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The Music Industry in the 21st Century: An Innovative Partnership for Pandora Internet Radio and Live Nation Entertainment to Drive Consumer Preferences

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Abstract

The music and entertainment industry has been one that evolves with society, this being no different for the industry businesses in the twenty-first century. Significant advances in technology in the past decade have been a driving cause in the changes consumer based needs being less about owning copies of the music as in the 1990s, but instead towards the individual’s musical experience. This is prevalent in the growing trends towards both internet music streaming services with individualized preferences, including Pandora Internet Radio, and the increase in live music performances. As these organizations are leaders in their segments of the entertainment industry, a partnership will allow both companies to benefit through access to an increased market segment, more consumers, and the potential for increased revenue and profit. It also provides each with a continued opportunity to be innovative and the leaders in new trends of the music and entertainment industry. Through this mutually beneficial relationship, both Pandora and Live Nation will be able to contribute to the forward growth of how people consume music and entertainment in the twenty-first century.
I. Executive Summary

The music and entertainment industry has been one that evolves with society, this being no different for the industry businesses in the twenty-first century. Significant advances in technology in the past decade have been a driving cause in the changes, particularly as there is a move towards internet streaming services and away from purchasing individual hard copies of music like CDs. This change has caused revenues for the industry to fall and forced the necessity for companies to find new sources to be profitable. These new sources of revenues will be explored, particularly emphasizing the trend of internet streaming services and live concert performances.

Pandora Internet Radio is one of the top streaming services for digital music. With their entrance into the digital music market eight years ago, they have continually grown their position in the market segment and drastically increased both the monthly average and total number of users. While Pandora has been able to maintain a position as a frontrunner in digital music, the increasing trend towards digital music has also increased competition, has forced Pandora to continue to distinguish themselves as a leader. The following are recommendations for Pandora to continue to be innovative and maintain the company’s position as a top leader in digital music and streaming services.

In addition to Pandora Internet Radio as a leader in the digital streaming services market segment, Live Nation Entertainment is a leader in the music of live
entertainment and ecommerce for the world. With only being founded in 2010 after the merger of multiple preexisting music and entertainment organizations, Live Nation Entertainment has maintained its position as a leader in live performance and ticketing segment in addition to the other divisions of the corporation. The following is also a recommendation for Live Nation to continue being innovative in order to maintain their leadership in the ever-evolving music and entertainment industry.

II. Music and Entertainment Industry

a. Background

The music and entertainment industries are not new to society as they have been of prominence to world culture dating back even to before musicians composed and performed for monarchs of the renaissance. Even within the last century, music consumption has changed due to technological advances including transitions from vinyl to cassette to compact disc to digital\(^1\). In the 1990s, the music industry received a heightened amount of sales, unusual based on previous trends, due to the boost from people transitioning their music collections from cassette to CD in order to keep up with the technology\(^2\) (Appendix 1). This surge in industry sales created new exceedingly high standards that was unrealistic to maintain in the long term. With recent moves to digital since the millennium, consumers have found numerous other sources to illegally obtain music. This includes downloads from the famous website, Napster, a website that provided consumers a way to download


music for free. With illegal downloading still prevalent, many users are moving towards service oriented ways to listen to music, often with free options, to continue to not have to pay for music but at the same time not download music illegally.

   b. Consumer Trends

   The move to digital is ever prominent in this changing industry. Not only are physical sales of declining, but also digital music consumption has been increasing, both in the form of digital sales and the use of streaming services. The industry has been facing challenges due to the rapid technological advances in the world since the turn of the century. For years, the music industry’s decline looked terminal, especially due to the inability of record companies to adapt their business models to the change towards digital, particularly in how to combat the accessibility of online piracy. With new services being introduced over the past decade, including Pandora, industry and consumer trends are moving away from individuals purchasing their own copies of music and instead using streaming services to have access to music both on their personal devices and on the go.

