Where is the Music?

An analysis of the recording industry major labels enduring digital media transformation

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HONORS CAPSTONE SUPPLEMENT

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INTRODUCTION

Some consider it a universal language that has no limitations. Some are born with a rhythm and grow alongside it. Some hear it in nature. Some devote their lives to studying it, others creating it and delivering it to the world. Some have it embedded within their souls and know that they could not be complete without it. For these individuals, music is the lifeblood of their being.

Whether passionate about music, simply a fan, or even incapable of tolerating the sound of a drum, there is something unbelievable about music that seems to spark a change in people; it has the power to evoke every type of emotion. Those within the music recording industry understand this power, and continually search for the best possible and most profitable way to deliver this unique media to the world.

The recording industry is currently dominated by four major record labels, known to many as the "majors." These majors have traditionally provided a distinct value chain within the industry, essentially serving the artist by first scouting and signing musical talent, recording the artist's work, producing it in a physical format, and providing unique network effects through both promoting the artist and music as a package and utilizing distribution relationships to deliver the final product to end-consumers.

However, with the public availability of MP3 digital media files in the early 1990s, the music industry was faced with a new music format technology that has forced the majors to reconsider their established value chain and to re-evaluate the way they provide consumers with music.

Throughout the history of the recording industry, these majors have concentrated on four main issues concerning the industry; they have conventionally remained parallel to the ever-evolving recording format technology sector, maintained media content publishing and intellectual property rights, secured strong manufacturing, production, and distribution relationships, and have dealt with the increasingly expanding artist talent market and genre proliferation. The latter trend is one that does not primarily pertain to the majors' problem nor the solution of the new digital era of the recording industry, which is why this treatment will analyze the former three issues with considerably more depth.

THE MUSIC RECORDING INDUSTRY

HISTORY OF RECORDING FORMAT TECHNOLOGY

Innovators have constantly created new methods of recording sound with an aim for mass production. It is important to recognize the arguable impetus of the modern recording industry with Thomas Edison's creation of the phonograph in 1877, which used tinfoil cylinders as a means of recording sound. Later inventors began to modify Edison's creation, but it was not until 1897 when Emile Berliner's improved gramophone was able to accommodate shellac discs and steel cylinders that the industry experienced a noticeable growth in sales of discs and cylinders with recorded music (Schoenherr, 2005).

Many subsequent engineers continued to improve recording devices and discs, dabbling with different materials and etching patterns to allow for more durable products with increased playback time. By the first quarter of the 20th century, records were produced electrically by the Western Electric System, and for the first time full symphonies and sound motion pictures were supported by these 16-inch discs which recorded at the ground-breaking speed of 33.3 revolutions per minute (Schoenherr, 2005).

Towards the end of 1927, the modern coin-operated electric juke box was created, encouraging wider production and purchase of single track records. As soon as the early 1930s, a technological move from vinyl records to magnetic tape recording began, but production of smaller vinyl records with faster recording speed continued until the early 1950s. By this time, more advanced tape recordings were produced, allowing for smaller and cheaper devices to be purchased by recording studios and consumers alike (Schoenherr, 2005).

In 1951, a Swiss self-contained tape recorder allowed for portable sound used by consumers and eventually reporters. Shortly after, portable transistor radios started to become more popular, amplifying the range of music to include household consumers with lower disposable income. Portable stereos, compact audio cassettes, and 8-track stereo cartridge tape players were subsequently introduced throughout the 1960s and played influential roles in the consumption of music among American youth and automobile owners (Schoenherr, 2005).

By 1965, Phillips had introduced the compact cassette that, in shape and size, resembled the tapes that fit in the modern tape decks which have been widely used up

until the 1980s. Phillips then revolutionized the compact cassette with laser-disc technology that allowed for sharper sound resolution. Laser disc players began to receive consumer popularity by the early 1980s (Schoenherr, 2005).

By this time, Sony developed the TPS-12 Walkman portable audio cassette player which in effect initiated a new age of personal music listening. Throughout the 1980s, Sony and other companies would grow to produce hundreds of different types of "walkman" portable audio cassette players, further enabling individual consumption of music among lower-income consumers. Large vinyl record sales began to suffer as a result of exponential growth in the sales of audio cassettes and audio cassette players (Schoenherr, 2005).

In 1982, the original digital 5-inch compact disc (CD) was introduced and served as another innovative method of music delivery that was available concurrently with the audio cassette. CDs and audio cassettes served as the most popular audio formats throughout the 1980's. It was not until the early 1990s, when consumers were able to purchase portable MiniDisc and CD players, did the audio cassette format begin to fade in popularity, as can be noted when comparing the number of units shipped for CDs surpassing that for cassette format around 1992 in **Graph 1** in **Appendices** (Schoenherr, 2005).

Development of digital audio was revolutionized once again throughout the early 1990s with another format, the MPEG-1 Audio Layer 3 (MP3). Although variations of these digital music files were created in the early 1990s, the first MP3 player software, Winplay3 was not made available until late 1995. Music consumers were then able to encode and play back MP3 files on their personal computers (Schoenherr, 2005).

THE "MAJORS"

As arguably the direst of the three significant issues concerning the digital format transformation within the recording industry, each technological development of music recording format and equipment throughout the history of the modern recording industry has forced record production and distribution companies to reorganize the way they produce and deliver music to consumers. As technological advances offer consumers better methods of listening to, storing, and purchasing music, record labels must be

equally innovative in their distribution methods in order to stay competitive in the recording industry.

Considering this competition, the recording industry is dominated by four major record labels: Vivendi, Sony BMG Music Entertainment, Warner Music Group, and EMI Group - the so called "majors." As demonstrated in **Graph 2**, the majors control roughly 80% market share of the global recording industry (Integrated Record Production/Distribution in the US [IRPD], p 26).

