from each other, as well as distinct from interactive streaming. *See supra* APL-

E270 272

F3/0-	-373.		
3/23 1	Tr. (Ramaprasa	d) 2697:19-2698:14.	
	APL-F376.	Section 115 Licenses:	Lastly,
			3/23 Tr. (Ramaprasad) 2689:5-16. To come up
with t	his rate,		
			Ex. 1616 (Ramaprasad WRT) ¶¶ 7, 37.
	APL-F377.	But Dr. Eisenach's use	of Apple's licenses for this purpose is improper
and is	akin to compa	ring "apples to oranges"	because Apple is paying for different things under
each t	ype of agreeme	ent. In particular,	
		Ex. 10	616 (Ramaprasad WRT) ¶¶ 7, 37. For labels,
			Ex. 1616 (Ramaprasad
WRT)	¶ 37. For pub	lishers,	
	. Ex. 1616	(Ramaprasad WRT) ¶ 37	

APL-F378. In sum, as illustrated below in Apple Demonstrative 46, the relative value of sound recordings and musical works varies widely across contexts: 1:1 (synchronization

licenses) to 2.67:1 (YouTube) to 3.7:1 (Pandora) to 4.76:1 (Section 115 deals). See also Ex.

1616 (Ramaprasad WRT) ¶ 27; 3/23 Tr. (Ramaprasad) 2690:14-2691:3.



3/23 Tr. (Ramaprasad) 2685:20-2686:8.

APL-F379. Further, there is no support for Dr. Eisenach's assertion that the relative value of sound recordings and musical works in the interactive streaming context would be close to 1:1 or 4.76:1 or even be in this range. Ex. 1616 (Ramaprasad WRT) 26. Moreover,

. 3/23 Tr. (Ramaprasad) 2691:4-10; 2693:15-2694:6.

APL-F380. The fact that the relative value of sound recordings and musical works varies substantially across different contexts indicates that these ratios are determined by the specifics of each context, and are not informative about a different context. Ex. 1616

(Ramaprasad WRT) ¶ 28; 4/5 Tr. (Katz) 4952:21-4953:7 (opining that

); see also Ex. 886 (Katz WRT) ¶¶ 86-92, 108-111.

(B) Dr. Eisenach's Biased Methodology Led to a Lower Range of "Relative Values"

APL-F381. In addition to the fact that Dr. Eisenach's range of "relative values" is neither stable nor applicable to the context of interactive streaming, Dr. Eisenach's methodology is flawed in calculating his range of relative values. Specifically,

Ex. 1616 (Ramaprasad WRT) ¶ 42; 3/23 Tr. (Ramaprasad) 2694:16-2695:4. As discussed below, these choices included (1) ignoring the more analogous context of digital downloads, (2) miscalculating the relative value in the context of Pandora licenses for non-interactive streaming, and (3) selectively ignoring certain YouTube licenses. *See infra* APL-F382–390.

APL-F382. First, while Dr. Eisenach chose to look at synchronization licenses, YouTube licenses, and Pandora non-interactive streaming licenses, he tellingly excluded the context of digital downloads in order to artificially lower his range of relative values. Dr. Eisenach excluded the context of digital downloads despite acknowledging that digital downloads and interactive streams are close substitutes. Ex. 3027 (Eisenach WDT) ¶ 5. Indeed,



Ex. 1616 (Ramaprasad WRT) ¶ 43; 3/23 Tr. (Ramaprasad) 2695:22-

2696:17.

APL-F384. As illustrated below in Apple Demonstrative 47, Dr. Eisenach's failure to include the digital download relative values radically skews his range of relative values:



3/23 Tr. (Ramaprasad) 2695:5-10.

APL-F385.	Second,
	. Ex.

1616 (Ramaprasad WRT) ¶¶ 7, 39-41; 3/23 Tr. (Ramaprasad) 2699:25-2701:7; see also Ex. 886

(Katz WRT) ¶¶ 98-109; Ex. 698 (Leonard WRT) ¶¶ 48-53.

APL-F386.
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. Ex. 1616 (Ramaprasad WRT) ¶¶ 7, 39-41; 3/23 Tr. (Ramaprasad) 2699:25-2701.

. Ex. 1616 (Ramaprasad WRT) ¶¶ 7, 39-41; 3/23 Tr. (Ramaprasad)

2699:25-2701:7.

APL-F387. As illustrated below in Apple Demonstrative 48, a logarithmic time trend (where the growth slows over time, creating a curved line) is statistically a better fit than Dr. Eisenach's straight line projection, and would result in a more accurate projection:



3/23 Tr. (Ramaprasad) 2700:5-2701:19.

APL-F388.

Ex. 1616 (Ramaprasad WRT) ¶ 41; 3/23 Tr. (Ramaprasad) 2699:25-2701:7; see also 4/5 Tr.

(Katz) 4959:19-4961	:9 (opining that	at a second s
		); <i>id.</i> at 4961:13-4962:6 (referring to
testimony		
		); Ex. 698
(Leonard WRT) ¶¶ 5	1-52.	
APL-F389.	In addition,	

	. 4/5 Tr. (Katz) 4956:3-12; Ex. 886 (Katz WRT) ¶¶ 85, 99-
100, 102 & Table 1.	
APL-F390.	Third,
. 4/5 Tr. (Katz	z) 4963:11-4967:12.
. <i>Id</i> .	

#### iv. Making Two Corrections to Dr. Eisenach's "Method 1" Calculations Demonstrates That His Methodology Led to an Artificially Inflated Rate

APL-F391. As discussed above, Dr. Eisenach's overall premise and calculations are fundamentally flawed in many respects, and are not possible to correct. *See supra* APL-F328– 390. It is possible to correct two of the above-referenced flaws in Dr. Eisenach's "Method 1" calculation, however, and doing so demonstrates that Dr. Eisenach's calculations were improperly biased in favor of the Copyright Owners. To be clear, however, addressing these two correctable errors still leaves his approach fundamentally flawed. Therefore, his entire analysis should be rejected.

APL-F392. Specifically, as illustrated below in Apple Demonstrative 51,

Ex. 1616 (Ramaprasad WRT) ¶ 50 & Rebuttal Table 2; 3/23 Tr. (Ramaprasad) 2702:9-2704:14;

Ex. 3027 (Eisenach WDT) ¶¶ 151-53 & Table 12.



3/23 Tr. (Ramaprasad) 2702:15-2704:14.

#### b. Dr. Eisenach's "Method 2" Suffers from Similar Flaws and **Results in an Artificially Inflated Range of Mechanical Royalty Rates**

APL-F393. Similar to "Method 1," Dr. Eisenach's "Method 2"—which he uses to

calculate a range of per-play royalty rates and per-user rates—is flawed and unreliable. Dr. Eisenach illustrates his "Method 2" for deriving the mechanical royalty rate for musical works in

the following equation:

# $\frac{All-InS.\,R._{interactive streaming}}{S.\,R./M.\,W.\,Ratio} - Performance-OnlyM.\,W.$

Tr. Ex. 3027 (Eisenach WDT) ¶¶ 142-143.

APL-F394.



. Ex. 3027 (Eisenach WDT) ¶¶ 140-43;

3/23 Tr. (Ramaprasad) 2705:4-10.

. 3/23 Tr. (Ramaprasad) 2705:11-2706:22. See supra APL-

F360-390.

APL-F398. As with Dr. Eisenach's "Method 1" calculations, his overall premise and calculations are flawed in many respects, and many of these flaws are not correctable. However, it is possible to correct the same two flaws in Dr. Eisenach's "Method 2" calculation, and doing so once again demonstrates that Dr. Eisenach's calculations were improperly biased in favor of the Copyright Owners. To be clear, however, addressing these two correctable errors still leaves his approach fundamentally flawed. Therefore, his entire analysis should be rejected.



(Ramaprasad WRT) ¶ 51 & Rebuttal Table 3; 3/23 Tr. (Ramaprasad) 2705:11-2706:22; Tr. Ex.

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3027 (Eisenach WDT) ¶¶ 154-58.
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3/23 Tr. (Ramaprasad) 2706:4-2707:14.

APL-F400. Similarly, as illustrated in Apple Demonstrative 58 below,

. Ex. 1616 (Ramaprasad WRT) ¶¶ 53-56 & Rebuttal Table 4; 3/23 Tr.

(Ramaprasad) 2707:8-2708:2; Tr. Ex. 3027 (Eisenach WDT) ¶¶ 159-65.



3/23 Tr. (Ramaprasad) 2708:4-21.

#### B. Dr. Rysman's Analysis of Historic Rates Is Skewed and Unreliable

APL-F401. The Copyright Owners' expert, Dr. Rysman, claims that the Copyright Owners' proposed per-play rate is "reasonable" based on the historic effective mechanical perplay rates services have paid in the past, and that the proposed per-user rate is reasonable based on the number of streams users across three services have played per month on average. Ex. 3026 (Rysman WDT) ¶ 62. Dr. Rysman's analysis of historic rates is unreliable because (1) Dr. Rysman made numerous mistakes in his data analyses that render his data analyses unreliable, and (2) his analysis of historic data excludes **Constant and The Security** that should have been included. As a result, his analysis is misleading and **Constant and Security**.

#### 1. Dr. Rysman Made Numerous Errors In His Data Analyses

APL-F402. Dr. Rysman made numerous demonstrable errors is his data analyses—

— that

render his data analyses unreliable. See 4/3 Tr. (Rysman) 4457:7-4458:1, 4459:25-4464:7.

APL-F403. First, Dr. Rysman erroneously stated

. 4/3 Tr. (Rysman) 4457:7-

4458:1, 4459:25-4463:8. In fact,
. <i>Id</i> .
APL-F404. Second, Dr. Rysman claimed
. 4/3 Tr. (Rysman) 4463:14-17. But,
4/3 Tr (Rysman) 4463:18-4464:7
ADI E405 Third
AFL-F405. <u>111110,</u>
. 4/3 Tr. (Rysman) 4462:19-4463:13.
APL-F406. <u>Fourth</u> , Dr.
. 4/3 Tr. (Rysman) 4300:17-23. Google's
agreements which suggests yet another mistake in
Dr. Rysman's data analysis. See, e.g., Ex. 380 at 3 (
); Ex. 390 at 3 (
).
APL-F407 Fifth in his Written Rebuttal Testimony Dr. Rysman claimed that
See Ex. 3032 (Rysman WR1) ¶¶ 82. In fact,
Dr. Rysman's own analysis indicated the Copyright Owners' proposal would
. See
Ex. 3032 (Rysman WRT) ¶¶ 87 Table 1. Dr. Marx's analysis corroborates that
. Ex. 1069 (Marx

WRT) ¶ 23, Figure 4.

APL-F408. <u>Sixth</u> , Dr. Rysman testified several times that
4/3 Tr.
(Rysman) 4301:25-4302:4, 4303:5-7, 4303:22-23. This statement is false. See Ex. 1069 (Marx
WRT) ¶¶ 19 Figure 3 and 23 Figure 4 (
); Ex. 3032 (Rysman WRT) ¶ 87 Table 1 and Table 2 (same).
. See Ex.
3032 (Rysman WRT) ¶ 87 Table 1 (
). Moreover, many offerings in the current statute have either a mechanical
floor that is less than \$0.50 per subscriber, or no floor at all. 37 C.F.R. § 385.23. For those
services, , , the increase in royalties caused by the
Copyright Owners' proposal could be greater than 112%, regardless of the prong in the
Copyright Owners' proposal under which the services pay. See e.g., Ex. 1069 (Marx WRT) $\P$ 19
Table 19 (
¶ 23 Figure 4 (
). Dr. Rysman's statements indicate a lack of understanding
of how the current royalty rates, and the Copyright Owners' proposal, work. This raises further
questions about his data analyses, particularly the data analyses in his rebuttal testimony which
focuses almost exclusively on the impact that the Copyright Owners' proposal would have on the
royalties services pay, neither of which Dr. Rysman seems to understand.

APL-F409. <u>Finally</u>, in Table 1 in Exhibit 3026, Dr. Rysman's Written Direct Testimony, Dr. Rysman erroneously reported

. 4/3 Tr. (Rysman) 4469:25-4471:25. Dr. Rysman

4/3 Tr.

(Rysman) 4469:25-4471-4471:7. Transcription or otherwise, this mistake is emblematic of the carelessness with which Dr. Rysman conducted his data analyses. He was not missing a zero, or off by a keystroke. He reported a number that was entirely different from the correct figure.

APL-F410. In sum, Dr. Rysman's data analyses are littered with errors. Accordingly, his analyses of historic per-play rates, a reasonable per-user rate, and the impact of the Copyright Owners' proposal on the services in this proceeding are unreliable and entitled to no weight.

#### 2. Dr. Rysman's Analysis of Historic Per-Play Rates Is Flawed

#### a. Dr. Rysman's Analysis of Historic Per-Play Rates Excludes Relevant Data with No Basis and Fails to Properly Weight the Available Data

APL-F411. To conduct his analysis of historic effective mechanical per-play rates, Dr. Rysman calculates the effective mechanical per-play rate various subscription services paid from 2012 to 2015. Ex. 3026 (Rysman WDT) ¶ 62. He then summarizes the data for some of the "larger services" in Table 1 of his Written Direct Statement and concludes that the Copyright Owners' proposal is reasonable as

" *Id*. ¶ 64.