   Over the past decade, piracy has been on the decline, especially as a result of the decisions made in the A&M Records, Inc. v. Napster, Inc. case in 2001. With music consumers more aware of the implications of downloading music illegally, there has been a decline in piracy in addition to a push from record labels to fight

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3 Ibid.
piracy and find alternatives for music consumers. For the first time since 1999, the global music industry saw increases in revenues due to digital music sales, a notion that fights against piracy and illegal downloading have been successful\(^6\). While the revenue increase is relatively small, 0.3% to $16.5 billion, it is a huge step in the right direction and proves piracy is on the decline\(^7\). This increase in revenues for the music industry has largely been due to the increasing popularity for digital music and streaming services, with over $4 billion in digital music sales in 2012\(^8\). Over the past year, the move to digital has been every increasing, with a 9% growth in digital music, including digital downloads and subscription services such as Spotify and Pandora\(^9\). As digital music is a continually growing trend in music consumption, Pandora needs to maintain their front running position in the digital streaming sector.

There are two main trends in the music industry in this decade of technology being key to everything: the internet is crucial and the key to money in the industry is now in the live performances, no longer by selling records\(^10\). This reality would have been unheard of in the previous decade of music, but the industry trend is moving away from purchasing music and more to how consumers experience music. The experience is key to why live venues and concerts are increasingly prevalent, including a range of venue sizes, types of performances, and increases in the popularity of concerts, events, and festivals.

\(^7\) Ibid.
\(^9\) See footnote 4.
III. **Pandora Internet Radio**

a. **Background**

Pandora (NYSE: P) is the leading internet radio streaming service. It all began in 2000 with founder Tim Westergren having the idea for idea was to bring different styles of music together into a predictable pattern, accomplished through the start of the Music Genome Project. Pandora Internet Radio was launched on the web in July 2005 and has continued to increase the user count annually. In April 2013, Pandora announced it had reached over 200 million users, with 70 million users active monthly\(^\text{11}\). Currently, Pandora is accessible for streaming in the United States, Australia, and New Zealand. As an increasingly popular web platform for consumers to listen to music, as the total number of users grows, so does the impact the company has on the music consumption segment of the industry.

b. **Music Genome Project**

The Music Genome Project is the idea that started Pandora and how each song played on a radio station is selected as a part of the set list. Through this project, over 400 specifications for each song were created, resulting in a deeply detailed hand-built musical taxonomy, in essence the musical “DNA” for each song\(^\text{12}\). The Music Genome Project and coding of each song with each of the specifications powers the personalization of Pandora Internet Radio. The combination of the musical “DNA” and user feedback and preferences, each

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\(^{11}\) “Press.” *Pandora Internet Radio*. www.pandora.com/press

\(^{12}\) Ibid.
Pandora station is personalized for the user. The catalog of songs is built one at a time and put into the Music Genome Project database, which continues to grow. Pandora’s current music catalog carries of over 900,000 uniquely analyzed songs from over 90,000 artists, spanning over 350 genres\textsuperscript{13}. This process is one that is continual, with new music constantly being added to the database and coded with the song DNA. The site also provides users the opportunity to share their music selections on social media sites, both Facebook and Twitter, as well as a link to purchase songs on both iTunes or Amazon.

c. Competition

Pandora competes for time and attention of listeners in a variety of segments including with other radio, audio, and various media services.

i. Radio Providers

Indirect competitors for music consumption are both terrestrial radio providers and satellite radio providers, including SiriusXM; these are not a direct competitor but still take away listener usage from Pandora. Direct competition in Pandora’s segment of internet radio are other non-interactive online radio providers, which include CBS's Last.fm, Clear Channel's iHeartRadio and Slacker Personal Radio\textsuperscript{14}. The non-interactive aspect of the streaming services designates that the user does not directly select the music that is playing, that is determined by the service, but the user has preferences of genres of

\textsuperscript{13} Pandora 2012 Annual Report.
\textsuperscript{14} Ibid.
music and the ability to skip songs or denote song selection likes and dislikes. With this growing segment in digital music, there is the potential for unknown competition due to new incumbents entering the digital media space of internet radio.

Clear Channel’s iHeartRadio was launched in October 2011 at the inaugural and now annual iHeartRadio Music Festival. This application, available for download on smartphone devices and internet streaming service all available to users for free. The service includes access to more than 1,500 of the nation’s most popular live broadcast, digital-only radio stations from 150 cities, and additional user-created Custom Stations including selections of user artists and songs. The service streams all Clear Channel radio stations with additional stations from other groups including Univision, Cumulus, and others. The digital platforms offered by iHeartRadio allow users to listen to Clear Channel’s music on the go.