Vivendi is the industry leader in terms of market share, holding roughly 26.5%. After acquiring Universal Music Group in 2000, Vivendi has become the largest music company in the world. Managing 14 record labels, Universal produces, markets, and distributes recorded music in every music genre across the globe. Universal acquired BMG Music Publishing in September 2006 through a deal which strengthened Universal's position in the music industry. Not only is Vivendi, through Universal, the largest music producer, but it is also the largest music publisher, garnering over one million copyrights (IRPD, p 27).

Originally, Universal manufactured and distributed all of the music it produced, primarily in CD format for mass music consumption, and also a small amount of traditional vinyl records for the niche market of performers, radio stations, and disk jockeys. But, in May 2005, Universal sold its US and German manufacturing and distribution facilities to Glenayre Technologies, the parent company of Entertainment Distribution Corporation. Henceforth, Universal has "outsourced the bulk of such facilities to third parties or joint ventures with other record companies" (IRPD, p 27). Despite this massive relief distribution of physical music, Universal still retains its distribution facilities in the UK and France.

Since the company's diminished production of physical music, Universal has made a substantial amount of its music readily available in digital format. As demonstrated in **Graph 2**, the company is the largest in the recording industry in terms of market share, and besides the physical music distribution market, the company also leads the digital distribution market with a noted 27.35% market share of digital albums in 2006 and 32.96% of digital tracks (Business Wire, 2007). Universal has been able to maintain this position because it offers the "largest catalog of digital music" (IRPD, p 27)

of all the majors. Upon release of new music, Universal supplies digital retailers with the content in the digitized form of the retailers' preference "through Universal's proprietary digital distribution infrastructure" (IRPD, p 27).

Based on Universal's estimation, 2003 sales within the global music market declined roughly 7.6% from the previous year mainly due to an increase in album piracy and illegal music downloading. This hit in sales directly affected Universal's net income for that year, resulting in a loss of EUR 1.143 billion (Mergent Online - Vivendi, 2007).

Although Universal's US album sales rose 2% from 2003 to 2004, total US album sales for the music industry dropped 7.2% in 2005. Also in this year, the global music market experienced a 6% decline in physical music sales. Conversely, as indicated in **Graph 3** and **Table 1**, the industry received a 174.5% growth in US sales of digital tracks and albums from $183.4 million to $498.9 million in 2005 and a 74.4% growth to $856.4 million in 2006 (Recording Industry Association of America, 2006).

Parallel to the digital music sales, Universal's legal distribution of digital music has continued to increase. Universal has enjoyed substantial revenue from the legalization of purchasing downloadable music files and music video streaming off the internet. This legalization has spurred a US, European, and Japanese appearance of more legal download and fee-based subscription retailers that use Universal's digital music catalog, directly contributing to Universal's revenue stream (IRPD, p 29).

Nearly as powerful as Vivendi, Sony BMG is the second largest of the four majors with a 26% market share, as noted in **Graph 2**. In August 2004, Sony Corporation's worldwide recorded music business, Sony Music Entertainment, joined with Bertelsmann AG to form a 50/50 joint-venture named Sony BMG Music Entertainment in the US and Europe. Before the joint-venture, Sony had estimated total revenue of $5 billion and BMG had estimated total revenue of $3.5 billion, giving the 50/50 jointly-owned company Sony BMG roughly $8.5 billion total revenue in 2004 (IRPD, p 30). Sony BMG's market share shortcomings compared to Vivendi might be attributed to the company not sharing BMG's music publishing business line, Sony's manufacturing and distribution facilities, nor Sony's recording business in Japan.

In response to increased piracy and illegal music file-sharing, the joint-venture was attempted in hopes to create a business model that would reposition Sony BMG

within the music industry to cut employment and production costs "through the consolidation and rationalization of facilities worldwide" (IRPD, p 31). Staff reductions and the shutdown of distribution operations ensued in the year following the joint-venture, resulting in substantial restructuring costs and essentially a net income loss of approximately 25% from the previous year. Currently, Sony has been able to increase its net income in 2007 by nearly 150% since the 2004 loss after the joint-venture (Mergent Online - Sony Corp, 2007).

Since recently when it separated from its parent company Time Warner in 2004, the music business line Warner Music Group is the only music company in the US not affiliated with a larger media conglomerate. Warner Music Group is the third largest music company in the industry, holding 16.5% market share, as can be seen in **Graph 2**. Like Vivendi, Warner owns its own publishing company, Warner/Chappell Music, owning over one million copyrights (IRPD, p 32).

Before Warner/Chappell Music, Warner's publishing operations included Warner Brothers Publications US Incorporated. The primary streams now for Warner's music publishing revenues are synchronization licenses, and mechanical and performance royalties. Musical compositions used on television, in motion pictures, or within video games are subject to synchronization royalty fees. Mechanical royalties are collected for the use of Warner-owned compositions on CDs and DVDs, television commercials, mobile ring tones, and the internet. Any composition performed on radio, television, or in any public setting constitutes performance royalty fees (IRPD, 32).

Warner has experienced a decline in revenues from $3.8 billion in 1999 to $3.5 billion in 2006. Of that $3.5 billion, $3 billion is attributed to the distribution of music while the remaining to music publishing. With the exception of 2006, Warner has reported net income losses for each of the past five years. Recently, however, the company has been able to stabilize its dramatic losses; since the $238 million net income loss in 2004, Warner has nearly doubled its revenue in 2007 and has sustained a net income loss of only $21 million (Mergent Online - Warner Music Group, 2007).

The fourth largest music company of the four majors is the UK-based EMI Group. EMI manages more than 70 record labels and owns EMI Music Publishing, the largest music publishing company in the world. In order to become more competitive with the

two largest of the four majors, EMI and Warner have made multiple attempts to combine their resources. After two failed merging efforts and preventative European industry regulations, all merging plans were abandoned. EMI unfortunately could have benefited from Warner's valuable resources; the company is indeed in bad financial shape. By March of 2007, EMI reported a profit loss of $525 million after taxation, nearly a 350% deficit from 2006 (Mergent Online - EMI Group, 2007).