4/12 Tr. (Ghose) 5692:3-21; see also Ex. 698 (Leonard

WRT) ¶¶ 96-100; Ex. 132 (Hubbard WRT) ¶ 6.6; Ex. 886 (Katz WRT) ¶¶ 176-182.

APL-F412. For ease of reference, the corrected version of Table 1, which was depicted in Demonstrative 14 during Dr. Rysman's live testimony, is depicted below:

4/3 Tr. (Rysman) 4469:25-4471:25.

APL-F413.
. Ex. 1618 (Ghose WRT) ¶
19; 4/12 Tr. (Ghose) 5693:1-5693:10.
. Ex. 1618 (Ghose WRT) ¶ 19; 4/12 Tr.
(Ghose) 5693:16-25; Ex. 698 (Leonard WRT) ¶ 98-100. The excluded services also include
locker services, such as Amazon's paid locker services. Ex. 698 (Leonard WRT) ¶ 99.
APL-F414. Given that all interactive streaming, limited download, music locker, and
bundled services will be subject to the Copyright Owners' proposed rates, there is no basis for

excluding these services from the analysis. Ex. 1618 (Ghose WRT) ¶¶ 20-21; 4/12 Tr. (Ghose)

5694:1-8; Ex. 698 (Leonard WRT) ¶¶ 98-99.

. Ex.

1618 (Ghose WRT) ¶ 21-25 and Rebuttal Table 1; see also 4/12 Tr. (Ghose) 5694:9-5695:20; Ex. 698 (Leonard WRT) ¶ 98.

APL-F415.

. Ex. 1618 (Ghose WRT) ¶ 21-25 and Rebuttal Table 1

and Chart 1; see also 4/12 Tr. (Ghose) 5694:24-5695:23; Ex. 698 (Leonard WRT)  $\P$  98; Ex. 146

(Exhibit 13 to Dr. Hubbard's rebuttal report).



Ex. 1618 Rebuttal Table 1.

APL-F416.	
	. Ex. 1618 (Ghose WRT) ¶ 22 Rebuttal Table 1.
	. Ex. 1618 (Ghose WRT)
22 Rebuttal Table 1.	
	. Ex. 1618 (Ghose WRT) 22 Rebuttal Table 1. By contrast, the lowest
effective per-play rate reported in Dr. Rysman's analysis in Table 1 of his Written Direct	
Statement was	. Ex. 1618 (Ghose WRT) ¶ 22-23.

APL-F417. In addition to his analysis in Table 1 of his Written Direct Statement, Dr.

Rysman also reports annual historic mechanical per-play royalties for various services

. Ex. 3026 (Rysman WDT) Figure 7. A copy of Figure 7 is depicted below.	
Ex. 3026 (Rysman WDT) ¶ 64, Figure 7.	

APL-F418. Although Dr. Rysman's Figure 7	it does
not save his analysis as it is just as misleading as the data reported in Table 1. First, Dr. I	Rysman
Ex. 3026 (Rysman WDT) Figure	7
); see also Ex. 132 (Hubbard WRT) $\P$ 6.4. Nor did he	include
. Ex. 3026 (Rysman WDT) Figure 7; Ex. 698 (Leonard WRT) ¶ 96.	Second,
. Ex. 30	26

(Rysman WDT) Figure 7.
. Ex. 3026 (Rysman WDT) Figure 7.
Apple, however, also offers family, student and trial plans.
. See Ex. 1129 (document
relied upon by Dr. Rysman). As shown below,
Ex. 1618 (Ghose WRT) Chart 1.
APL-F419. In other words, Dr. Rysman's Figure 7
). Ex. 1129 (
); <i>see, e.g.,</i> Ex.
1432 (
).

APL-F420. The highlighted data in Figure 7 for other services is similarly misleading. For Spotify, . Ex. 3026 (Rysman WDT) ¶ 62 n. 56. For the Amazon data point, . Ex. 698 (Leonard WRT) ¶ 99. Including this service Amazon's 2014 effective mechanical per-play rate from . Ex. 698 (Leonard WRT) ¶ 99.

APL-F421. Finally, Dr. Rysman also erred in failing to conduct a weighted analysis of the historic effective per-play rates services have paid in either Figure 7 or Table 1. Ex. 1069 (Marx WRT) ¶ 119; Ex. 132 (Hubbard WRT) ¶ 6.3; Ex. 886 (Katz WRT) ¶ 179. "Visually and analytically, all services are given equal weight," even though some services account for substantially more streams than others. Ex. 1069 (Marx WRT) ¶ 120; *see* Ex. 132 (Hubbard WRT) ¶ 6.3; Ex. 886 (Katz WRT) ¶ 179.



. Ex. 1618 (Ghose WRT) ¶ 24 and Chart 1.
. 4/12 Tr. (Ghose) 5695:24-5696:7; Ex. 1618
(Ghose WRT) ¶¶ 23-24, Chart 1. The Copyright Owners' per-play rate
. 4/3 Tr. (Ghose) 5696:8-14.
APL-F423. Other experts similarly found that historic effective per-play mechanical
royalty rates are . See Ex. 886 (Katz WRT) ¶
179 (calculating a 2015 weighted average of <b>1997</b> ); Ex. 698 (Leonard WRT) ¶ 102 (finding a
weighted average mechanical per-play rate of across all services and all years of
available data); Ex. 144 (graph prepared by Dr. Hubbard
); Ex. 1069 (Marx WRT) ¶ 123
(finding that
).
APL-F424. Dr. Ghose also calculated the weighted average effective all-in per-play
rate services have paid historically and determined that in 2015 the effective all-in per-play rate
was
. 4/12 Tr. (Ghose)
5698:10-5699:16; Ex. 1618 (Ghose WRT) ¶¶ 25-26, Chart 2. In other words,
. 4/12 Tr. (Ghose) 5698:10-5699:16; Ex.
1618 (Ghose WRT) ¶¶ 25-26, Chart 2.
API_F/25 Finally even these weighted averages are misleading as they relate to the

Copyright Owners' proposal. First,

. Ex. 132 (Hubbard WRT) ¶ 6.9-6.10; Ex. 1069 (Marx WRT) ¶ 129.
. <i>See</i> Ex. 1069
(Marx WRT) ¶ 129 Figure 17 (
); Ex.
132 (Hubbard WRT) ¶ 6.10 Table 4 (
). This means that the Copyright Owners'
proposed per-play rate
. <u>Second</u> , by relying only on past data, Dr. Rysman fails to account for the
fact that
Ex. 1618 (Ghose WRT) ¶¶ 30-35. To account for this trend,
. Ex. 1618 (Ghose WRT) ¶ 34; <i>see</i> Ex. 886 (Katz WRT) ¶¶
180-181. Third, Dr. Rysman's analysis of the reasonableness of the Copyright Owners' proposal
does not account for the per-user prong and the fact that this could lead some services to pay
effective per-play rates well above \$0.0015. See supra APL-F282–286; Ex. 886 (Katz WRT) ¶
176; Ex. 1069 (Marx WRT) ¶¶ 130-131.
3. Dr. Rysman's Analysis of the Proper Per-User Rate Similarly Is Flawed

APL-F426. Dr. Rysman also analyzes the Copyright Owners' per-user rate using historic data. Ex. 3026 (Rysman WDT) ¶ 66. Like his analysis of the Copyright Owners' proposed per-play rate, his analysis of the per-user rate also is biased upward. Historic data shows that the Copyright Owners' proposed per-user rate of \$1.06 per user is in fact

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	. Ex. 698 (Leonard WRT) ¶ 107; Ex. 132 (Hubbard WRT) ¶
4.12 and Table 2.	
APL-F427.	In a single paragraph in his Written Direct Statement, Dr. Rysman uses
	to evaluate the Copyright Owners' proposed per user
rate. Ex. 3026 (Rysm	an WDT) ¶ 66. Specifically, Dr. Rysman determines that
	. Ex. 3026
(Rysman WDT) ¶ 66	
	. <i>Id</i> .
. Id. There are	many flaws with this analysis.
APL-F428.	First, the analysis is premised on the \$0.0015 per-play rate being
reasonable. As discu	assed above, it is not. See supra APL-F411-425.
APL-F429.	Second, the analysis is based on data regarding the number of streams per-
user from only three	services: Ex. 698 (Leonard WRT) ¶ 103-
106. Dr. Rysman ha	d data from other services, but he chose to ignore it. Ex. 698 (Leonard
WRT) ¶ 103. Furthe	r,

Ex. 698 (Leonard WRT) ¶ 104.

APL-F430. <u>Third</u>, rather than using the Copyright Owners' proposed per-play rate to calculate a range of per-user rates, Dr. Rysman could have looked at the royalties per-user that interactive streaming services actually have paid, just as he did in his analysis of historic per-play rates. Ex. 698 (Leonard WRT) ¶ 107; Ex. 132 (Hubbard WRT) ¶ 6.7. Under this methodology, the historic average mechanical royalty per-user across all services is approximately

Copyright Owners' proposed rate of \$1.06 per user. Ex. 698 (Leonard WRT) ¶ 107 (calculating a weighted average of ); Ex. 132 (Hubbard WRT) ¶ 4.12 and Table 2 (\_\_\_\_\_\_).

APL-F431. In sum, Dr. Rysman's analysis of historic data is severely flawed and biased as he excludes large quantities of data. Correcting these flaws shows that the Copyright Owners' proposed per-play and per-user rates are, in fact, unreasonable. *See supra* APL-F411–430.

#### C. Dr. Gans' Purported Shapley Value Analysis Does Not Support the Copyright Owners' Proposal and His Analysis of Historic Per-Play Rates Is Flawed

APL-F432. The Copyright Owners' expert, Dr. Gans, purports to have conducted a Shapley Value analysis to derive the ratio of of sound recording royalties and musical composition royalties that would exist in a free market, which he then uses to support his conclusion that the Copyright Owners' proposed mechanical-only rate is appropriate. *See* Ex. 3028 (Gans WDT) ¶¶ 61-86.

APL-F433. Dr. Gans's analysis is invalid, however, because he (1) fails to demonstrate that a cooperative game theory model that seeks to replicate the free market is applicable when setting a mechanical royalty rate for the interactive streaming industry, (2) fails to conduct a proper Shapley value analysis, and (3) makes several unsupported assumptions that render his calculations unreliable.

#### 1. Dr. Gans Fails to Demonstrate That the Shapley Value Analysis Is Applicable to This Proceeding

APL-F434. As an initial matter, Dr. Gans incorrectly assumes that a cooperative game theory model such as the Shapley analysis is applicable to the interactive streaming industry. As

Dr. Ghose explains, the Shapley value analysis was "conceived as a solution to the problem of dividing a fixed value among members of a group that <u>collectively</u> created said value." Ex. 1618 (Ghose WRT) ¶ 38 (emphasis added); 4/12 Tr. (Ghose) 5744:6-5745:13. Dr. Gans fails, however, to demonstrate that such a model has any relevance to the interactive streaming industry, given that the industry consists of many different publishers, record labels, and interactive streaming services, all of whom act non-cooperatively to maximize their individual profits. Ex. 1618 (Ghose WRT) ¶¶ 38-44, 55-56; 4/12 Tr. (Ghose) 5700:13-5701:25; Ex. 698 (Leonard WRT) ¶ 144; 4/5 Tr. (Katz) 4992:18-4993:5, 5135:6-12.

APL-F435. The CRB itself previously considered, and rejected, the use of the Shapley value analysis in the context of a rate setting proceeding precisely because there is no basis to conclude that industry participants would act cooperatively. *See SDARS I*, 73 Fed. Reg. at 4092 (considering and rejecting expert's Shapley value analysis of the satellite radio industry where expert provided no reason "as to why each participant. . . should not make its decisions independently to maximize their own profits. In other words, a non-cooperative game approach may have been more appropriate under the circumstances"). Because the same conclusion applies equally here, Dr. Gans' purported Shapley value analysis and the conclusions he draws based on that analysis are unreliable. Ex. 1618 (Ghose WRT) ¶¶ 38-44.

APL-F436. Moreover, Dr. Gans' reliance on the *Distribution of 1998 and 1999 Cable Television Funds* CRB proceeding as an example of an instance in which the CRB approved of the use of a Shapley value analysis, Ex. 3028 (Gans WDT) ¶ 68, is unavailing. Ex. 1618 (Ghose WRT) ¶ 40. In fact, Dr. Gans himself acknowledges that although the Shapely value approach was discussed hypothetically in that proceeding, it was never actually applied. Ex. 3028 (Gans WDT) n. 37. *See also* Ex. 1618 (Ghose WRT) ¶ 40.