In 2007, CBS acquired Last.fm, originally launched in 2002, in order to add a web based music service to their corporation and continue the move to the digital age. The service provides individuals with access to a large music repertoire and addition social networking capabilities. This includes music and artists that are trending each week based on user preferences. The site also includes information

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16 Ibid.
on any upcoming events in the area featuring other Last.fm users that will be attending the concert or festival and links to information on the artists, but does not link to music streaming for the upcoming events.

Each of these different services provide a slightly different experience for users and these preferences are based on how each user wants to consume music and additionally how their experiences will be shared with others, mainly through social media.

ii. Audio Providers

Pandora also competes with interactive music services including on-demand audio content from Apple’s iTunes Music Store, Rhapsody, Spotify, and Amazon. These competitors include both paid and unpaid content but all allow accessibility on the go and give listeners’ the ability to select audio content and interactive on-demand content\textsuperscript{18}. Despite the fact that Pandora’s streaming service provides users a link to purchase the music they’re listening to on either iTunes or Amazon, they are still viewed by the corporation as competitors since users have the option to listen to music through Pandora’s service or instead directly go to the marketplaces of iTunes and Amazon to purchase music.

Apple’s iTunes Music Store is the world’s number one music store that allows users to purchase downloads of music and other entertainment options including music videos, games, television

\textsuperscript{18} Pandora 2012 Annual Report.
shows, and movies\textsuperscript{19}. The application is available for a free download and currently has reached almost 50 million downloads\textsuperscript{20}. The online music store was launched in 2003 and originally each song for purchase at $0.99 with song prices now ranging from $0.99 to $1.29 per single download. The application allows each user to store the music they've purchased, transfer music from CDs to the individual's iTunes account, and then transfer that music to different devices such as iPods and iPhones.

Rhapsody is a subscription only based music service that allows users access to a catalog of millions of songs, access to music anywhere on compatible devices and ad free\textsuperscript{21}. The service provides users with the ability to customize music preferences, create playlists, and download music on applications of Rhapsody for either $9.99 or $14.99 per month\textsuperscript{22}, depending on the level and scope of the service selected.

Spotify is a private company that provides a commercial streaming music site both a free service and a paid subscription service. For the free content and direct selection of music offered, the service is available only online whereas the subscription service, known as Spotify Premium, offers users the ability to access 15 million songs

\textsuperscript{19}“What is iTunes?” Apple. www.apple.com/itunes/what-is/
\textsuperscript{20}Ibid.
\textsuperscript{21}“What is Rhapsody?” Rhapsody. www.rhapsody.com/what-is-rhapsody/what-is-rhapsody.html
\textsuperscript{22}Ibid.
both online and offline and ad-free among other features\textsuperscript{23}. The service also allows users the ability to connect to social media sites to share their music consuming experiences with friends and connections.

Amazon has a music mp3 download store as part of their consumer marketplace website. With over 20 million songs available for download, Amazon is a direct competitor of Apple’s iTunes for music sale downloads but also a competitor to Pandora for users in their choice and preference of where to source music. Amazon is also in the works of developing their own music streaming service to compete with existing services including Spotify and potential new streaming services being developed by Apple, YouTube and Google Play\textsuperscript{24}.

iii. Media Providers

In addition to competition within music services, Pandora also faces competition for time and attention to music instead of other forms of media including television, movies, and video games. Some of these services include on-demand streaming services such as Hulu, Vevo, and YouTube\textsuperscript{25}. While not directly related to music, different entertainment segments compete for user attend in what type of media to consume and the preferences the users develop over time.


\textsuperscript{25} Ibid.
IV. Live Nation Entertainment

Live Nation Entertainment (NYSE: LYV) is the world’s leading live entertainment and ecommerce company. The Live Nation Entertainment Corporation includes four market leaders in each segment:\(^{26}\):

- Ticketmaster.com, the global event ticketing leader and one of the world’s top five ecommerce sites
- Live Nation concerts, the global producer of over 20,000 shows annually for more than 2,000 artists
- Front Line Management Group, the world’s top artist management company representing over 250 artists
- Live Nation Network, the leading provider of entertainment marketing solutions