FALL OF CD SALES

In terms of revenue, the recorded music industry has experienced a significant decrease in the past five years from $11.36 billion in 2002 to $9.89 billion in 2007, an annualized decline of 2.74%, and is expected to further decline in 2008 with $9.81 billion in revenue (**Graph 4** demonstrates these trends). Along with a lull in real GDP growth from a rate of 3.3% in 2006 to a rough 2% in 2007, "the [industry-wide] decline can be attributed primarily to digital piracy" (IRPD, p 37). Furthermore, over the past five years, the value added to the industry has declined from an estimated $4.09 billion in 2002 to $3.65 billion in 2007, representing an annualized 3.37% decline. Although new audio formats that allow for legal digital music consumption have been developed, such as legal downloading of music files via the internet, DVD audio formats and the distribution of music files on mobile devices, the revenue growth for these new formats have not exceeded the revenue decline in CD sales (IRPD, p 37).

CD sales have indeed decreased dramatically since the CD sales growth the industry experienced through much of the 1990s. The first decline in sales was noted in 2000, due in large part to the widespread increase in broadband internet connection usage, the subsequent facilitation of sharing digital music files, and the increasingly more common illegal CD replication. As noted in both **Table 1** and **Graph 1**, since its peak in 2000 at 942.5 million units shipped in the US, the distribution of CDs in the US has fallen to 614.9 million units shipped in 2006.

This fall in sales has multiple explanations. One major component is that household entertainment has changed dramatically over the past decade. Between 2004 and 2009, consumers have been and are expected to continue to spend substantially more of their leisure time with forms of entertainment media other than physical recorded

music in the form of CDs (see **Table 2**). During this projected five-year time span, US media consumers are expected to exhibit consumption behavior with a compound annual growth of 2.9% of consumer internet, 4.4% of video games, 8.0% of home video, and an incredible growth of 31.3% of interactive television and wireless content. Conversely, there is to be an expected decline of 2.3% in physical recorded music usage (Veronis Suhler Stevenson Communications Industry Forecast [VSS CIF], p 52-53).

This increased usage of consumer internet, video games, home video, and interactive TV and wireless content clearly results in more consumer spending on these other forms of entertainment media. The more consumers spend on DVDs, video games, and TiVo, the less disposable income will be allocated for the purchase of music. Indeed, as can be seen in **Table 3**, annual consumer spending per capita is expected to demonstrate a compound annual growth rate parallel to the increase over the projected five-year time span in usage of consumer internet at 9.4%, video games at 6.1%, home video at 7.4%, and interactive TV and wireless content at 26.1%. Conversely, there is to be an expected decline of 3% in consumer spending on physical recorded music (VSS CIF, p 58-59).

Despite the fall of CD sales from an estimated 90% of all music industry sales in 2002, physical music still constitutes the lifeblood of music recording company revenues. Legal digital downloads account for only 18% of industry revenue in 2007, the remaining portion is comprised of various forms of royalties and primarily physical music formats, 72.6% of which are CDs (see **Graph 5**). If consumers are illegally downloading and sharing digital music, streaming files, or "burning" albums and thus not paying for this media, record companies are not receiving any revenue from royalties or CD sales. The decreased consumer usage of and disposable income-expenditure on CDs has raised serious financial concern within the industry.

Industry analysts and critics have tried to qualify reasons for this decrease in CD sales further than the measurable consumer trends. Given its history, the recording industry is one that sells nearly as much technology as it does music. Some say the industry "hit its peak about 20 years ago when [vinyl records] and [audio] cassettes reached saturation point" (IRPD, p 38). It was able to sustain itself with the introduction of CDs, increasing the demand for and consumption of music in this advanced format.

However, as can be noted by the bell curves in **Graph 1** and **Graph 3**, CDs too seem to have reached a saturation point at the turn of the century and are continually decreasing in music format preference and consumption.

Just like records and audio cassettes of the past, CDs are phasing out as the most popular music format. A new technology is needed to reignite the music industry, and that technology has come. However, as is diagramed in **Graph 6** and will be further explained in the Industry Analysis section, the problem for the majors is that digital music formats do not seem to require the production and distribution services that are the fundamental revenue drivers and competencies within the traditional value chain of the major music recording companies.

IMPACT OF DIGITAL MUSIC

With the dawn of the digital music format, the music recording industry has understandably encountered a new challenge. In the past, industry players have followed technological changes to audio media formats and playback equipment and have continued to devise innovative ways to produce and distribute music.

The four majors are rich in resources; they boast production and distribution competencies, long-standing industry relationships, network effects, and human, technological, marketing, and economies of scale resources. With all of these valuable assets, why are these innovative majors drowning in the waves of digital music?

Unlike past technological changes within the recording industry, the usage of the digital music format has not just introduced new dynamics to the recording industry, but it has seemed to create an entirely new industry business model altogether. A cultural shift from artists relying the recruiting efforts of a major's Artist and Repertoire (A&R) representatives to artists independently simulating all the steps of the traditional majors' value chain is occurring within the industry and is demonstrated in the new value chain depicted in **Graph 6**.

This can be simply exemplified by the changing cost of recording music. The equipment necessary to create a musical recording back in 1951, the Minifon P55, cost roughly $2338.60 in 2006 US dollars, adjusted for inflation, and can be compared to a simple portable tape recorder that produces sub-professional recorded sound. In the mid-1980s, Tascam or Otari reel-to-reel ½" 8-track semi-professional recording equipment cost roughly $15,752.00 in 2006 US dollars, adjusted for inflation (Video Interchange, 2007). Basic semi-professional recording equipment today, like the Boss BR - 1200CD Digital Recording Studio, can cost as low as $895.95, produces a recorded sound that is comparable to any professional studio-recorded sound, and is instantaneously converted in common MP3 format and can be subsequently burnt to a CD (Guitar Center, 2007). With this change of industry cost structure, initiated by recording equipment that is substantially cheaper, smaller, more intuitive, and more advanced than past options, any average computer-literate consumer or artist can record his or her own music, produce it digitally, and/or burn it to a CD.