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APL-F437. Finally, Dr. Gans' assumption that a mechanical royalty rate should attempt to replicate what publishers would receive in a free market that is "unconstrained" by compulsory licensing also is problematic. Ex. 3028 (Gans WDT) ¶¶ 63-64. As discussed further below, attempting to replicate free market conditions is in fact inconsistent with the Section 801(b) factors. *See infra* APL-F453–460. Dr. Gans' Shapley value analysis is flawed for this reason as well. *See* Ex. 1618 (Ghose WRT) ¶¶ 41-42 (testifying that Dr. Gans "invoke[es] a willing buyer/willing seller framework" in his Shapley Value analysis while failing to explain how such an approach is consistent with the Section 801(b) objectives); Ex. 698 (Leonard WRT) ¶ 144 ("[T]he Shapley value approach is inappropriate because it ignores the considerations of the 801(b)(1) factors.").

#### 2. Dr. Gans Did Not Conduct a Proper Shapley Value Analysis

APL-F438. Even if one were to assume that a Shapley value analysis has any relevance to this proceeding, Dr. Gans' analysis still would be inappropriate because he failed to conduct a proper Shapley value analysis. Ex. 1618 (Ghose WRT) ¶ 45; Ex. 1069 (Marx WRT) ¶ 186; 4/5 Tr. (Leonard) 5181:11-5184:22; 4/7 Tr. (Marx) 5535:19-5536:16, 5563:8-24.

APL-F439. A true Shapley Value analysis is designed to calculate how total value (in this context, industry profits) should be divided among <u>all</u> industry participants. Ex. 1618 (Ghose WRT) ¶ 46 ("[T]he whole point of performing the Shapley value analysis is to determine th[e] individual shares."). Dr. Gans, however, did not do this, instead employing a radically simplified model that simply does not constitute a true Shapley value analysis. *See id.*; Ex. 1069 (Marx WRT) ¶ 186 ("[E]very entity's Shapley value should be calculated from first principles instead of using values already reflecting complimentary oligopoly market power. . . . Dr. Gans does not perform these calculations."); 4/5 Tr. (Leonard) 5182:20-5183:2 ("[In a true] Shapley analysis, you would look at -- and I will get into this in a minute -- but in my view you would

start with each individual copyright that's at issue here. And you would say: I'm going to, you know, I've got look at each of them. I'm going to look at each of the Services. I have to look at everybody.").

APL-F440. Indeed, Dr. Gans himself admitted that his decision to rely on abstract Shapley concepts, rather than performing a full Shapley value analysis, makes his approach more of a "Shapley-inspired" or "Shapley light" analysis. 3/30 Tr. (Gans) 4109:18-4110:9.

APL-F441. Dr. Gans' admitted failure to conduct a true Shapley value analysis is fatal to the validity of his conclusions. Ex. 1618 (Ghose WRT) ¶ 46; Ex. 1069 (Marx WRT) ¶ 186.

# **3.** Dr. Gans' Calculations Are Based On Several Unsupported Assumptions That Render Them Unreliable

APL-F442. In addition to the conceptual and methodological problems discussed above, APL-F434–441, Dr. Gans' calculations also are unreliable because he (1) assumes that Dr. Eisenach's calculation of the sound recording per-play royalty is a viable benchmark, and (2) bases his analysis on several additional unsupported assumptions about the behavior of the participants in the interactive streaming market. Ex. 1069 (Marx WRT) ¶¶ 182-186; Ex. 132 (Hubbard WRT) ¶¶ 6.11-6.21; Ex. 698 (Leonard WRT) ¶¶ 115-118, 133-134, 142-147; Ex. 886 (Katz WRT) ¶¶ 138-174; Ex. 1618 (Ghose WRT) ¶¶ 47-70; 4/5 Tr. (Katz) 4992:3-4996:22; 4/5 Tr. (Leonard) 5181:3-5188:21; 4/7 Tr. (Marx) 5535:19-5536:16, 5563:8-5566:23; 4/12 Tr. (Ghose) 5702:12-5706:22; 4/13 Tr. (Hubbard) 5933:9-5934:6.

#### a. Dr. Gans' Reliance on Dr. Eisenach's Unreliable Calculation of the Sound Recording Per-Play Rate Is Inappropriate

APL-F443. Dr. Gans' calculations rely on sound recording royalties as a benchmark despite numerous indications that sound recording royalty rates are artificially inflated from what they would be in a free market. Ex. 886 (Katz WRT) ¶¶ 150-154; Ex. 698 (Leonard WRT) ¶¶ 133-134, 147. Equally problematic,

. *See* APL-F346–353; Ex. 1618 (Ghose WRT) ¶¶ 48-51 and n.2; 4/12 Tr. (Ghose) 5702:25-5703:14. *See also* Ex. 132 (Hubbard WRT) ¶¶ 6.18-6.21. Given the flaws in these two components of his analysis, Dr. Gans' reliance on them is inappropriate and renders his conclusions unreliable.

#### b. Dr. Gans' Assumptions Regarding the Behavior of Players in a Free Market Also Are Unsupported and Unreliable

APL-F444. Dr. Gans also bases his analysis on several unsupported assumptions which, both separately and taken together, undermine the validity and reliability of his analysis.

APL-F445. <u>First</u>, Dr. Gans assumes that publisher revenue and label revenue would be the same in a free market that is unconstrained by compulsory licensing, which is highly implausible. Ex. 698 (Leonard WRT) ¶¶ 115-118, 142-143; Ex. 886 (Katz WRT) ¶¶ 144, 155-157; Ex. 1069 (Marx WRT) ¶ 183; Ex. 132 (Hubbard WRT) ¶¶ 6.13-6.16; Ex. 1618 (Ghose WRT) ¶¶ 52-64; 4/5 Tr. (Katz) 4993:6-4994:1; 4/5 Tr. (Leonard) 5182:3-5184:22; 4/12 Tr. (Ghose) 5703:15-5704:12.

APL-F446. As numerous other experts testified, Dr. Gans's assumption that, in an unconstrained market, publishers and record labels would have equal bargaining power and therefore would earn the same profits, is unrealistic and neither supported nor implied by the Shapley value approach. *See* Ex. 886 (Katz WRT) ¶¶ 138-139 ("Dr. Gans presents an analysis based on the Shapley value concept that he concludes supports Copyright Owners' proposed perplay and per-user royalty rates. . . . The core of Dr. Gans's methodology is to use the Shapley value model of bargaining to reach the conclusion that publishers should earn the same profits from interactive streaming royalties as record companies currently do. . . . [This analysis] makes

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unrealistic assumptions about the structure of the Shapley bargaining situation."); Ex. 1069 (Marx WRT) ¶ 186 (Dr. Gans "simply uses the profit of sound recording copyright owners as their Shapley value without any justification. This is not a proper application of the Shapley value."); Ex. 886 (Katz WRT) ¶ 144 ("Dr. Gans' primary conclusion—that record labels and publishers should earn the same profits—is the [] result of the particular structure that he has chosen to use. Had he considered a range of models of effectively competitive record companies and publishers, Dr. Gans would have found-contrary to the example that he considered-that record companies and publishers do not always earn the same profits as one another under Shapley bargaining."); Ex. 1618 (Ghose WRT) ¶¶ 52-56 ("Professor Gans' oversimplified example is premised on the notion that the hypothetical lone publisher and the hypothetical lone record company have symmetric bargaining power because they each can, individually, shut down the industry (*i.e.*, they each have 'veto power'). The parallel to the real world would be a situation where all publishers always acted collectively and all record labels always acted collectively. In such a situation, no individual record company (or publisher) would agree to a deal with a streaming service unless all other record companies (or publishers) also agreed to a deal with that service. Clearly, such a scenario is not consistent with the realities of the industry."); 4/5 Tr. (Leonard) 5182:8-15 ("Well, I mean, [Dr. Gans] could have made that assumption [that sound recording labels and publisher profits would have equal profits in an unconstrained market] without calling it a Shapley value analysis. I think he -- in fact, the fundamental -- yeah, I don't see that you need Shapley to make that assumption. That assumption is just something he is saying, well, they both have veto power, therefore, their contribution is the same."); 4/7 Tr. (Marx) 5563:14-24 ("What [Dr. Gans] does in that analysis is that he assumes that the record label's Shapley value, their fair return, is equal to their current

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profits, which, as I have noted are inflated by market power and other issues. He doesn't model the copyright users at all, so he doesn't calculate a Shapley value for interactive streaming.").

APL-F447. Second,
. Ex. 1618 (Ghose WRT) ¶¶ 57-58; Ex. 132 (Hubbard WRT) ¶ 6.15.
. Ex. 1618 (Ghose WRT) ¶¶ 58-59; Ex. 132
(Hubbard WRT) ¶ 6.16. Professor Gans
. Ex. 1618 (Ghose WRT) ¶¶ 57-59; Ex. 132 (Hubbard WRT)
¶¶ 6.15-6.16. See also Ex. 886 (Katz WRT) ¶ 161; 4/12 Tr. (Ghose) 5704:13-5705:12.
APL-F448. <u>Third</u> ,
. Ex. 1618 (Ghose WRT) ¶ 65; Ex. 698 (Leonard WRT) ¶ 142;
Ex. 886 (Katz WRT) ¶ 170; 4/12 Tr. (Ghose) 5705:13-19.
. Ex. 1618 (Ghose WRT) ¶ 66. Dr. Gans
. Ex. 1618 (Ghose WRT) ¶¶ 65-69;
Ex. 886 (Katz WRT) ¶ 170.
APL-F449.
, Ex. 3028 (Gans WDT) ¶ 78, . Ex. 1618 (Ghose WRT)

¶ 70. This is consistent with the conclusions of other experts who testified that correcting for Dr. Gans' unsupported assumptions yielded significantly different conclusions, which are far less supportive of the Copyright Owners' proposed per-play rate. *See* Ex. 698 (Leonard WRT) ¶ 145 (testifying that the ratio of sound recordings to musical works in Professor Gans' analysis should be 4.7, rather than 2.5, which would yield a significantly lower effective mechanical per-play rate); Ex. 886 (Katz WRT) ¶ 149 (testifying that his recalculation to account for Dr. Gans' flawed ratio of sound recordings to musical works yielded a mechanical per-play rate of

); Ex. 132 (Hubbard WRT) ¶¶ 6.17, 6.19, 6.21 (

).

### 4. Like Dr. Rysman, Dr. Gans Performs An Analysis of Historic Per-Play Rates That Excludes Relevant Data and Is Biased Upward

APL-F450. Like Dr. Rysman, Dr. Gans purports to calculate the historic effective per-

play rates paid by services in order to argue that the Copyright Owners' proposed rate is

"reasonable" because it "falls into th[e] range historically paid." Ex. 3028 (Gans WDT) ¶ 83-

84, Table 6. Dr. Gans' analysis has all of the same flaws, however, as Dr. Rysman. See supra

F411–425. He relies on only

. Ex. 1618 (Ghose WRT) n.14. He also excludes

Ex. 1618 (Ghose

WRT) n.13. Dr. Gans also uses many of the same data sources as Dr. Rysman, which means

. *Compare* Ex. 3028 (Gans WDT)

Table 6 with Ex. 3026 (Rysman WDT) Table 1.

APL-F451. The impact of each of these decisions is to present the CRB with a misleading, upwardly biased range of historic effective mechanical per-play rates, so that the Copyright Owners' proposal appears less jarring than it truly is. Dr. Gans' cherry-picking is improper and renders his analysis unreliable and uninformative.

\* \* \*

APL-F452. In sum, because Dr. Gans' purported Shapley value analysis is inapplicable, unreliable, and improperly conducted, the CRB should not give his analysis, or the effective mechanical royalty per-play and per-user rates he calculates, any weight. *Cf. NetAirus Techs., LLC v. Apple, Inc.*, No. LACV1003257JAKEX, 2013 WL 11237200, at \*6 (C.D. Cal. Oct. 23, 2013) (rejecting, in the *Daubert* context, a game theory analysis that attempted to calculate a reasonable patent royalty on the grounds that the analysis was based on unsupported facts and "unreliable [] assumption[s]"). And because Dr. Gans' historical analysis excludes relevant data, the CRB should not consider this analysis valid.

## D. The Copyright Owners' Expert Analyses Are Fundamentally Flawed for the Additional Reason That They Incorrectly Attempt to Emulate the Free Market Without Any Adjustment for the 801(b) Factors

APL-F453. Many of the Copyright Owners' experts argue, wrongly, that an appropriate royalty rate for interactive streaming should be modeled on the free market. *See* Ex. 3028 (Gans WDT) ¶ 9; *id.* ¶¶ 30-37 (testifying that an appropriate mechanical royalty rate should be consistent with the "outcome that would result in a hypothetical free market"); Ex. 3027 (Eisenach WDT) ¶ 33 (testifying that the best way to arrive at an appropriate royalty rate is by using "market-based benchmarks - that is, agreements for comparable rights reached in comparable circumstances through voluntary negotiations in an unconstrained market."); *id.* ¶¶ 23-25, 34-38; Ex. 3033 (Eisenach WRT) ¶¶ 23-25; Ex. 3026 (Rysman WDT) ¶ 37 (testifying that "[i]n thinking about appropriate royalty payments for publishers, it is useful to consider what

would happen in a hypothetical free market in which publishers, labels and music services could efficiently bargain for the contribution to overall revenue.").