As a leader in the live entertainment segment of the industry, Live Nation spans numerous genres through the concert, entertainment, and venue offerings. The venues range in size, with many holding pop culture and historic significance including the House of Blues, the Hollywood Palladium, The Fillmore San Francisco, the Heineken Music Hall in Amsterdam and the O2 Dublin.\(^{27}\)

V. Recommendations

a. Partner with Live Nation

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\(^{27}\) Ibid.
i. Venue Stations

Between Pandora’s database of music coded through the Music Genome Project and Live Nation’s extensive venue and live performance calendar annually, the two companies should collaborate to bring music listeners a new experience. This would include the introduction of Pandora Internet Radio stations based on location, venues, and upcoming shows at the specified venues or location area. Currently Pandora offers users to select radio stations based on genre, artist, or composer. In a user’s search for stations, they would find venues based on the location of their computer, found by Pandora through the IP address. Users would also have the ability to manually find other venues and stations by location nationwide. After the initial ability for users to select stations by venue and location, there is potential to further expand selections to music festival stations, such as South by Southwest, Coachella, Bonaroo, Lollapalooza, and more.28

This partnership allows Pandora to create more content and individualized experience for each user. It also provides Live Nation additional access to consumers that otherwise might not have been aware of upcoming performances in their area or would not have purchased tickets unless directly given a link.

In addition to Live Nation being a leader in live performances, they also have the other sectors of the business including artist management group and the music and entertainment marketing segment. The

partnership with Pandora allows Live Nation to target a segment of the music industry they do not currently have direct access to while at the same time allowing multiple areas of the corporation to take advantage of the partnership. This includes Front Line Management Group having accessibility to feature their artists on Pandora stations and even promote and feature specific artists on an “artist station of the week” for users to listen to and potentially develop new music interests and preferences. There will also be access for Live Nation Network to market to a broad group of users, through the advertising content on screen and audio.

ii. Advertisements

As Pandora makes a significant amount of revenue through advertisements, both audio and visual, on their internet radio streaming site. Through the proposed partnership, Live Nation would be able link advertisements to local venues and Ticketmaster to give users the direct opportunity to purchase tickets to concerts. This would be in a similar capacity to the current offering from Pandora, linking the user to purchase a song they are listening to on the site.

With the technology from the Music Genome Project, Pandora has the unique opportunity as a company to specifically target users with their advertisements based on music preference and profile settings. For this reason, Pandora targets local businesses whose budget might only be
$20,000 per month allows the advertisements to be targeted\textsuperscript{29}. As Pandora is in competition for advertisers with terrestrial radio broadcasters in a market of over $17 billion annually spent on advertisements\textsuperscript{30}. With the technology that goes into generating music stations and sorting based on user preferences, Pandora has gathered big data to allow advertisers the ability to target consumers more specifically than they would be able to with regular radio. This information includes data such as age and sex, ZIP code or even musical taste with the data possibilities continually growing as Pandora expands and grows to be a top radio station in many cities in the United States\textsuperscript{31}. With companies able to more specifically target users through Pandora Internet Radio streaming, they are able to continue to produce revenue through advertising. In order to continue the growth of the site, they need to increase the advertising reach from more businesses in order to target consumers.

b. Pandora One

Pandora One is a paid subscription service offered to music consumers in the countries currently available for streaming. The paid subscription service entitles consumers to an ad-free listening experience, a desktop application to play Pandora without a web browser, high quality audio, and fewer

\textsuperscript{30} Ibid.
\textsuperscript{31} Ibid.
interruptions including non-stop play for up to 5 hours\textsuperscript{32}. The cost of a Pandora One subscription is $3.99/month or $36/year for the service\textsuperscript{33}. The additional offerings in radio station selection to music venues would only be offered to Pandora One subscribers. At the current state, Pandora One does not have enough additional benefits to the free Pandora streaming service to incentive consumers to pay the monthly premium. With the additional stations being offered only to Pandora One users, the extra benefits will entice more users to spend the extra few dollars a month for the subscription.

Initially this new selection of services for venue stations would only be available to consumers who pay for the service. This will increase the number of consumers. Even if at first the only 1\% of current Pandora users purchase the subscription to Pandora One, that will be 700,000 new user agreements and at a cost of $3.99 per month, this will generate $2.79 million additionally in revenue each month. This would more than double the current revenue from subscription services\textsuperscript{34}(Appendix 4).