This new era of digital transformation within the recording industry is distinct from the traditional recording industry in that these copyrighted files can be "produced" digitally by the average computer-literate consumer or artist at practically no cost and are essentially being distributed throughout the market by these end-users and unexpected competitors.

Indeed, these indirect competitors to the four majors are not other recording companies at all. Artists who record, produce, and distribute their own music through internet companies that offer digital downloads, fee-based subscriptions, and streaming music are essentially stealing customers from the four majors. Although these companies still must pay licensing fees to the majors for the usage of copyrighted tracks within the majors' digital catalogs, consumers are moving away from CDs, thus affecting the majors' primary source of revenue, and artists are moving away from reliance on the majors' contracted assistance to get their music to the end consumer.

The initial response to digital music format was free music sharing through download peer-to-peer services like Napster, Limewire, and Ares. Widespread file sharing and audio piracy proceeded, but regulations and litigations made this option not only illegal, but unattractive to many. These legal ramifications have become quite serious, with the industry pursuing violent litigation on violators of music copyright laws who have "stolen" music from the internet (Stodghill, 2007). This has led to the emergence of online companies that provide options for purchasing downloadable music files (Preston, 2007*)*.

Among such online companies are the popular iTunes store, eMusic, Rhapsody, Y! Music, Napster, Amazon.com, and even Wal-Mart, all offering different permutations of purchasing music downloads online (Preston, 2007*)*.

Being a first mover, Rhapsody was able to obtain online distribution licenses in 2002 from Universal, EMI, Warner, Sony, and BMG (separate organizations at the time). This allowed Rhapsody to offer on-demand access to every musical entity available in the digital music libraries of the five major record labels at the time. Also, Rhapsody offers multiple subscription options to users at $12.99 per month for "Rhapsody Unlimited," allowing for unlimited downloads from its entire music library and "Rhapsody on the Go" for $14.99, offering the same privileges as the cheaper option but also allowing the

transfer of downloaded music files to supported MP3 players. Users can also purchase individual songs, just like one other major competitor, iTunes Store, but for $0.10 cheaper per download (Preston, 2007).

Other emerging online music services offer even cheaper options; Y! Music Unlimited offers a monthly subscription fee of $8.99 per month and a cheaper individual download price of $0.79 each; by far the cheapest, Wal-Mart has no monthly subscription cost and each individual download is $0.88 (Preston, 2007).

Other competitors, including eMusic, iTunes, and Amazon offer music downloads that are all compatible with iPods. Apple iPod is the dominant MP3 player in the market. No other option comes close, with the iPod commanding nearly 90% of the digital media device market. Since its 2001 introduction, the widespread usage of the iPod has increased the demand for MP3 downloads that are compatible with the intuitive, ever-improving MP3 device (Betteridge, 2006).

DIFFERING VIEWS ON DIGITAL RIGHTS MANAGEMENT

Ever since the modern recording industry first began producing recorded formats of artists' compositions, the publishing, reproduction, distribution, and use of these files have been subject to various degrees of copyright regulations. The four majors maintain the copyrights to millions of audio compositions that have been compiled over the past century, and although these rights do expire after 100 years in the US, the majors have strong policies in place for copyright renewal (Rose, 2006). The privilege to these copyrights arguably serves as the majors' most valuable asset, and is considered by some to be the source of the industry's solution to the digital music dilemma.

The majors have indeed been trying to enforce these copyrights on compositions that are digitized and shared over the internet since the mid 1990s through the implementation of digital rights management (DRM).

DRM describes the access and copy control mechanisms that publishers, copyright holders, and online distributors use to limit the prohibited usage of digital media. Those advocating DRM technologies tend to be the four majors and online music distributors, attempting to uphold the integrity of artists' creations and "prevent the unauthorized duplication" of their compositions, essentially maintaining revenue streams.

Some opponents, like consumers and independent labels, argue that these restrictions to the use of copyrighted digital material violate the statutes inherent in "fair use" laws (Von Lohmann, 2005).

Fair use is an addendum to US copyright laws based on the free speech rights established in the First Amendment of the US constitution. It allows for limited use of copyrighted material without the necessity of permission from the copyright holder (Cornell Law School, 2007). Certain DRM technologies arguably prevent end-user legal fair use of digital music files, but the morality of DRM access control applications and digital piracy are not the crux of the issue the recording industry faces.

What the four majors, independent labels, online distributors, artists, and any other copyright stakeholder need to consider in respect to digital media is whether or not DRM is helping or hurting the industry.

DRM APPLICATIONS

As early as 2002, the four majors attempted to discourage CD burning by copy-protecting CDs to such an extent that they were unable to be played on PCs. This attempt was defeated by consumers who were informed via an anti-DRM blog website of simple methods to annul the copy protection on CDs such as using a "marker pen to cover the outer ring of [the] disc" (BBC News, 2002).

Watermarking systems, invisible digital tracking technologies that prohibit tracks from being shared and in some cases record the name, e-mail address, and other personal information of those who purchase a watermarked digital file, were met with severe social and moral criticism from consumers. These affected music files were eventually illuminated as watermarked files and consumers responded to this invasion of privacy with decreased purchasing behavior (BBC News, 2002).

Common DRM technologies found today on MP3 files purchased through mainstream online digital media distributors like the Apple iTunes store can be easily overcome by the average end-user. A moderately computer-savvy user can purchase a DRM-protected song from the iTunes store, burn it to a CD using the burning application found in the iTunes program, re-insert that burnt CD into iTunes, and essentially erase all DRM protection applications from those files. So an "exclusive" DRM-protected iTunes

track can be found and obtained on an illegal peer-to-peer file sharing application within two minutes of release (Veiga, 2004).

THOUGHTS ON MUSIC

More recently, however, some entities have taken a stance against the majors' advocacy for DRM. In the trail-blazing essay, "Thoughts on Music," written by Steve Jobs early in 2007, the Apple CEO addresses the iTunes music file incompatibility with other MP3 players as a direct result of DRM applications insisted upon by the majors (Jobs, 2007).