APL-F454. These experts seemingly ignore the fact that the Copyright Act expressly requires the CRB to apply the four objectives set forth in Section 801(b) when determining a rate under Section 115. *See* 17 U.S.C. § 115(c)(3)(D); *see also Phonorecords I*, 74 Fed. Reg. at 4527-28 (noting that "we are directed by the terms of this license to establish reasonable terms that are consistent with the section 801(b) factors.).

APL-F455. Significantly, the 801(b) objectives are not intended to replicate the free market. See *Web IV*, 81 Fed. Reg. at 26391 ("[U]nder th[e Section 801(b)] standard '[t]he Copyright Act permits, but does not require, the Judges to use market rates to help determine reasonable rates."). As a result, the royalty rate that might prevail in a free market does not provide a basis for the rate to be set in this proceeding. See *SDARS I*, 73 Fed. Reg. at 4088, 4094-98 (concluding that the Section 801(b) objectives warranted divergence from the results indicated by a purely market-based analysis).

APL-F456. The standard to be applied in a Section 115 proceeding under Section 801(b) thus differs significantly from the standard that applies to a rate setting proceeding under Sections 112(e)(4) or 114(f)(2) of the Copyright Act, where, unlike here, the CRB is charged with "establish[ing] rates and terms that most clearly represent the rates and terms that would have been negotiated in the marketplace between a willing buyer and a willing seller." 17 U.S.C. \$114(f)(2)(b). *See also* 17 U.S.C. 112(e)(4) ("The Copyright Royalty Judges shall establish rates that most clearly represent the fees that would have been negotiated in the marketplace between a willing buyer and a willing seller.").

APL-F457. Indeed, the CRB has repeatedly emphasized the differences between the willing buyer/willing seller standard applied in proceedings under 17 U.S.C. § 112(e)(4) or 17 U.S.C. § 114(f)(2) and the Section 801(b) standard applicable here. *See Web IV*, 81 Fed. Reg. at 26391 (distinguishing between 801(b) factors and the Section 114(f)(2)(B) willing buyer/willing seller standard, under which "[t]he Judges must determine market rates" (quoting *Music Choice v. Copyright Royalty Bd.*, 774 F.3d 1000, 1010 (D.C. Cir. 2014).); *SDARS I*, 73 Fed. Reg. at 4088, 4094-98 (noting that the Section 801(b) standard "provides a broader scope for analyzing relevant 'benchmark' rates than the 'willing buyer, willing seller standard'").

APL-F458. Other experts who testified in this proceeding expressly recognized that the Section 801(b) standard is not equivalent to a "willing buyer and willing seller" standard because furthering the Section 801(b) objectives may require setting a rate that is different from the rate that would prevail in a free market. See Ex. 698 (Leonard WRT) ¶ 149 ("[T]he 801(b)(1) factors do not imply an unconstrained market standard nor a 'willing buyer/willing seller' standard. Instead, the 801(b)(1) factors argue for a rate that can maximize consumer surplus, which may not be achieved under an unconstrained market."); *id.* ¶¶ 56, 113, 121, 132; Ex. 1069 (Marx WRT) ¶ 79 ("The 801(b) standard is neither an unconstrained market standard nor a 'willing buyer/willing seller' standard. ... [A] reasonable interpretation of its language argues for a rate that takes into account consumer surplus in a way that an unconstrained market rate, particularly in a market with a large degree of market power, does not."); id. ¶ 62, 77-79, 94-96. See also Ex. 132 (Hubbard WRT) ¶ 4.4 (criticizing Dr. Gans' reliance on the Efficient Component Pricing Rule ('ECPR') as being inconsistent with the Section 801(b) objectives); Ex. 886 (Katz WRT) ¶ 41 (same); Ex. 1618 (Ghose WRT) ¶¶ 41-42 (criticizing Dr. Gans for "invoking a willing buyer/willing seller framework" in his Shapley Value analysis while failing

to explain how such an approach is consistent with the Section 801(b) objectives); 3/29 Tr. (Israelite) 3808:7-3813:5 (testifying that in *SDARS I*, NMPA calculated that mechanical royalty revenue would be higher under a willing buyer/willing seller standard than under the 801(b) objectives); Amazon Tr. Ex. 309 at 2 (internal NMPA document

).

APL-F459. Indeed, the Copyright Owners' own expert, Dr. Eisenach, even argued before Congress in 2012 that the standard used in Section 114(f)(2) rate-setting proceedings should not be changed from the willing buyer/willing seller standard to the Section 801(b) standard. Spotify Trial Ex. 1698 (Testimony of Jeffrey A. Eisenach, Ph.D. Before the Subcommittee on Intellectual Property, Competition and the Internet, Judiciary Committee, United States House of Representatives, November 28, 2012). During that testimony, Dr. Eisenach acknowledged that a rate developed through application of the Section 801(b) factors "would be below those that would emerge from a competitive market." *Id.* at 2-3. *See also* 4/4 Tr. (Eisenach) 4676:7-16, 4677:21-4678:15, 4678:19-4679:6, 4679:22-4680:14. (Dr. Eisenach acknowledged that this was indeed his 2012 testimony). In other words, Dr. Eisenach expressly acknowledged that a free market result is different from the 801(b) test and could lead to higher rates. Yet in this proceeding he nonetheless relied on, and advocated for the use of, free market negotiations as a benchmark.

APL-F460. The Copyright Owners' experts' use of benchmarks based on analyses that attempt to replicate the free market suggests that if one of their benchmarks were adopted (which they should not be for the reasons described above, *see* APL-F327–452), then the Section 801(b) factors would require a substantial reduction in any rate calculated using the benchmarks. *See* 

*SDARS I*, 73 Fed. Reg. at 4094-98 (finding that 801(b) objectives made it "appropriate to adopt a rate from the zone of reasonableness for potential marketplace benchmarks that is lower than the upper boundary most strongly indicated by marketplace data."); Ex. 309 at 2 (

### XVI. THE COPYRIGHT OWNERS' PROPOSAL IS FLAWED FOR OTHER REASONS

## A. The Copyright Owners' Proposed Application of the Per-Play Rate to Music Locker Services Is Inappropriate

APL-F461. The Copyright Owners' proposal would apply equally to music lockers as it does to interactive streaming services. As discussed previously, this makes no sense. Music lockers and interactive streaming services are fundamentally different services that provide different benefits to consumers. Pricing them in the same manner would effectively make music lockers obsolete. *See supra* APL-F260–278, APL-291.

APL-F462. Moreover, the publishers and songwriters already were compensated for the music in music lockers when the music was purchased. APL-F275–276. As Mr. Dorn explained, the Copyright Owners' "demand for double-compensation is emblematic of the onesided rate proposal that the Copyright Owners have put forward. They are demanding extreme changes to the current royalty with little regard for whether these changes are fair to the interactive streaming services that make music available to consumers or to the consumers themselves, who just want to be able to listen to the songs they own." *See* Ex. 1612 (Dorn WRT) ¶ 43; *see also* Ex. 1616 (Ramaprasad WRT) ¶ 60 (explaining that "using the same royalty rate for music on a locker service and for the music on an interactive streaming service would result in an improper windfall for the Copyright Owners"). APL-F463. The Copyright Owners' proposal to eliminate the separate locker category is unfair and likely to be highly disruptive to the music locker industry. *See supra* APL-F260–278, 291.

# B. Requiring Services to Pay For Fraudulent Plays and Plays Less than 30 Seconds Is Inappropriate

APL-F464. The Copyright Owners, unlike Apple, are demanding that services pay for every stream, even those that are just a microsecond long. As discussed *supra* APL-F240–251, not only is this proposal inconsistent with current practices, it also is grossly unfair to services and consumers. Part of the value of interactive streaming is that it allows consumers to sample songs and skip songs as they discover new music. *See* APL-F245. If services have to pay for these short plays, they are likely to stop offering these music discovery benefits altogether. *See* APL-F245.

## C. The Late Fee Included in the Copyright Owners' Proposal Would Unfairly Penalize the Services

APL-F465. The Copyright Owners' proposal that the interactive streaming services be required to "pay a late fee of 1.5% per month, or the highest lawful rate, whichever is lower," would unfairly penalize the services. *See* Exhibit 1677 (Copyright Owners' Proposed Rates and Terms, dated Nov. 1, 2016), at B-15.

APL-F466. First, the Copyright Owners' proposal is "a solution in search of a problem that doesn't exist," as there is no evidence that interactive streaming services' royalty payments are not paid on time. 3/14 Tr. (Herring) 904:1-2; *see also id.* 903:13-16 ("We pay everybody we can figure out to pay and way pay them on time. We don't play games on that front at all.").

APL-F467. Indeed, to the extent any royalty amounts owning are not paid, it typically is because the copyright owners themselves have not told the services who to pay. *See, e.g.*, 3/22 Tr. (Dorn) 2516:13-2517:10 (testifying that royalties cannot be paid when a service does not

"know who the songwriter is or the publisher" because that "information hasn't been supplied"); *see also* 3/14 Tr. (Herring) 904:2-11 ("The real problem is the data issues. . . . [Services] have a hard time getting data accurate[ly] [from the copyright owners] to make the payments that we want to make."); 3/14 Tr. (Herring) 903:16-18 (testifying that "[o]wnership can be complex" because the owner of the copyright in a particular musical work can change).

APL-F468. The Copyright Owners' proposed late fee, however, ignores this reality and instead "applies to all late payments, regardless of why they are late." *See* Ex. 1612 (Dorn WRT) ¶ 45.

APL-F469. Second, the Copyright Owners' proposed late fee of 18% annually is exorbitant. *See* 3/22 Tr. (Dorn) 2516:13-25; *see also* Ex. 1612 (Dorn WRT) ¶¶ 9, 44. ("[T]he late fee that the Copyright Owners is proposing is incredibly high," as "even the average credit card interest rate is under 18% per year.").

APL-F470. Because it is inflexible and set unreasonably high, it is clear that the Copyright Owners' proposed late fee in fact "is an unjustifiable penalty that, like most of the Copyright Owners' proposal, is designed to pad the pockets of publishers and songwriters at the expense of interactive streaming services rather than promote a fair return for all parties." *See* Ex. 1612 (Dorn WRT) ¶ 9. As such, the Copyright Owners' late fee proposal is unreasonable and should be rejected. *See* Ex. 1612 (Dorn WRT) ¶ 9; *see also* 3/14 Tr. (Herring) 903:7-904:14.

#### CONCLUSIONS OF LAW

APL-C1. When applied to the relevant legal standards and precedent, the abovereferenced Findings of Fact result in the following Conclusions of Law. As discussed below, the benchmarks that Apple used to derive its per-play rate for interactive streaming are comparable and reasonable, and Apple's rate best satisfies the statutory objectives of Section 801(b). Similarly, Apple's proposed rate for locker services is reasonable and also satisfies these statutory objectives. In contrast, the Copyright Owners' proposed rate for interactive streaming and locker services is not based on comparable benchmarks or reliable expert testimony. Nor does it satisfy the Section 801(b) factors as it is too high and penalizes the services. The time is right to update the current structure and adopt Apple's proposed rates, which recognize the symbiotic and mutually beneficial relationship between the copyright holders and the services.

## I. THE SCOPE OF THE CRB'S STATUTORY AUTHORITY

## A. The CRB Has the Statutory Authority to Set A Mechanical Royalty Equal to an All-In Rate Less Performance Royalties

APL-C2. The CRB has the statutory authority to set an all-in rate, *i.e.*, a mechanical rate that allows for a deduction for performance royalties, just like Apple is proposing, as this is the same structure that the CRB approved in *Phonorecords I* and *Phonorecords II*. *See Mech. and Dig. Phonorecord Delivery Rate Determination Proceeding*, 74 Fed. Reg. 4510-01, 4529, 4531-32 (Jan. 26 2009) ("*Phonorecords I*"); *Adjustment of Determination of Compulsory License Rates for Mechanical and Digital Phonorecords*, 78 Fed. Reg. 67938-02, 67947-48 (Nov. 13, 2013) ("*Phonorecords II*").

APL-C3. Had the adoption of a mechanical royalty equal to an all-in rate less performance fees exceeded the CRB's statutory authority, it could not have approved these settlements. *See Review of Copyright Royalty Judges Determination*, 74 Fed. Reg. 4537-01,

4540 (Jan. 26, 2009) ("*Phonorecords I Review*"). That is because "[t]he [CRB is] not compelled to adopt a privately negotiated agreement to the extent it includes provisions that are inconsistent with the statutory license." *Id.* The Copyright Act "does not foreclose the [CRB] from ascertaining whether specific provisions [in a settlement] are contrary to law." *Id.* Thus, by adopting the *Phonorecords I* and *Phonorecords II* settlements, the CRB implicitly found that it is within its statutory authority to adopt an all-in rate. *See Phonorecords I Review*, 74 Fed. Reg. at 4540 ("By 'adopting' [the] agreement[s], the [CRB] necessarily accept[ed] the terms of the agreement[s] and 'resolve[d]' any material question of substantive law that the adopted agreement purports to resolve.").