\textbf{VI. Implications}

\textbf{a. Perceived Opportunity}

Currently no other partnerships like this exist to connect music streaming to live performance. As a currently untapped area, this is a great opportunity for two industry leaders in their segments to collaborate in the trends the

\textsuperscript{32} “Pandora One.” \textit{Pandora Internet Radio}. www.pandora.com/one
\textsuperscript{33} Ibid.
\textsuperscript{34} Pandora Annual Report.
music and entertainment industry is moving towards. Record companies have seen the trend moving away from purchasing music to revenues being made from tours and live performances, therefore they have been signing artists to 360 Deals which include CDs, ring tones, V.I.P. concert packages, touring and merchandise. With the combination of trends in both concert touring as a main source of revenue for companies in the industry and music consumption trends to paying for streaming services instead of purchasing copies music, it is only logical for the two leaders in these segments to partner.

With this partnership, both corporations will be able to benefit from a greater consumer reach, connections within the industry, and artist partnership and base. Both Pandora and Live Nation have the ability to generate a greater user base, thus increasing their point of contact and ability to later generate a large percentage of revenue and profit.

b. Consumer Reach

With this partnership, both Pandora and Live Nation have the potential for a greater reach to consumers. As Pandora’s goal in increasing their user numbers, the consumers who have interest in live performances will be enticed to listen to music through the new station options with venues. With the advertisements Live Nation will now have access to on Pandora’s site, they will be able to reach a greater audience to promote ticket sales and upcoming live performances. Also, Pandora will be able to increase their

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revenue from paid streaming services by adding more incentives for consumers and making consumers more aware of the service option. This collaboration provides a new marketing strategy to reach consumers about upcoming concerts and entertainment at local venues.

VII. Conclusion

The music industry trends are moving towards consumer based needs, which are less about owning copies of the music as in the 1990s, but instead towards the individual’s musical experience. This is prevalent in the growing trends towards both internet music streaming services with individualized preferences, including Pandora Internet Radio, and the increase in profits from live music performances. With a partnership between Pandora and Live Nation, both companies will be able to benefit through access to an increased market segment, more consumers, and the potential for increased revenue and profit. It also allows both companies to be innovative and continue to be the leaders in new trends of the music and entertainment industry. Through this mutually beneficial relationship, both Pandora and Live Nation will be able to contribute to the forward growth of how people consume music and entertainment in the twenty-first century.
Works Cited


Pandora 2012 Annual Report.

“Pandora One.” Pandora Internet Radio. www.pandora.com/one


NEWYORK (CNNMoney.com) -- If you watched the Grammy Awards Sunday night, it would appear all is well in the recording industry. But at the end of last year, the music business was worth half of what it was ten years ago and the decline doesn't look like it will be slowing anytime soon.

Total revenue from U.S. music sales and licensing plunged to $6.3 billion in 2009, according to Forrester Research. In 1999, that revenue figure topped $14.6 billion.

Although the Recording Industry Association of America will report its official figures in the early spring, the trend has been very clear: RIAA has reported declining revenue in nine of the past 10 years, with album sales falling an average of 8% each year. Last decade was the first ever in which sales were lower going out than coming in.

"There have been a lot of changes over the past 10 years," said Joshua Friedlander, vice president of research at RIAA. "The industry is adapting to consumer's demands of how they listen to music, when and where, and we've had some growing pains in terms of monetizing those changes."
The two recessions during the decade certainly didn't help music sales. It's also a bit unfair to compare the 2000s with the 1990s, since the '90s enjoyed an unnatural sales boost when consumers replaced their cassette tapes and vinyl records in masse with CDs.

But industry insiders and experts argue that the main culprit for the industry's massive decline was the growing popularity of digital music.

"The digital music business has been a war of attrition that nobody seems to be winning," said David Goldberg, the former head of Yahoo music. "The CD is still disappearing, and nothing is replacing it in entirety as a revenue generator."

**The disease of free**

The battle for paying digital customers may have been lost before it had truly begun. In 1999, Napster, a free online file-sharing service, made its debut. Not only did Napster help change the way most people got music, it also lowered the price point from $14 for a CD to free.

"It's pretty easy to give away something for free," said Russell Frackman, the lead attorney for the music industry in its 1999 case against Napster. "It's not that the music industry thought the technology was bad, it just objected to the use to which it was being put."