ITunes does not control any of the music sold in its online store; they simply distribute it. The rights to distribute these files must be licensed by each proprietary copyright owner, primarily the four majors, accounting for nearly 70% of worldwide music and secondarily other independent labels roughly providing the remaining 30%. Through these licensing agreements, the majors have mandated DRM stipulations which iTunes is obligated to uphold, update, and essentially keep secret so as to properly protect the majors' compositions (Jobs, 2007).

Jobs blatantly recognizes digital piracy in his public statement, citing internal research on the market's most popular MP3 device and online store, his own iPod and iTunes respectively. According to Apple research, 22 of every 1000 songs found on the average iPod has been purchased from iTunes stores and is encoded with some form of DRM technology. This meager 2.2% is only compatible with the iPod, while the remaining 97.8% is comprised of either music that was purchased from another online music distributor that does not employ DRM, was ripped from a non-copy-protected CD, or has been shared or obtained from illegal sources (Jobs, 2007).

Jobs highlights three potential options to move forward in light of DRM limitations. If kept status quo, consumers will be "well served with a continuing stream of innovative products and a wide variety of choices," but might feel limited in the sense that DRM does not allow for interoperability between all online music stores and respective MP3 playback devices (Jobs, 2007).

Apple could alternatively license its FairPlay DRM service to other online music distributors and MP3 device manufacturers. This would eliminate inoperability

limitations, but would require the devolution of the DRM "secrets" that Apple has kept hidden. These secrets are meant to discourage hackers from decoding the DRM software interface and thereby expose copyrighted music files to unauthorized users and devices. Apple concludes that sharing these DRM secrets among other competitors would facilitate consumer use through media interoperability, but would eventually lead to an information leak, ultimately compromising Apple's licensing agreement guarantee to protect the majors' copyrighted compositions (Jobs, 2007).

The third brazen alternative suggested by Jobs is to completely eliminate the use of DRM technologies altogether. He brightly describes a "world where every online store sells DRM-free music encoded in open licensable formats." Any consumer can purchase any song DRM-free from any online music distributor and play it on any device available (Jobs, 2007). This complete interoperability would facilitate consumer digital music consumption and subsequently encourage new online music retailers to invest in the majors' digital music catalog.

What about protecting the rights associated with each composition? DRM technologies have proven time and time again not to work in preventing illegal sharing and unauthorized use of copyrighted digital media. The majors already provide DRM-free tracks in every CD sold, which can each be subsequently uploaded to a PC and shared illegally among millions. Why implement DRM to the considerably fewer tracks sold digitally and alienate loyal and law-abiding music fans and potential consumers by making it difficult to use the music they purchase?

In response to Jobs' public advocacy and in an attempt to gain competitiveness and secure some type of footing in the currently uncertain and transforming recording industry, EMI Group has agreed in April 2007 to provide nearly its entire digital music catalog DRM-free on Apple's iTunes store. These songs will be offered at $1.29 each, $0.30 more than the common DRM-protected files available on the online store. These files will also be formatted at a higher quality than the aforementioned $0.99 tracks. Consumer response to this innovative move tells EMI that they may have made the right long-term choice. Consumers are willing to "pay a higher price for digital music that they could use on any player" (Wardell, 2007). A move towards DRM-free digital music

availability could be the solution to expanding the complicated music market and increase revenues for the majors.

OTHER IDEAS

Some media technology innovators like the German Fraunhofer IDMT have offered the industry some other more creative solutions to the digital music issue. Through the acceptance and use of Freebies, Fraunhofer suggests that digital music consumers receive a Freebie along with a legal file purchase. This free Freebie is a shortened, lesser quality version of that same purchased song with some promotional advertising attached to it. The legal purchaser can include comments, ratings, signatures and other text-rich or graphically customizable options on this Freebie and subsequently share this authorized version of the composition with others using peer-to-peer or other music distribution networks like e-mail or mobile. If the Freebie recipient decides to purchase the full version of the song, incentives will be repatriated to the original purchaser (Fraunhofer, 2007).

The use of Freebies can promote the legal purchase of digital music for the purpose of providing feedback on music, exposing others to new and popularly-rated tracks, promoting oneself as a music critic of sorts, and receiving incentives for this promotion. If integrated with some form of online social networking such as myspace.com or facebook.com, Freebies can have some power in the market. This could further discourage digital piracy because many casual music fans, those of whom would not purchase a desired song but would consider illegally obtaining it, might be satisfied with the Freebie version the song, and thus not participate in illegal file sharing (Fraunhofer, 2007).

This is just one of many responses to the dawn of digital music that industry stakeholders have implemented. Companies ranging from online music distributors like iTunes, Rhapsody, and eMusic, technological innovators, artists, independent and major labels alike have all attempted different permutations of digital media offerings, from free to expensive, DRM-protected to DRM-free, and everything in between. Perhaps a challenge to the majors' traditional value chain of the recording industry will open the door to a new and better way to distribute music.

TAKING THE MUSIC INTO THEIR OWN HANDS

Some independent labels and label-free artists have tried to grasp the reins of the changing dynamics in the music industry and abstain from the traditional business model of the majors. Independent labels are usually at the mercy of the DRM desires of content distributors, which are usually at odds with those of these smaller labels. Most independent labels tend to have the consumer interests in mind, advocating DRM-free music and the expansion of the music market (Bohn, 2005).

Such independent labels as Kitty-Yo Records have conceded to withdraw from licensing agreements with large distributors like iTunes that slaps its own DRM applications on the music, regardless of label wishes. Kitty-Yo only distributes its compositions through smaller download stores that maintain the same opinion on digital rights (Bohn, 2005).

Similarly, !K7 Records calls for "two-way-loyalty" with respect to the digital music customer-proprietor relationship. But !K7 has retained its license with iTunes, offering DRM-protected files while also selling DRM-free content via Finetunes, a lesser known online distributor (Bohn, 2005).