APL-C4. The Register of Copyrights has reached a similar conclusion. Following *Phonorecords I*, the Register of Copyrights reviewed the CRB's final determination, including the resolution of the Section 115 royalty for interactive streaming, "for legal error." *Phonorecords I Review*, 74 Fed. Reg. at 4537. The Register of Copyrights did not identify any legal error in the CRB's adoption of an all-in rate. *Id*.

APL-C5. Because both the CRB and the Register of Copyrights have recognized the CRB's statutory authority to adopt an all-in rate, it is appropriate to adopt that structure in this proceeding as well. *See Phonorecords II*, 78 Fed. Reg. at 67947-48; *Phonorecords I Review*, 74 Fed. Reg. at 4537-43.

#### B. The CRB Has the Statutory Authority to Set a Zero Royalty Rate

APL-C6. The CRB also has the statutory authority to set a zero royalty rate, as Apple is proposing for plays under 30 seconds and fraudulent plays. *See Phonorecords II*, 78 Fed. Reg. at 67941 (concluding that the Judges did not exceed their statutory authority by adopting a royalty rate of zero for promotional plays).

APL-C7. This question arose in *Phonorecords II*, after the CRB adopted a royalty rate that excluded "promotional" plays from the royalty calculation, and assigned such plays a royalty rate of zero. *See* 37 C.F.R. § 358.12(b)(4). One of the comments on the proposed rates and terms challenged the zero royalty rate as violating Section 115 of the Copyright Act. *Phonorecords II*, 78 Fed. Reg. at 67941. The Judges disagreed, concluding that "nothing in the Copyright Act indicates that adoption of a zero royalty rate is contrary to section 115 of the Copyright Act." *Id.* at 67941-42.

## II. APPLE'S PROPOSED PER-PLAY RATE FOR INTERACTIVE STREAMING IS BASED ON COMPARABLE BENCHMARKS AND SATISFIES THE STATUTORY OBJECTIVES OF SECTION 801(B)

APL-C8. The determination of the royalty rate for interactive streaming in this proceeding "begin[s] with a consideration and analysis of the benchmarks and testimony submitted by the parties." *Determination of Rates and Terms for Preexisting Subscription Servs. and Satellite Dig. Audio Radio Servs.*, 73 Fed. Reg. 4084-01, 4084 (Jan. 24, 2008) ("*SDARS I*"). The benchmarks used by the parties must be "confined to a zone of reasonableness that excludes clearly noncomparable marketplace situations." *Id.* at 4088. The proposed royalty rates are "then measure[d] . . . against the statutory objectives" of Section 801(b) of the Copyright Act. *Id.* at 4084.

APL-C9. While the proposed rates for interactive streaming must be assessed in light of the statutory objectives of Section 801(b), they are not required to be consistent with rates that might prevail in a free market context. *See Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Dig. Performance of Sound Recordings*, 84 Fed. Reg. 26316-01 ,26391 (May 2, 2016) (*"Web IV"*) (quoting *Music Choice v. Copyright Royalty Bd.*, 774 F.3d 1000, 1010 (D.C. Cir. 2014)) (*"*[U]nder th[e Section 801(b)] standard '[t]he Copyright Act permits, but does not require, the Judges to use market rates to help determine reasonable rates.""); *SDARS I*, 73 Fed. Reg. at 4088, 4094-98 (concluding that the Section 801(b) objectives warranted divergence from the results indicated by a purely market-based analysis). Nor do they need to satisfy the willing buyer/willing seller standard that applies in other rate-setting proceedings. *Id.*; *see also* APL-F454–459; *Recording Indus. Ass'n of Am. v. Librarian of Cong.*, 176 F.3d 528, 533 (D.C. Cir. 1999) ("Section 801(b)(1) requires only that arbitration panels set 'reasonable copyright royalty rates.' The statute does not use the term 'market rates,' nor does it require that the term 'reasonable rates' be defined as market rates.").

APL-C10. As noted above in the Findings of Fact, Apple proposes the following mechanical royalty rate for interactive streaming of musical works: a per-play rate of \$0.00091 (minus any royalties paid for the right to publicly perform the musical work) for non-fraudulent interactive streams that are 30 seconds or longer. APL-F86–87.

APL-C11. As discussed below, Apple's proposed rate for interactive streaming is based on comparable benchmarks and best satisfies the Section 801(b) statutory objectives. *See infra* APL-C12–51.

## A. The Digital Download Benchmarks Used by Apple to Derive Its Proposed Rate Are Comparable and Reasonable

APL-C12. In assessing Apple's proposed rate, as noted above at APL-C8, the CRB starts with consideration of the benchmarks used to derive it. As discussed below, Apple's benchmarks meet the CRB's directives as they are within "a zone of reasonableness" and "exclude[] noncomparable marketplace situations." *SDARS I*, 73 Fed. Reg. at 4088.

APL-C13. Apple's proposed rate is based on the current digital download royalty rate of \$0.091 per download. APL-F168. The digital download royalty rate is the best benchmark to use for determining the rate for interactive streaming because downloads and interactive streams are very similar forms of music distribution and consumption. APL-F169. With both digital

downloads and interactive streaming, music is distributed to consumers over the Internet, and consumers can listen to the songs they want, when they want, and as many times as they choose. *Id.* In economic terms, downloads and interactive streams are substitutes for each other. APL-F170–171. This substitution is illustrated by recent trends in the industry. APL-F172–174. Revenue derived from downloads has been decreasing, while revenue derived from streaming has been increasing. APL-F173. The Copyright Owners have admitted these trends. APL-F174. Given this substitution between downloads and interactive streams, the royalty rate for interactive streaming should be consistent with the royalty rate for downloads, and it should provide income to publishers and songwriters that is commensurate with the income they receive from downloads. APL-F175.

APL-C14. Further, the particular digital download rate that Apple uses in its calculation—\$0.091 per download—is reasonable to use in this proceeding. This rate was originally set by the CRB in accordance with the same statutory objectives that apply to interactive streaming here. APL-F177. In other words, the CRB already determined that this \$0.091 rate maximized the availability of musical works to consumers, afforded both the copyright holders and services a fair return, reflected their relative risks and contributions and would not be disruptive to the industry. Moreover, this rate has near-universal support among the participants and was reaffirmed by the CRB in the Subpart A Settlement in this proceeding. APL-F178–182. The experts of other participants also agree that it is a good benchmark to use for interactive streaming. APL-F183–184.

APL-C15. In order to derive its proposed rate for interactive streaming from the digital download rate, Apple divided the digital download rate by the number of streams that equal one download. APL-F187. In order to find this number, Apple looked to the work of

prominent music industry leaders who recently grappled with this very same issue in their business. APL-F188.

APL-C16. Specifically, Apple looked to Billboard, the RIAA and Official Charts Company, each of which had formulated conversion rates between downloads and interactive streams in order to be able to account for streaming in their charts and awards for album and single sales. APL-F189–207. These entities undertook a thorough analysis to arrive at their conversion rates. Billboard consulted "key [music industry] executives" and "used accepted industry benchmarks." APL-F194. The RIAA consulted with a "myriad of industry colleagues" and conducted "a comprehensive analysis of a variety of factors," including "streaming and download consumption patterns." APL-F200. The Official Charts Company conducted an "extensive investigation of royalties paid" and consulted with labels, retailers and services. APL-F204.

APL-C17. These entities are respected throughout the music industry and were well qualified to formulate these conversion rates. APL-F208–209. There is no indication that they had any reason to be biased in favor of any particular party or to skew the conversion rate one way or the other. APL-F210. There is no evidence that these benchmarks were devised for the purposes of litigation; rather the evidence indicates they were formulated for charting and award purposes. APL-F211. In fact, it would put these organization's professional reputations at great risk if they were to distort these numbers in any way.

APL-C18. As a result of their analyses, Billboard, the RIAA and the Official Charts Company all adopted conversion rates within the same range: one download equals 100-150 streams. APL-F237. These conversion rates have been widely accepted and relied on in the music industry, including by the Copyright Owners. APL-F208–220. Notably, the NMPA uses

the RIAA's conversion rate in order to award songwriters with "gold" and "platinum" awards. APL-F213. In addition, almost everyone in the industry relies on the charts and awards, which are formulated using these conversion rates. APL-F215–219. There is no evidence in the record that anyone (including the Copyright Owners) has contested the validity of these conversion ratios outside of this proceeding, or the charts and awards that incorporate them. APL-F220. Moreover, these music industry conversion rates were corroborated by reliable, independent academic research (divorced from any litigation influence), which found that one download is displaced by 137 streams. APL-F221–236.

APL-C19. After considering a conversion rate of 1 download equaling 150 interactive streams, Apple selected 1 download equals 100 streams to use for its proposed rate for interactive streaming. APL-F237–238. This was a conservative choice because it is most favorable to songwriters and publishers. *Id.* As a result, Apple's proposed rate is \$0.091 divided by 100, which equals \$0.00091 per stream. *Id.* 

### B. Apple' Proposed Rate for Interactive Streaming Satisfies the Statutory Objectives of Section 801(b)

APL-C20. As discussed below, Apple's proposed rate structure and rate satisfies the objectives of each of the four statutory objectives of Section 801(b). It fairly compensates the services for the significant risk and expense that they contribute to the interactive streaming industry and fairly compensates songwriters and publishers for their musical works. By doing so, Apple's proposed rate will maximize the availability of music to the public by providing a merit-based incentive for the services to provide the infrastructure and tools required for interactive streaming to exist and by incentivizing songwriters and publishers to create new songs. Further, Apple's proposed rate is consistent with traditional pricing structures and

and thus will not be disruptive to the industry. See infra APL-FC21-50

## 1. Apple's Proposed Rate Will Maximize the Availability of Songs to the Public

APL-C21. First, Apple's proposed rate creates incentives for songwriters and publishers to create and the services to distribute more musical works to a greater number of consumers through interactive streaming. 3/23 Tr. (Ramaprasad) 2658:18-2659:1; 3/23 Tr. (Ghose) 2871:9-17; Ex. 1615 (Ramaprasad WDT) ¶¶ 76-77, 97.

APL-C22. As discussed above in the Findings of Fact, with the advent of digital technology and mobile devices, interactive streaming has become an important way that people consume music. APL-F46–51, APL-F94–99. Given the convenience and mobility of streaming, it has \_\_\_\_\_\_\_. APL-F46–51, APL-F94–99. Given the convenience and mobility of streaming could not exist without the services, which provide the innovative platforms and expensive technological infrastructure needed to access the music. APL-F14–25.

APL-C23. Under Apple's proposed rate, interactive streaming services "will be incentivized by a merit-based return." 3/23 Tr. (Ramaprasad) 2659:3-4. In other words, they will pay a fixed, predictable royalty fee to copyright holders and know that if they enter the market and develop a successful service that can earn revenue above the cost they must pay the publishers and songwriters, they can keep that revenue. *Id.* at 2659:4-9; APL-F112–114, 148–149. This will incentivize companies to enter the streaming market and to invest the substantial resources and money required to set up and maintain the infrastructure and platforms, which are needed in order for interactive streaming to exist in the first place. APL-F118–119. By keeping companies incentivized to be in the business of providing interactive streaming services, it will lead to increased music availability especially given the fact that, as noted above in APL-C22, streaming **.** APL-F36.

APL-C24. In addition to incentivizing services to provide the platform itself, Apple's proposed rate will incentivize the services to create innovative features and tools that promote music distribution and increase the volume, variety, and accessibility of music consumed. 3/23 Tr. (Ramaprasad) 2659:10-18; APL-F118–119. These features include interfaces that make it easier for consumers to access music, music curation and discovery tools, and social engagement features that create a community for music enjoyment and deepen engagement with music. APL-F14–25. Again, services will be able to retain all of the upside and increased revenue that they earn as a result of these innovations—rather than have to pay a percentage of it to songwriters and publishers, who do not contribute to or put themselves at risk for these innovations. Thus, Apple's proposed rate structure will incentivize services to come up with more and more of these features and tools, which in turn will "drive consumption to the tail" (*i.e.*, to lesser-known artists or music) and thus maximize distribution of music further. 3/23 Tr. (Ramaprasad) 2659:3-18; 3/23 Tr. (Ghose) 2848:11-2851:13, 2864:15-2865:11, 2871:7-22; Ex. 1615 (Ramaprasad WDT) ¶¶ 6, 77; Ex. 1617 (Ghose WDT) ¶¶ 61, 69-70, 84.

APL-C25. Moreover, Apple's proposed zero royalty for plays 30 seconds or shorter (or "skips") will incentivize services to design their platforms to encourage music exploration by consumers, rather than stifle it. APL-F241–242. In other words, the services will not be penalized by creating features that introduce and encourage consumers to try new songs, even if they ultimately decide they do not like all of them. Thus, the services will offer features that allow users the freedom to "skip" over songs that they have sampled, but ultimately do not want to listen to. APL-F245. It also will incentivize services to develop other features that may, by their nature, lead to mistaken song choices and generate more "skips." APL-F246. For example, services have added voice activation features, which allow users to request a song through a

voice command, rather than typing it into their mobile device. *Id*. Given the risk that the software may not clearly discern a spoken command or song name, such features could lead to more incorrect song selections and "skips." *Id*. Thus, Apple's proposed rate will encourage services to create tools that encourage music exploration and experimentation by not penalizing them when consumers do not like a song.