Apple's (AAPL, Fortune 500) iTunes is credited with finally getting people to pay for digital music, but it wasn't unveiled until 2003.

In the time between Napster's shuttering and iTunes' debut, many of Napster's 60 million users found other online file sharing techniques to get music for free. Even after iTunes got people buying music tracks for just 99 cents, it wasn't as attractive as free.

"That four-year lag is where the music industry lost the battle," said Sonal Gandhi, music analyst with Forrester Research. "They lost an opportunity to take consumers' new behavior and really monetize it in a way that nipped the free music expectation in the bud."

Now just 44% of U.S. Internet users and 64% of Americans who buy digital music think that that music is worth paying for, according to Forrester. The volume of unauthorized downloads continues to represent about 90% of the market, according to online download tracker BigChampagne Media Measurement.

"People will steal music regardless, so it's not worth trying to fight against something where the fight's already over," said Dan Ingala, founder and lead singer of the band Plushgun.
When Plushgun released its album "Pins and Panzers," it was the most downloaded album on the popular peer-to-peer Web site What.cd with more than 10,000 illegally downloaded tracks.

"It's just a matter of adjusting," said Ingala. "At the same time, it's helping us create an audience."

**Where we're headed**

The problem for the music industry may actually be its greatest opportunity. Despite the great decline in sales, the Internet has exposed consumers to more music than ever before. But that accessibility has been difficult to monetize.

The music industry has tried to keep up by licensing ringtones, licensing music on popular Internet radio stations like MySpace Music and Pandora and licensing music videos on YouTube. **Digital licensing revenue reached $84 million in 2009**, and it is expected to grow substantially in the coming year. (See correction below.)

Licensing fees don't make up for the volume of total lost sales, but Gandhi says the fact that the music industry is finally embracing these new technologies and revenue streams means the industry is finally getting it.

She said the combined effect of interactive multimedia, a growth in digital licensing and services such as Lala, which was bought by Apple in December, will ultimately help give sales a boost.

"The industry is actively doing a lot of things that are putting us back on the right path," said RIAA's Friedlander. "We're switching to an access model from a purchase model."

Forrester forecasts music industry revenues will continue to decline until it reaches about $5.5 billion a year by 2014, as new revenue sources begin to lift sales again.

**Correction:** An earlier version of the story incorrectly reported the figure for digital licensing revenue as $84 billion when it should have been $84 million.

First Published: February 2, 2010: 4:24 AM ET
Appendix 2
Excerpt of Pandora music Play Rates from 2012 Annual Report

<table>
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<th>Year</th>
<th>CRB Rate</th>
<th>Pureplay Rate (non-subscription)</th>
<th>Pureplay Rate (subscription)</th>
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<td>2011</td>
<td>$0.00190</td>
<td>$0.00102</td>
<td>0.00120</td>
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<tr>
<td>2012</td>
<td>0.00210</td>
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<td>2013</td>
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<tr>
<td>2015</td>
<td>0.00230</td>
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</table>

*The rate applicable to our non-subscription service is the greater of the per performance rates set forth in this column or 25% of our U.S. gross revenue.

As reflected in the table above, we currently pay per-performance rates for streaming of sound recordings via our Pandora One subscription service that are higher than the per-performance rates for our free, non-subscription service. As a result, we may incur higher royalty expenses to SoundExchange for a listener that subscribes to Pandora One as compared to a listener that uses our free, non-subscription service, even if both listeners listen for the same amount of time.