Other independent labels or artists can distinguish themselves from the majors' method of distributing and marketing music through another one of Fraunhofer's innovations. The PotatoSystem operated through 4FriendsOnly.com Internet Technologies AG, allows independent labels or artists to provide their music file and publish links to that song. This provider defines the retail price for that composition and receives 43% of every song sold, minus a minimal operating fee. When a registered user purchases this song, that user gets the rights to both download and distribute it on the internet. Subsequent redistribution results in commissions repatriated to the original label or artist. This offers a great opportunity for small labels and artists to distribute and sell music on the internet "without expensive marketing activities - just based on recommendations of friends and fans" (Fraunhofer, 2007).

Still, other major artists have taken radical steps toward new music distribution methods. In early October 2007, UK-based band Radiohead allowed official fan website members to pay "whatever price [they] want to pay" for the band's latest album, *In Rainbows*. Fans are able to download the entire album, including track titles and

numbers, full-length tracks of album-quality, and album artwork for less than $1.00, which covers the credit card handling fee. Although this has been done before, no artist with nearly as much respect and popularity as this mainstream rock group has executed such a program (Richmond, 2007).

Radiohead is not affiliated with any record label; the group has to finance its own recording and must go without the marketing and distribution clout a major label offers. However the PR coverage this attempt has received coupled with sales via the internet seem to provide sufficient marketing strength to drive site visits and purchases. Furthermore, purchasers and freeloaders alike are now placed within the Radiohead fan network and mailing list and are concurrently offered to purchase the promotional premium *In Rainbows* album box set (Richmond, 2007).

All profits go directly to Radiohead, avoiding both distribution costs associated with middlemen and publishing costs with labels. Regardless of how much money, if any, the group receives from an individual consumer, the Radiohead fan base and goodwill is compounding with each visit. Giving away the music to the fan drives demand for live performance, merchandise, and subsequent albums. Fans will become loyal and might be willing to pay the group back more in the long-run than would a major label through royalties. Even freeloaders may become fans down the road (Richmond, 2007).

Note the cost breakdown of a CD in 2004 in **Graph 7**. Roughly 11% goes to the artist and songwriter, while the remaining 89% is distributed among retail markup, profit to label, company overhead, distribution, shipping, discounts to retailers, album pressing, booklet printing, record production, signing the talent, and marketing and promotion. Save perhaps the estimated 7.5% allotted to album pressing, booklet printing, and record production, all of the other mentioned cost allocations can be eliminated by not signing with a major label, as Radiohead and a plethora of other artists have done. The cost to the consumer can dramatically drop and all the profits of a CD or digital album can go directly to the artist.

Although it has been done before, the new value chain of direct distribution of music from the artist has illuminated the possibilities of the recording industry without the need for major labels. If an artist can market his own music, find the resources to

record and produce it, and distribute it directly to consumers at low cost, then the main values of A&R, recording, production, marketing, and distribution clout a major label offers are no longer needed.

INDUSTRY ANALYSIS

VALUE CHAIN ANALYSIS

More concentrated recommendations can be made in respect to possible next steps for the four majors if the recording industry is analyzed through a comparison of the traditional value chain and cost structure as guided by the majors with the new value chain and cost structure as possible by the artist.

As depicted in **Graph 6** and mentioned previously, the traditional value chain within the recording industry starts with an artist creating a piece of work essentially in hope to distribute it to the consumer. The major label immediately steps in at this point in the form of A&R, which finds and signs talented artists who wish to produce their work. Next, the artist records his or her work in a label-owned studio. That recording is then produced on a physical format for distribution; it has primarily been in CD format throughout the past two decades. The label then uses its network effects to promote and market the music and provide distributors with the physical product. This product is then marked-up and sold to the end-consumer via retailers.

As explained in cost breakdown of a CD in 2004 found in **Graph 7**, the costs incurred by the label in this traditional process are considerably high. Thus A&R, which acts as the gatekeeper for the label, will scout and sign only those select few artists that are deemed marketable and profitable. If an artist is not very talented and/or does not have glamour appeal, he or she most likely will not even have the chance to initiate the process.

Traditionally, professional recording equipment has been extremely expensive and large in size, necessitating the storage within an owned or rented studio location. An artist records in a studio that is relatively expensive to either maintain or rent. As noted in **Graph 7**, both the A&R and recording process account for roughly 6.4% of the total CD production cost.

Although labels have developed strong relationships with CD manufacturing plants, the production of the physical format does indeed constitute additional costs, roughly 4.4%, according to **Graph 7**.

The bulk of the cost structure comes next in the value chain, where labels provide their network effects in the form of promotion expertise and marketing clout. Roughly

12.66% of the total CD cost depicted in **Graph 7** is allocated to this intangible service, which is provided by the label in the form of radio airplay, album release promotion, and traditional and innovative advertisement.

Another network effect provided by the label is its distribution relationships with music product retailers. Roughly 24.6%, as noted in **Graph 7**, is allocated to both giving these distributors a discount on bulk purchases, and actually implementing the distribution and shipping processes.

At the point of purchase, the end-consumer is unknowingly forced to pay for the final product that is marked up roughly 36.6%, demonstrated in **Graph 7**. As mentioned, only about 11.0% is paid in royalties to the artist, without whom, the music would have never been available.

As described by the alternative avenues some artists are taking towards music distribution through applications like PotatoSystem and Radiohead's label-free business model, a new value chain is possible in this era of digital transformation within the recording industry.

If an artist can raise enough capital to obtain reasonably affordable recording equipment, he or she can not only record the work, but also digitally produce and physically burn hard copies of the music for relatively low cost. With the use of innovative guerrilla marketing and other marketing and distribution opportunities on the internet, independent artists can bypass the arguably overrated and outdated A&R, recording, production, and marketing and distribution network effects offered by the majors.

RECOMMENDATIONS

The recognition for the potential dismissal of major record labels is truly positive from the viewpoint of the consumer who is overcharged by the industry, and also the artist who is underpaid. So what is the role of the four majors in this new industry plagued with digital piracy and copyright infringement, and shaken by plausible opportunities for independent labels and artists alike to record, publish, distribute, and market their own music?