APL-C26. Also, Apple's proposed rate will maximize the availability of music because it is business-model agnostic and does not favor one type of interactive streaming service business model over another. 3/23 Tr. (Ghose) 2871:21-22. As discussed above in the Findings of Fact, there are a variety of different types of interactive streaming services operating under a range of business models, including "pure play" companies, diversified companies, subscription services (with different tiers), ad-supported services and bundled services. APL-F40–45. Under Apple's proposed rate, all services will pay the same fixed per-play rate, regardless of whether they earn income (and how much) from ads, subscriptions or some other method. APL-F86–87. This rate structure will give existing services (and new entrants) greater flexibility and predictability in setting up their businesses and lead to more pricing innovations for their customers. APL-F126–136. As Dr. Ghose explained, these pricing innovations could include tiered pricing and quantity discounts. APL-F127, 136. This will result in more types of subscriptions and pricing plans for consumers to choose from and thus provide further access to music through interactive streaming. Id. These different subscriptions and pricing plans allow services to target consumers who are willing to pay for streaming at different price points. *Id.* 

APL-C27. While this consumer pricing flexibility is a benefit, a rate structure should not be overly focused on favoring services that opt to offer free subscriptions. Given the evidence that consumers are willing to pay for streaming services, such plans could cannibalize

revenue without increasing music availability to more people. APL-F130. Moreover, historically, music has been assigned a value and consumers have had to pay a fee in order to access it. APL-F134.

APL-C28. In addition to incentivizing services to distribute music, Apple's proposed rate will incentivize songwriters to write songs and make them available for streaming. 3/23 Tr. (Ramaprasad) 2659:1-3; Ex. 1615 (Ramaprasad WDT) ¶ 76-77, 97. Their income will be predictable, transparent and tied to true demand for their musical works. 3/23 Tr. (Ghose) 2871:9-21. In other words, the royalties that services will pay to songwriters for musical works will be dependent on the number of times that consumers choose to listen to their songs. It will not be tied to unrelated factors that are not transparent to songwriters and over which they have no control, such as a particular service's business model or the revenues a service receives in a given time period. APL-F112–114.

APL-C29. Apple's proposed rate structure will make sense to songwriters, and clear up the confusion and dissatisfaction that songwriters have with the widely varying rates that they receive under the current rate structure. *Id.*; *see also* APL-F76–77. It will also incentivize them by paying them a fair rate, commensurate with the income they receive for digital downloads under the agreed-upon statutory Subpart A rate. 3/23 Tr. (Ramaprasad) 2659:1-3; Ex. 1615 (Ramaprasad WDT) ¶ 76-77, 97.

APL-C30. In sum, Apple's proposed rate will incentivize songwriters and publishers to create musical works and services to create and invest in the platforms and tools to distribute musical works to more and more people through interactive streaming, thereby maximizing the availability of music to consumers overall.

## 2. Apple's Proposed Rate Will Afford the Songwriters and Publishers a Fair Return for Their Musical Works and Services a Fair Income under Existing Conditions

APL-C31. Second, Apple's proposed rate will compensate both copyright holders and services fairly. 3/23 Tr. (Ghose) 2871:23-2872:4; 3/23 Tr. (Ramaprasad) 2659:19-2661:24.

APL-C32. It will provide songwriters and publishers a fair return in exchange for the right to stream their musical works. Ex. 1615 (Ramaprasad WDT) ¶¶ 4-5, 7. As noted above in the Findings of Fact, given the fact that interactive streaming and downloads are substitutes for each other, Apple's proposed rate is based on the digital download rate of \$0.091, which the Copyright Owners agreed to and which has been deemed reasonable by the CRB. APL-F177– 186. Under Apple's proposed rate, songwriters and publishers will be compensated for streaming at an equivalent rate for which they are compensated for downloads. APL-F168, 237.

APL-C33. In addition, Apple's rate provides a fair return to songwriters and publishers because it is predictable and links their income directly to consumer demand for their individual musical works. APL-F112–114, 148–149; *see also Phonorecords I*, 74 Fed. Reg. at 4517 (rejecting a percentage of revenue rate structure proposal in part because such a structure provides "a less than fully satisfactory proxy for measuring more usage or the actual intensity of the usage of the rights in question" and noting that "[i]t is not fair to fail to properly value the reproduction rights at issue in this proceeding. . . . [because] [s]uch a result is at odds with the stated policy objective of the statute to afford the copyright owner a fair return for his creative work."). Under Apple's rate, the payments to songwriters and publishers will be consistent across services and time periods and not fluctuate pursuant to the amount of services' revenues or whether the service is a loss leader. 3/23 Tr. (Ghose) 2872:3-14; Ex. 1615 (Ramaprasad WDT) ¶¶ 4-5, 7; APL-F112; *see also* APL-F80–81. As Dr. Ghose explained during the hearing, under Apple's proposed rate, "a copyright owner essentially knows exactly what he or she is

going to get as a function of the number of streams." 3/23 Tr. (Ghose) 2872:7-9. Apple's proposal recognizes that a musical work has an inherent value, and songwriters and publishers will be compensated with a fixed per-play fee, which will remain constant and not decrease in value if their musical work is popular and streamed many times. 3/23 Tr. (Ghose) 2872:10-14.

APL-C34. At the same time, Apple's all-in rate structure will prevent exorbitant royalties for musical works, which would be an unfair windfall to copyright holders. It ensures that the two complementary rights that are negotiated for interactive streaming of musical works—the performance right and mechanical right—are considered in tandem, with the cost of one impacting the cost of the other. APL-F139–144. This will keep the overall cost of streaming a musical work predictable and stable. Id. This is especially important in light of the recent developments within performance right licensing-the increase in the number of PROs, withdrawals from PROs and fractional licensing-which make unpredictability and costs associated with performance rights licenses at an all-time high. APL-F150–157; see also Music *Choice v. Copyright Royalty Bd.*, 774 F.3d 1000, 1015 (D.C. Cir. 2014) (quoting SoundExchange, Inc. v. Librarian of Cong., 571 F.3d 1220, 1225 (D.C. Cir. 2009)) (The second 801(b) factor empowers the Judges to "predict the future course of the music industry" and the Judges may therefore set a rate designed to account for likely trends in the music industry.). It will also keep the overall cost of streaming a musical work in line with the rate for digital downloads, which do not involve performance rights. APL-F146.

APL-C35. Moreover, Apple's proposed rate will not unfairly overcompensate copyright holders for plays that do not reflect true consumer demand, such as "skips" and "fraudulent" plays. As noted above in the Findings of Fact, "skips" (or plays 30 seconds or shorter) do not reflect true consumer demand. APL-F241. Rather, when a song is played for less

than 30 seconds, the user typically is "skipping through music, trying to find something," hit the play button "by accident" or is "sampling" music. *Id.* Similarly, "fraudulent" plays are the result of attempts to unfairly game the system, such as automated "bots" programmed to stream a song over and over, or a room full of people hired to play a song over and over. APL-F249. It is not fair to compensate copyright holders for these types of plays.

APL-C36. While providing a fair return to songwriters and publishers for their musical works, Apple's proposal will also provide services a fair income. Ex. 1615 (Ramaprasad WDT) ¶¶ 6-7, 45; 3/23 Tr. (Ghose) 2872:15-17. A per-play rate of \$0.00091 per stream is not prohibitive for the interactive streaming industry. It is

APL-F252–255. Given that existing

economic conditions show that

. Id.

APL-C37. Moreover, Apple's proposed rate is a predictable, fixed rate that services have the capability to predict and budget for, while having the ability to keep the additional revenues derived from their value-added tools and other technological and marketing contributions. APL-F112–119; *see also Phonorecords I*, 74 Fed. Reg. at n.19 (expressing skepticism about a rate structure that "adds the complexity and costs of multiple measurements, [without] . . . persuasive evidence that such costs are reasonably incurred relative to the more modest potential benefits to [copyright] users . . . and owners").

### 3. Apple's Proposed Rate Reflects the Relative Contributions and Risks Undertaken by Copyright Holders and Services

APL-C38. Third, Apple's proposed rate properly compensates the participants for their contributions to the interactive streaming industry and the respective risks they undertake. 3/23 Tr. (Ghose) 2872:18-2873:11; 3/23 Tr. (Ramaprasad) 2663:23-2664:15.

APL-C39. On the one hand, songwriters and publishers contribute their creative musical works to the streaming industry. And, songwriters take risks by devoting their time to the creation of new music, while publishers take risks investing in and signing songwriters not knowing what their compensation will be or if they will be successful. APL-F82. But, publishers and songwriters have not made any investments or undertaken the risk to start an interactive streaming service platform. APL-F33, 82. They will not lose money if an interactive streaming service is unsuccessful, while they stand to gain significant royalties if their songs are popular and streamed many times. APL-F34, 82–83. Thus, under Apple's proposed rate, the Copyright Owners will receive a fixed, transparent fee each time a consumer streams their musical works, which is commensurate with the agreed-upon rate that they receive for digital downloads. APL-F86–87.

APL-C40. On the other hand, Apple's proposed rate recognizes the critical role that streaming services play in making music available. In fact, services make huge contributions to the interactive streaming industry. APL-F11–39. They contribute the entire interactive streaming platform and infrastructure, which makes it possible for consumers to access music through interactive streaming in the first place. APL-F11–13. Services also contribute creative and innovative enhancements and tools to differentiate themselves from other services, attract consumers, and expose them to music that they may never have heard before. APL-F14–25; *cf. Determination of Rates and Terms for Preexisting Subscription Servs. and Satellite Dig. Audio Radio Servs.*, 78 Fed. Reg. 23054-01, 23069 (April 17, 2013) (*SDARS II*) (explaining that it was appropriate under the third Section 801(b) factor for the Judges to be mindful of the costs incurred by Sirius XM in "maintain[ing] and upgrad[ing] its [satellite] distribution system"). They also serve as a useful new platform for marketing music to consumers. APL-F34–39. To

make these contributions, services undertake significant risks, and have to make substantial investments, before they earn any income. APL-F26–33. Services expend

. Id. They

also spend resources to create the creative interfaces and technological tools. Even then, there is no guarantee that they will succeed, and many have failed in the past. APL-F33.

APL-C41. Copyright holders benefit from interactive streaming services. APL-F34– 39. Interactive streaming would not exist without services and their efforts. APL-F11–39. As noted above in the Findings of Fact, interactive streaming increases music consumption overall. APL-F36. Services also invent tools that allow people to explore new music and listen to copyright holders' musical works thereby "driving consumption to the tail," and introducing consumers to more obscure songs that they may have never chosen to stream on their own. 3/23 Tr. (Ramaprasad) 2659:3-18; APL-F37. Interactive streaming services also provide analytic tools to the copyright holders to allow artists to better understand their fans and thus generate more hits for songwriters and publishers. APL-F38. Moreover, streaming has helped reduce music piracy overall. APL-F39; see also Phonorecords I, 74 Fed. Reg. at 4524 (noting that, in applying the Section 801(b) factors, the CRB had "examined the record evidence regarding the role that piracy has played in the industry. . . . and the role that new services, such as iTunes, may have played in channeling consumers toward legal sources of sound recordings").

APL-C42. As noted above in the Findings of Fact, Apple's proposal recognizes these risks and contributions by allowing services to retain the upside of their technical contributions or value-added enhancements to their services. APL-F115–119; Ex. 1615 (Ramaprasad WDT) ¶¶ 4-5, 7; Ex. 1617 (Ghose WDT) ¶¶ 61, 68-70. Further, it does not penalize services for these features by requiring them to pay royalties on "skips" when someone samples a song that the

service's algorithm recommends for a few seconds, but then opts not to listen to it. APL-F240–246. (Of course, if the services' features introduce consumers to songs that they like and want to listen to, copyright holders will receive a payment for those streams.) Apple's proposal also does not require services to pay for "fraudulent" plays, which are not the product of actual consumer demand. APL-F248–251.

## 4. Apple's Proposed Rate Will Have No Disruptive Impact on the Structure of the Industries Involved or on Generally Prevailing Industry Practices

APL-C43. The fourth and final factor focuses on whether a proposed rate will have a disruptive impact on the overall structure of or prevailing practices in the industry. This factor looks at disruption to the industry as a whole—and not to disruption to one particular type of business model chosen by a participant. As the CRB has stated, "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." *Phonorecords I*, 74 Fed. Reg. at 4510, 4516 (*citing SDARS I*, 73 Fed. Reg. at 4097). As discussed below, Apple's proposal will have no disruptive effect on the industry or industry practices. 3/23 Tr. (Ghose) 2874:1-2; 3/22 Tr. (Ramaprasad) 2303:9-2304:4.

APL-C44. For one thing, Apple's proposed rate is a traditional per-play or per-unit royalty rate structure, which has been used historically for other types of music distribution, such as CDs, downloads and ringtones. APL-F107–110. Indeed,

APL-F111.

A per-play rate is also consistent with CRB's preference for rates that are linked to demand and the rate structure adopted in other proceedings. APL-F120–124.