Appendix 3
Excerpt of Operations Data from Pandora 2012 Annual Report

<table>
<thead>
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<td>(in thousands, except per share data)</td>
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<td></td>
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<tr>
<td><strong>Revenue:</strong></td>
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<td><strong>Income (loss) from operations</strong></td>
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<td><strong>Loss before provision for income taxes</strong></td>
<td>(13,988)</td>
<td>(28,228)</td>
<td>(16,753)</td>
<td>(1,630)</td>
<td>(16,032)</td>
</tr>
<tr>
<td><strong>Provision for income taxes</strong></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>134</td>
<td>75</td>
</tr>
<tr>
<td><strong>Net loss</strong></td>
<td>(13,988)</td>
<td>(28,228)</td>
<td>(16,753)</td>
<td>(1,630)</td>
<td>(16,032)</td>
</tr>
<tr>
<td><strong>Deemed dividend on Series D and Series E</strong></td>
<td>—</td>
<td>—</td>
<td>(1,443)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Accretions of redeemable convertible preferred stock</strong></td>
<td>(58)</td>
<td>(58)</td>
<td>(218)</td>
<td>(300)</td>
<td>(110)</td>
</tr>
<tr>
<td>Increase in cumulative dividends payable upon conversion of liqaudation of redeemable convertible preferred stock</td>
<td>(3,705)</td>
<td>(3,751)</td>
<td>(6,251)</td>
<td>(8,978)</td>
<td>(3,668)</td>
</tr>
<tr>
<td><strong>Net loss attributable to common stockholders</strong></td>
<td>$(17,751)</td>
<td>$(32,679)</td>
<td>$(24,325)</td>
<td>$(11,042)</td>
<td>$(19,865)</td>
</tr>
<tr>
<td><strong>Basic and diluted net loss per share</strong></td>
<td>$(3.80)</td>
<td>$(3.45)</td>
<td>$(3.84)</td>
<td>$(1.03)</td>
<td>$(0.19)</td>
</tr>
<tr>
<td><strong>Weighted-average number of shares used in per share amounts—basic and diluted</strong></td>
<td>4,671</td>
<td>5,881</td>
<td>6,482</td>
<td>10,761</td>
<td>105,555</td>
</tr>
</tbody>
</table>

Appendix 4
Excerpt of information on Pandora’s listeners from 2012 Annual Report

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Listener hours (in billions)</strong>(3)</td>
<td>0.9</td>
<td>1.8</td>
<td>3.8</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>Active users (as of period end, in millions)</strong>(4)</td>
<td>7</td>
<td>16</td>
<td>29</td>
<td>47</td>
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</tbody>
</table>

25
Appendix 5
Excerpt of Balance Sheet Data from Pandora 2012 Annual Report

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$11,810</td>
<td>$9,608</td>
<td>$16,164</td>
<td>$43,048</td>
<td>$44,126</td>
</tr>
<tr>
<td>Working capital (deficit)</td>
<td>10,400 (5,114)</td>
<td>18,929</td>
<td>36,715</td>
<td>89,218</td>
<td></td>
</tr>
<tr>
<td>Total assets</td>
<td>18,629</td>
<td>16,685</td>
<td>40,277</td>
<td>99,209</td>
<td>175,815</td>
</tr>
<tr>
<td>Preferred stock warrant liability</td>
<td>99</td>
<td>49</td>
<td>300</td>
<td>1,027</td>
<td>—</td>
</tr>
<tr>
<td>Convertible preferred stock</td>
<td>52,638</td>
<td>62,560</td>
<td>104,806</td>
<td>126,662</td>
<td>—</td>
</tr>
<tr>
<td>Common stock and additional paid-in capital</td>
<td>1</td>
<td>726</td>
<td>1</td>
<td>2,309</td>
<td>203,971</td>
</tr>
<tr>
<td>Total stockholders' equity (deficit)</td>
<td>(40,247)</td>
<td>(63,510)</td>
<td>(87,771)</td>
<td>(83,010)</td>
<td>105,540</td>
</tr>
</tbody>
</table>

(1) Includes stock-based compensation as follows:

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Cost of revenue</td>
<td>$10</td>
<td>$14</td>
<td>$18</td>
<td>$85</td>
<td>$582</td>
</tr>
<tr>
<td>Product development</td>
<td>44</td>
<td>54</td>
<td>125</td>
<td>329</td>
<td>1,638</td>
</tr>
<tr>
<td>Marketing and sales</td>
<td>128</td>
<td>188</td>
<td>225</td>
<td>549</td>
<td>4,866</td>
</tr>
<tr>
<td>General and administrative</td>
<td>71</td>
<td>77</td>
<td>109</td>
<td>492</td>
<td>2,101</td>
</tr>
<tr>
<td>Total stock-based compensation</td>
<td>$283</td>
<td>$533</td>
<td>$472</td>
<td>$1,558</td>
<td>$9,187</td>
</tr>
</tbody>
</table>

Appendix 6
Pandora Internet Radio’s Business Model