Given the possibility for artists to completely circumvent the traditional value chain of the recording industry, the majors should attempt to maintain validity through promoting their assets. By convincing an artist that he or she can not only benefit by the majors' resources and network effects but rather without which he or she cannot "make it" in the industry, the majors can retain some legitimacy and market share in the industry while they come to terms with the era of digital transformation.

Indeed, the new value chain seems to paint a dismal picture of the quintessential "struggling artist." Although this new cost structure may be feasible and potentially more profitable for an independent artist, the capital start-up requirements can be prohibitive for many young musicians who know nothing more than how to create music. Even if they can properly record and produce their own music, it might be difficult for an artist to implement sufficient marketing know-how and the necessary distribution techniques to become commercially viable. For artists with shortcomings as such, perhaps the majors still have a purpose.

Furthermore, with the ease of obtaining not only legal digital music files through simple online purchase from home but also illegal digital music files through DRM hacking, peer-to-peer file sharing, CD burning, and other methods of digital piracy, those artists choosing to follow the new value chain may be at considerable risk. By having too much faith in the consumer to purchase music legally, an artist can be potentially hurt by not soliciting the protection a label offers through copyright and DRM enforcing.

Perhaps, then, a hybrid model of the traditional and new value chain can be followed. Artists can pursue their own recording and producing while choosing to sign with a label to solicit their network effects and copyright protection only, or any permutation thereof.

Other artists, those of whom are geared towards Hollywood and sex-appeal more so than attracting internet-focused audiophiles, can truly benefit from the marketing and promotion clout a major can provide. Besides, those artists that "make it big" through a label, although according to **Graph 7** are arguably underpaid, are still measured to live in considerable luxury.

For now, it seems, the majors still have a place in the industry, but without a doubt need to consider the emerging business model as a threat to the existing.

CONCLUSION

The new era of transformation within the recording industry from physical to digital music format has created a wide and exciting forum for the proliferation of music consumption and creation. Through the new value chain within the industry, more artists can get their music recorded, produced, promoted, and distributed at relatively low cost without the time, material, labor, and other miscellaneous expenses inherent in the traditional value chain.

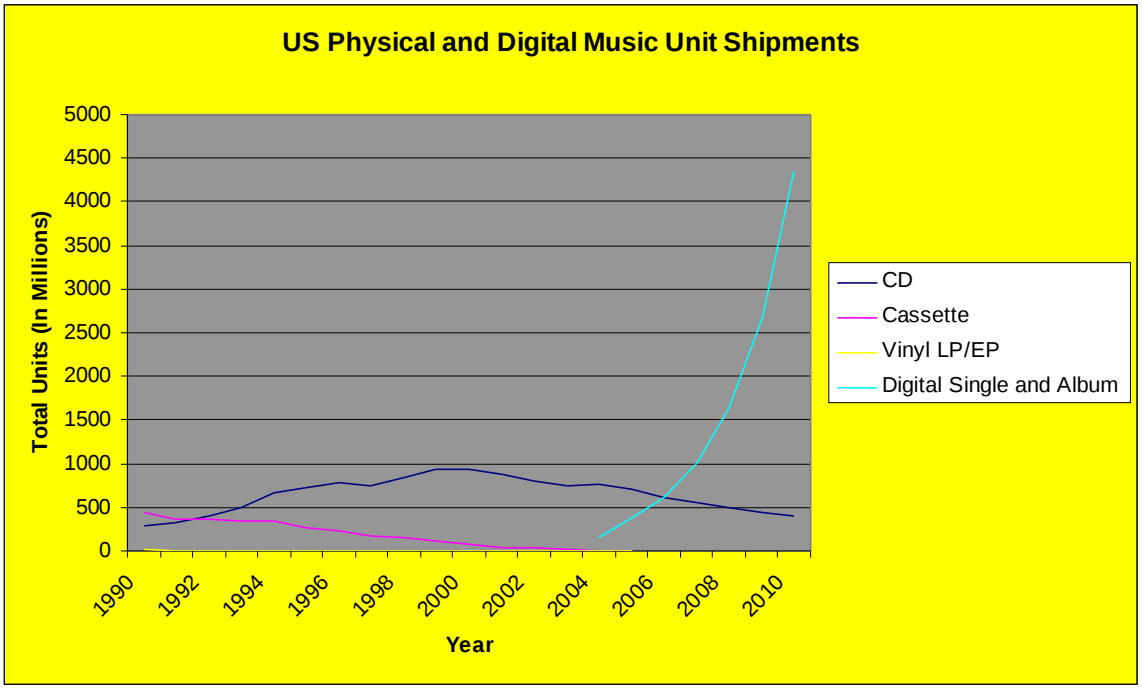
It seems, however, that the issue of digital music within the recording industry has gone unanswered for the majors. The numbers are clearly indicative; the industry is truly transforming from physical to digital music format at a rapid rate. Based on projected growth rates of total unit shipments and total retail dollar value estimated from an average of previous years' rates represented in **Graph 1** and **Graph 3** respectively and more precisely quantified in **Table 1**, digital singles and albums have already matched CDs in total units shipped in the US and they will surpass CDs in terms of US net retail value contribution as soon as 2010.

The age of digital music has certainly more than dawned on the industry and it is left to be seen what the business model and value chain in 2010 will be. Further investigation is warranted to determine what steps the majors are willing and prepared to take towards possibly relinquishing the traditional value chain and either wholly accepting the new one, or considering a viable integration of the two.