Id.

APL-C45. Similarly, the all-in rate structure will not be disruptive. The current statutory rate structure is already set up to be an all-in rate,

. APL-F145–147.

APL-C46. Nor will Apple's proposal for a zero royalty for streams under 30 seconds (or "skips") be disruptive. It is consistent with



APL-C47. In addition, Apple's proposed rate will not radically change the amount of income that copyright holders have received. Given the trends in the industry of consumers substituting streaming for downloads, Apple's proposed rate will not be disruptive to copyright holders as it will provide income to them that is commensurate with the income they would have received if consumers purchased a download instead. APL-F172–176.

APL-C48. Apple's proposed rate is also consistent

APL-F252-255. In

addition, because it is a constant per-play rate, streaming services will be able to better predict their future royalty costs. APL-F114, 148–149. In other words, they have the ability to forecast streaming usage, and then will be able to use those forecasts and this fixed rate to come up with innovative pricing structures to maximize their returns. 3/23 Tr. (Ghose) 2878:1-2879:21.

APL-C49. Lastly, Apple's proposal is simple, and will be easy to administer and understand. APL-F102–106; 3/23 Tr. (Ghose) 2873:18-2874:2. Services will simply have to multiply the number of non-fraudulent streams of over 30 seconds that were played in a given time period by \$0.00091. Services

automatically identify and thus exclude "fraudulent" plays from royalty payments. APL-F250. Apple's proposal does not require complicated multi-pronged rate calculations, or analyses of revenues earned, like the current structure. APL-F66–70. Overall, it will significantly reduce the efforts and resources that services expend to make these royalty payments. APL-F102–106.

APL-C50. As Dr. Ghose summed up during the hearing, Apple's proposed rate is a "simple, transparent, easy to administer formula that leads to predictable outcomes, no surprises, . . . and something that is consistent with existing benchmarks," and thus "it has very minimal potential for causing disruption." 3/23 Tr. (Ghose) 2873:21-2874:2.

\* \* \*

APL-C51. In conclusion, Apple's proposed rate for interactive streaming is based on very comparable benchmarks and satisfies the 801(b) statutory objectives. Thus, Apple respectfully requests that the CRB adopt it.

### III. APPLE'S LOCKER PROPOSAL SIMILARLY SATISFIES THE 801(B) FACTORS

APL-C52. As discussed in the Findings of Fact, Apple is proposing a separate royalty for music locker services that effectively has two parts.

- For <u>purchased content locker services</u>, which are <u>free</u> locker services that allow users to store and redownload only content purchased from the company offering the locker, Apple is proposing a zero-royalty rate.
- For <u>paid locker services</u>, which are <u>subscription</u> locker services that allow users to store any content that they own, whether purchased from the company offering the locker or not, Apple is proposing a per-subscriber royalty of \$0.17 per month.

APL-F265, 271. Apple's music locker proposal is thus nuanced and tailored to the differences between these two types of locker services. It also takes into account the unique nature of "storage" that music locker services provide to consumers that distinguishes music lockers from interactive streaming services. APL-F262–263. Because Apple's locker proposal is carefully calibrated to the needs of the music locker market, it satisfies each of the four statutory Section 801(b) factors.

# A. Apple's Music Locker Proposal Will Maximize the Availability of Songs to the Public

APL-C53. Apple's locker proposal maximizes the availability of musical works to the public. As explained in the Findings of Fact, music lockers, no matter what kind, simply allow users to store and (in many, but not all, cases) listen to music they already own. APL-F260–261. Copyright holders are paid for the musical work that is stored in the locker at the point of purchase. APL-F275–276. Historically, that point of purchase royalty payment alone has been sufficient to incentivize publishers and songwriters to create new works. Thus, although Apple is proposing a zero-royalty payment for purchased content locker services, copyright holders nonetheless will be incentivized to continue creating musical works for the public, just as they are now by receiving payment for a purchase of a download. Services also will be incentivized to continue offering these free purchased content lockers if Apple's proposal is adopted because they will no longer need to incur additional costs in order to offer these free services.

APL-C54. Similarly, the paid locker proposal also incentivizes both copyright owners and services to make music available to the public. With Apple's paid locker proposal, songwriters and publishers who already were compensated for their works at the time of purchase receive an <u>additional</u> royalty payment simply because a user stores the song in a locker

rather than on a CD or the user's local hard drive. APL-F275–277. At the same time, the persubscriber fee is low enough that services will be able to afford to offer paid locker services to the public. APL-F269. Thus, Apple's two-tiered proposal ensures the continued availability of both types of music locker services, which address consumers' varied needs, preferences, and demands.

## B. Apple's Music Locker Proposal Will Afford Copyright Holders a Fair Return for Their Musical Works and Services a Fair Income under Existing Conditions

APL-C55. Apple's locker proposal affords publishers and songwriters a fair return for their creative works and music locker services a fair income under existing economic conditions. A zero royalty for purchased content locker services provides a fair income to copyright holders because such lockers only allow consumers to store music purchased from the service offering the locker. APL-F273. As a result, the service knows that the copyright holders already received a royalty for the stored music. Id. Historically, once music was purchased and the appropriate royalty was paid, a user was entitled to listen to the purchased music as often as he or she wanted without any additional royalty payment accruing. APL-F276. Apple's purchased content locker proposal is consistent with this practice and affords songwriters and publishers a fair return because they have already been compensated a fair amount at the time of purchase. Id. Indeed, requiring a per-play payment every time a user privately plays a song he or she owns would be antithetical to the idea of music ownership. Further, because purchased content locker services are free, there is no incremental revenue to the service offering the purchased content locker. APL-F272. Thus, it is fair for the publishers and songwriters to similarly receive zero royalties.

APL-C56. In the case of paid music lockers, as noted above in APL-C54, Apple's proposal rewards copyright holders with an additional payment for the storage of their music on

these paid lockers. APL-F275–277. This is fair and appropriate because, unlike with purchased content locker services, the company offering a paid locker service cannot confirm from its own records whether the copyright holders already received a royalty payment for the music being stored. *See* APL-F273. Thus, it is fair to give copyright holders a royalty payment for content stored in a paid content locker because the service cannot say with certainty whether the copyright holders were paid a royalty, and also the service itself has not necessarily paid a royalty for the music stored in the locker. Further, because all paid content locker services are subscription services, the companies offering the services could be accruing incremental revenue from the service, so it is fair to have a positive royalty for these offerings. APL-F262.

## C. Apple's Music Locker Proposal Reflects the Relative Contributions and Risks Undertaken by Copyright Holders and Services

APL-C57. Apple's locker proposal reflects the relative roles of copyright holders and music locker services in making music lockers available to the public. With both paid and purchased content locker services, the services are the ones providing the locker. APL-F260. Songwriters and publishers are making no additional contributions above the contributions they already made in making their songs available for purchase. In other words, it requires no extra effort on the songwriters' or publishers' part for their music to be stored in a locker as opposed to as an MP3 on someone's hard drive. Thus, a zero-royalty payment for purchased content lockers and the \$0.17 per user royalty for paid lockers is more than appropriate to compensate publishers and songwriters for their contribution to the music locker industry.

APL-C58. By contrast, because services are the ones who make music lockers available and possible, it is appropriate that they keep a portion of the revenue generated from these services, or, to the extent there is no revenue, that their costs are minimized. Apple's proposal achieves this goal. Purchased content locker services are free benefits that services

provide to consumers who purchase music from them and want to be able to store those purchased songs in the cloud, or redownload those songs if, for example, their device breaks. APL-F272–273. With Apple's proposal, such services do not have the added expense of a royalty fee just for effectively giving consumers storage for the music they own. *Id*.

APL-C59. Similarly, with paid locker services, the per-user fee Apple is proposing appropriately rewards services because if they are able to increase the value of their paid locker service, and charge higher subscriber fees, they can keep that increase in revenue. APL-F269. Further, by contrast to interactive streaming services, which come in a variety of business models and provide consumers with the value of playing music, paid music locker services are all subscription services that provide consumers with the value of storage. APL-F278. Thus, a peruser rate can provide the appropriate compensation in the music locker space, even though it cannot in the interactive streaming market. APL-F277.

## D. Apple's Music Locker Proposal Will Not Have a Disruptive Impact on the Structure of the Industries Involved or on Generally Prevailing Industry Practices

APL-C60. Apple's locker proposal minimizes any disruptive impact on the music locker and songwriting/publishing industries and on generally prevailing industry practices. Apple's proposed rate for purchased content locker services is unlikely to be disruptive because, as already noted, it is consistent with the fact that when consumers purchase music, songwriters and publishers are not paid every single time the consumer plays the song. APL-F276. Apple's proposal simply is aligning purchased content music lockers with this historic practice.

APL-C61. Apple's proposed rate for paid locker services also is unlikely to be disruptive because it is consistent with the current statutory minimum for these types of services. APL-F266.

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APL-C62. For the foregoing reasons, Apple's proposal for paid locker and purchased content locker services satisfies the 801(b) objectives and should be adopted. *See supra* APL-C52–61

## IV. THE COPYRIGHT OWNERS' RATE PROPOSAL IS NOT BASED ON COMPARABLE BENCHMARKS AND DOES NOT SATISFY THE STATUTORY OBJECTIVES OF SECTION 801(B)

APL-C63. As noted above in the Findings of Fact, the Copyright Owners propose the following mechanical royalty rate for all current Subpart B and Subpart C services: the greater of (a) a per-play rate of \$0.0015, or (b) a per-user rate of \$1.06 per user per month for all plays regardless of length. APL-F279. This proposal does not meet the applicable legal standards for several reasons.

APL-C64. <u>First</u>, as discussed below, the rate that the Copyright Owners propose is inappropriate because the benchmarks that they use both to derive and to support their proposed per-play rate of \$0.0015 are noncomparable and unreasonable. *See* APL-C68–77.

APL-C65. <u>Second</u>, as also discussed below, the Copyright Owners' proposal as a whole is inappropriate because it fails to satisfy the Section 801(b) factors, as it is structurally flawed and proposes rates that are exorbitantly high, not only for interactive streaming under Subpart B, but also for music locker services under Subpart C. *See* APL-C78–99.

APL-C66. The assertions by the Copyright Owners' experts that their proposal is comparable to a free-market rate or willing-buyer/willing-seller rate are unavailing. APL-F453–460. The law is clear that the proposed rate must satisfy the objectives of the Section 801(b) factors, which are not intended to replicate a free-market or willing-buyer/willing-seller rate. *See* APL-F454–457. Indeed, the Copyright Owners and their experts have argued that compulsory rates are often lower than free-market or willing-buyer/willing-seller rates. *See* APL-F458–459.

APL-C67. Moreover, the CRB has rejected a "greater of" royalty with per-play and per-subscriber prongs, such as the one the Copyright Owners propose here, because such a structure is "duplicative." *Dig. Performance Right in Sound Recordings and Ephemeral Recordings*, 72 Fed. Reg. 24084-01, n.14 (May 1, 2007) ("*Web II*"). Indeed, the CRB explained in *Web II* that because the per-subscriber prong was allocated based on usage, it served the same function as the per-play prong and provided no benefits in terms of ease of administration or reduced transaction costs. *Id.* 

## A. The Benchmarks on which the Copyright Owners Rely Are Not Comparable and Thus Do Not Support Their Proposed Rate

APL-C68. As described above in the Findings of Fact, in support of their proposed rate of \$0.0015 the Copyright Owners rely on benchmarking analyses conducted by three experts, Drs. Eisenach, Rysman and Gans. APL-F327–449. As discussed below, however, those experts' opinions are fatally flawed because their analyses are based on noncomparable and unreliable metrics. *See infra* APL-C69–77. As a result, the Copyright Owners' benchmarks, and thus their ultimate rate proposal, are themselves noncomparable and unreliable.

#### 1. Both Dr. Eisenach's Premise and His Conclusions Are Flawed

APL-C69. Dr. Eisenach's purported benchmarking analysis is fundamentally flawed, unreliable, and biased in favor of an inflated rate for interactive streaming. APL-F328–400.

APL-C70. <u>First</u>, Dr. Eisenach's entire underlying premise, *i.e.*, that there is a "stable" "relative value" between sound recording royalties and musical works royalties that applies in all contexts, and therefore sound recording royalty rates can be used as a benchmark to derive a royalty rate for musical works in the context of interactive streaming, is fundamentally flawed. APL-F330–338. Sound recordings and musical works are not comparable works, and the relationship between sound recording royalties and musical works royalties is not fixed. APL-

*Id.* Rather, it can vary even for the same type of use based on several factors, including the popularity of the artist who recorded the sound recording and the copyright holders' relative bargaining power. *Id.* 

APL-C71. <u>Second</u>, Dr. Eisenach's conclusions also are fundamentally flawed because his analysis relies on noncomparable contexts (such as synchronization licenses and YouTube licenses) and ignores contexts more comparable to interactive streaming (such as digital downloads). APL-F354–400. Moreover, his methodologies are biased toward producing an exorbitant mechanical royalty rate (among other things

APL-F346-353.

# 2. The Historic Rate Analyses by Drs. Rysman and Gans Are Skewed and Unreliable

APL-C72. Drs. Rysman's and Gans' purported analyses of historical effective

mechanical-only per-play rates across the streaming industry, which they use to justify the

Copyright Owners' high rates, also are flawed and unreliable. APL-F401–431, 450–451.

APL-C73. <u>First</u>, the many errors in Dr. Rysman's data analysis (such as

), standing

alone, render his conclusions suspect. APL-F402–410, 426–430.

APL-C74. <u>Second</u>, Drs. Rysman and Gans both . APL-F411–

421, 429, 450. They also failed to take into account the fact that

APL-F425, 450. As a result of these choices, their historic rates analyses are heavily skewed toward a higher effective mechanical-only per-play rate and not comparable. APL-F422–425.

#### 3. Dr. Gans' Shapley Value Analysis Is Flawed and Uninstructive

APL-C75. Dr. Gans' alleged Shapley Value benchmark also is unreliable and uninstructive, for several reasons. <u>First</u>, he fails to demonstrate that the Shapley value, which is a cooperative game theory model, has any applicability to the interactive streaming industry. APL-F434–43; *SDARS I*, 73 Fed. Reg. at 4092 (rejecting Shapley analysis because "a noncooperative game approach may have been more appropriate").

APL-C76. <u>Second</u>, Dr. Gans admittedly did not even conduct a proper Shapley value analysis, but rather conducted what he himself referred to as a "Shapley-inspired" or "Shapley light" analysis. APL-F438–441.

APL-C77. <u>Third</u>, Dr. Gans' analysis relies on numerous unsupported assumptions, including that (1) Dr. Eisenach's flawed calculation of the average sound recording per-play rate is appropriate and reliable, (2) any increase in publisher revenue would come entirely from the services and (3) the entire increase in musical works royalties would come from mechanical, rather than performance, royalties. APL-F442–449. Taken together, these unsupported assumptions render his analysis, and his benchmark, unreliable. *See, e.g., NetAirus Techs., LLC v. Apple, Inc.*, No. LACV1003257JAKEX, 2013 WL 11237200, at \*6 (C.D. Cal. Oct. 23, 2013) (rejecting a game theory analysis that attempted to calculate a reasonable patent royalty on the grounds that the analysis was based on unsupported facts and "unreliable [] assumption[s]").

## B. The Copyright Owners' Proposed Rate Does Not Satisfy the Statutory Objectives of Section 801(b)

APL-C78. As discussed below, the Copyright Owners' proposed rate structure and rate do not satisfy the four Section 801(b) statutory objectives. Rather than balancing the needs of both copyright holders and services so that they can continue collaboratively to make music available to the public, the Copyright Owners' proposal instead ignores the enormous benefit that
interactive streaming already has provided to copyright holders, seeks to impose unjustifiably high costs on services, reduces predictability and is highly likely to lead to considerable disruption in the industry, potentially even forcing some services to eliminate particular offerings or, in a worst-case scenario, cease operations entirely. *See infra* APL-C79–99.

#### 1. The Copyright Owners' Proposed Rate Will Not Maximize the Availability of Songs to the Public

APL-C79. Far from maximizing the availability of music to the public, the Copyright Owners' proposal is likely to diminish the availability of music because the rates they propose are so high that many business models will become economically unfeasible if their proposal is adopted. APL-F306–318. Only those select services that can accommodate the exorbitantly high rates that the Copyright Owners propose, will remain. APL-313–318. Further, even among those services that can afford to remain in business, many may choose to leave the market anyway because the Copyright Owners' mechanical-only rate creates too much uncertainty regarding what total musical works royalties might be. *Id*.

APL-C80. Likewise, the Copyright Owners' proposal is likely to discourage new services with new, innovative pricing models from entering the industry, as the per-user royalty prong of their proposal does not fit well with any business model other than a subscription service. APL-F282–286. For example, a business model that charges users a per-stream fee would be untenable, as a consumer who streamed a single song could end up costing the services \$1.06 in fees, thereby far outstripping any revenue that the service could generate from such a user. APL-F283.

APL-C81. Such a disincentive to competition and business model innovation among interactive streaming services would hurt consumers and reduce their access to music in several ways. <u>First</u>, not all consumers can or will pay high subscription fees. *See* APL-F42–45.

Interactive streaming services currently address this issue through pricing variations, such as student plans, family plans and ad-supported services. *Id.* If services no longer can offer differential pricing tiers, the number of consumers who can access music through interactive streaming is likely to go down. *See Id.* Indeed, it is likely that consumers will be discouraged from even trying interactive streaming in the first place, as the pricing tiers are entry points for many users. *See Id.* 

APL-C82. <u>Second</u>, a reduction in competition also is likely to reduce the incentive for interactive streaming services to invest in the value-add features, such as music discovery tools. *See* APL-F25. This would be detrimental to consumers because it would make it more difficult for them, as a practical matter, to discover and enjoy new music. APL-F35–39.

 APL-C83.
 In the long run, copyright holders likely would suffer as well. First,

 evidence shows that
 In the long run, copyright holders likely would suffer as well.

. APL-F54–64. If fewer consumers are streaming,

#### the

APL-F35. In other words, by increasing royalties so dramatically in the short term, the Copyright Owners may kill the proverbial golden goose by making it impossible for many consumers to afford to use the services, thereby reversing all of the good that interactive streaming has done in curbing piracy. *Id.* Ultimately, that would lead to less revenue for songwriters and publishers and fewer songs for everyone.

APL-C84. <u>Second</u>, a reduction in competition that reduces the incentives for services to invest in the value-added features that attract consumers to streaming would harm the very same lesser-known, niche artists who have most benefitted from interactive streaming. APL-F19–20, 37, 63. When services invest in music discovery, the incentive for songwriters to create

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new songs is high because they know that even if they are not attached to the biggest publisher, they can still find an audience through streaming. *Id* If interactive streaming services are disincentivized to innovate and provide music discovery features to consumers, the incentive for independent artists in particular to create music also is reduced, if not eliminated. *See Id*.

APL-C85. Similarly, the Copyright Owners' definition of a "play" as including all streams, rather than only streams 30 seconds or longer, would diminish the availability of music by reducing incentives for independent songwriters to create, as services would be less incentivized to introduce such music to new audiences and risk incurring a royalty for an incomplete "skip" if the user quickly decides that he or she does not like the song. *See* APL-F245–246.

APL-C86. <u>Finally</u>, the per-user prong in the Copyright Owners' proposal likely would lead to fluctuating rates and unpredictability for both services and songwriters. APL-F290–300. This is because adding a per-user rate to a per-play rate under a "greater of" calculation introduces precisely the type of complexity and uncertainty that have frustrated songwriters in the past. *Id.*; APL-F76–77.

## 2. The Copyright Owners' Proposed Rate Will Not Afford Copyright Holders a Fair Return for Their Musical Works or Services a Fair Income under Existing Conditions

APL-C87. The current economic conditions in the industry show four things:

(1), (2)

, (3) consumer demand for interactive streaming services is high and

(4) performance royalty costs are uncertain. APL-F46–85. These four conditions point toward adopting an all-in per-play rate that is

APL-F254–255. The Copyright Owners, however, have proposed a per-play <u>mechanical-only</u> rate that is substantially higher than historic rates, and a per-user fee that would increase costs

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even further under their proposed "greater of" calculation. APL-F280. Ultimately, these elements of the Copyright Owners' proposal would lead to unfairly high royalty costs for services and a windfall per-play rate for songwriters and publishers. APL-F282–286, 306–312.

APL-C88. The per-user prong is demonstrative of the unfairness of the Copyright Owners' proposal. Under their proposal, if an interactive streaming service has one user who streams one song in a given month, the owner of that song would receive \$1.06 in royalties for that single stream. APL-F283. That amount is more than 11.5 times what the owner of the song would get from a download. *See* APL-F168. It is even higher than the total royalty for the sale of a 10-track CD, and more than 700 times what the song's owner would get under the Copyright Owners' (already high) per-play prong. *See* APL-F168, 282. Moreover, non-subscription services would not even have the counterbalancing benefit of a subscription fee from that user to cover the \$1.06 cost.

APL-C89. The Copyright Owners' proposal to apply the same rate to music lockers as to interactive streaming also is emblematic of their proposal's unfairness. As Mr.

Mirchandani of Amazon testified:

Today, when a customer purchases a digital download from [a service] for \$0.99 and then accesses it from [the service's] purchased content locker service, [the service] generates 9.1-cents in mechanical royalties. But under the [Copyright] Owners' proposal, rights[]holders 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.

APL-F290–293. Such a result is patently unfair.

APL-C90. Compounding the problem, the Copyright Owners propose that services be charged a monthly late fee, regardless of the reason for the late payment, which would only further increase their costs. APL-F465–470. This penalty is patently unfair, as the most

common reason for late payments is the poorly kept ownership records for musical works, as to which the services have no control whatsoever. APL-F467.

### 3. The Copyright Owners' Proposed Rate Does Not Reflect the Relative Contributions and Risks Undertaken by Copyright Holders and Services

APL-C91. In the interactive streaming industry, services bear almost all the risks and costs. APL-F26–33. They invest in infrastructure and marketing, create user platforms, develop value-added features like music curation and discovery tools, create useful data analytics tools for artists to gather information about their fans and make access to a wide catalog of music possible. *Id.* In contrast, while copyright holders bear the risk that consumers will not listen to their songs and the opportunity cost of pursuing a different profession, they have relatively low upfront costs and have numerous avenues to monetize their works outside of streaming services. Although a per-play rate allocates the risks and rewards in a manner that reflects these contributions, a per-user rate such as the one the Copyright Owners have proposed does not. *See* APL-F115–119, 287–289.

APL-C92. A per-user rate is inappropriate because it would result in publishers and songwriters receiving a royalty for a user even if the user does not listen to a single song in a given month, thus demonstrating that for that month the user's demand for music, and the value he or she derived from it, was zero. APL-F289. If a user joins a service because he or she is interested in the discovery features it offers, or the convenience and portability that it makes possible, it is the service that should be rewarded, not the publishers and songwriters. *See* APL-F82–83, 303. On the other hand, if a user listens to a song, the publishers and songwriters should be rewarded. APL-F112. As Dr. Ghose explained, the only reliable way to assess why a user signed up for a service is to "observe their behavior" and link compensation to that behavior. APL-F303. Because a per-user rate fails to do that, it does not properly reward services and

copyright holders for the contributions they each make. Instead, it gives copyright holders an undeserved portion of the value that interactive streaming services independently create. APL-F301–303.

APL-C93. Moreover, services also invest in locker services that offer consumers the ability to store music they already own in the cloud. APL-F269. The Copyright Owners have proposed that locker services pay the same rate as interactive streaming services. APL-F461. In so doing, they fail to appreciate the unique value and distinct contribution that the availability of music lockers makes to the industry. APL-F461–463.

# 4. The Copyright Owners' Proposed Rate Will Have a Highly Disruptive Impact on the Structure of the Industries Involved or on Generally Prevailing Industry Practices

APL-C94. Finally, the Copyright Owners' proposal would cause considerable

disruption to the interactive streaming industry.

APL-C95. The Copyright Owners' proposed per-play rate of \$0.0015 is nearly

. APL-

F306, 422–424. Moreover, the effective per-play rate that services actually would pay under the

Copyright Owners' proposal would be even greater than this \$0.0015 rate, as

under the much higher \$1.06 per-user prong. APL-F310–311.

APL-C96.

APL-F305-312.

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		. APL-F310.
APL-C97.	Such	
		APL-F313–317. Witnesses for several
services,		
		. <i>Id.</i> Surely this is the very
definition of industry disruption. See SDARS I, 73 Fed. Reg. at 4097 (noting that "[e]conomic		

experts for both sides agree that a royalty rate that would cause the SDARS to cease operating or dramatically change the nature of its product would clearly be disruptive").

APL-C98. On top of the disruptive impact of the rates alone, the Copyright Owners' proposal also adds disruptive uncertainty to the market. The fact that the Copyright Owners' proposal specifies a mechanical-only rate means that the total royalty costs for musical works would be unknown and unknowable, and that services could see large shifts in total royalty costs if performance royalties increase. *See* APL-F148–149, 304.

APL-C99. The Copyright Owners also want to be paid for all streams, even clear "skips" that last only a microsecond. APL-F464. Not only would this lead to even higher royalties, but also it would disrupt the way interactive streaming services run their businesses. APL-F240–246, 464. Rather than promoting music discovery, which benefits publishers, songwriters, and the public, services would be incentivized to feed consumers only the most popular music or songs by musicians the service already knows the consumer likes. *See* APL-F245–246. One of the greatest values that interactive streaming services provide, music discovery, would be lost as a result of the Copyright Owners' overreaching demands.

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APL-C100. In conclusion, the Copyright Owners' proposed royalty is based on noncomparable benchmarks and does not satisfy the 801(b) statutory objectives. Thus, Apple respectfully requests that the CRB reject the Copyright Owners' proposal, and instead adopt Apple's proposed rates Subpart B and Subpart C services. Dated: May 11, 2017

Respectfully submitted,

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