APPENDICES

GRAPH 1

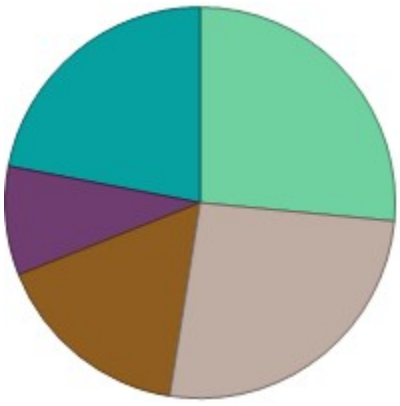
Source: *Recording Industry Association of America, 1990 – 2006 Year End Shipment Statistics*



GRAPH 2

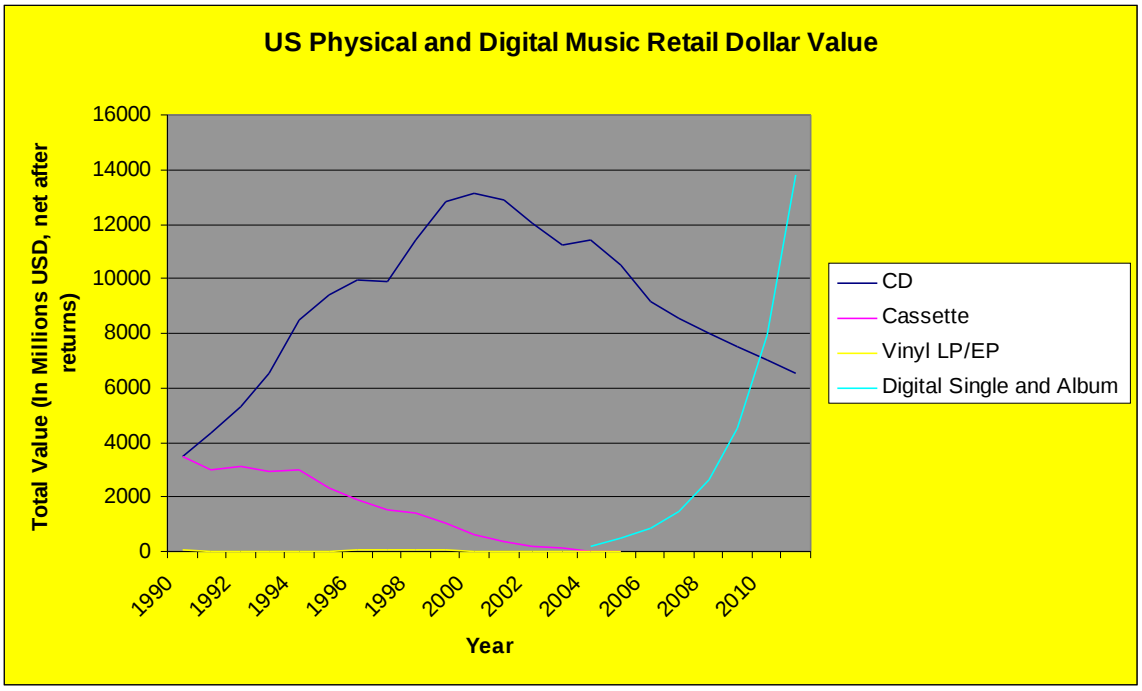
The "Four Majors" – 2007 Industry Market Share

Source: *Integrated Record Production/Distribution in the US - Industry Report (p 26)*



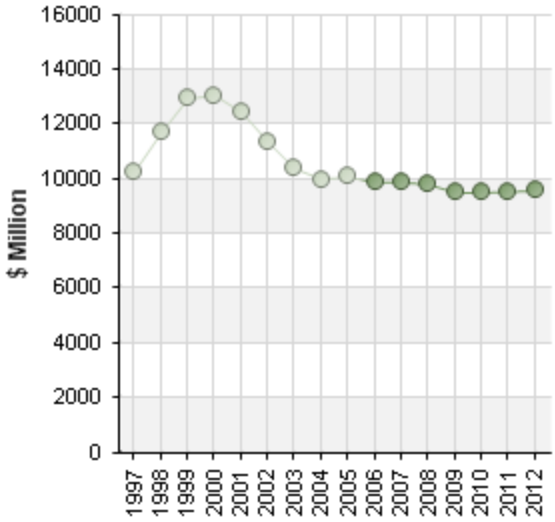
Major Player	Market Share Range
Vivendi	25.00% - 28.00%
Sony BMG Music Entertainment	25.00% - 27.00%
Warner Music Group	15.00% - 18.00%
EMI Group plc	8.00% - 10.00%
Other	17.00% - 27.00%

GRAPH 3
Source*: Recording Industry Association of America, 1990 – 2006 Year End Shipment Statistics*

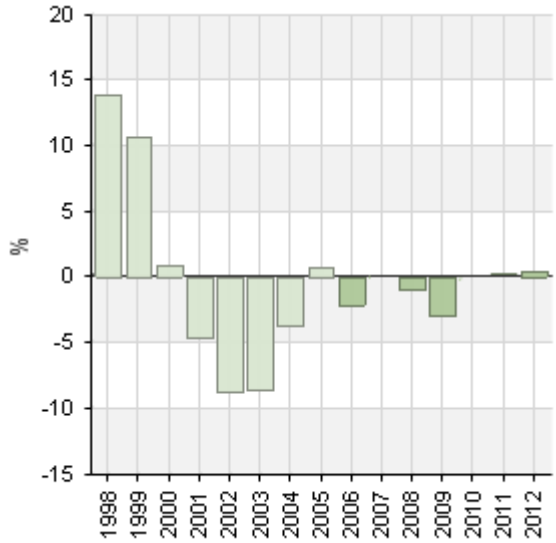


GRAPH 4
Music Industry Revenue and Revenue Growth Rate 1997-2012
Source: *Integrated Record Production/Distribution in the US - Industry Report (p 6)*

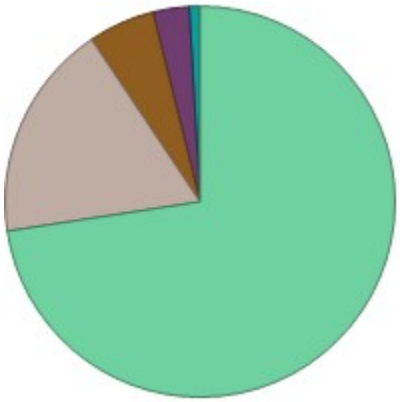
Revenue



Revenue Growth Rate

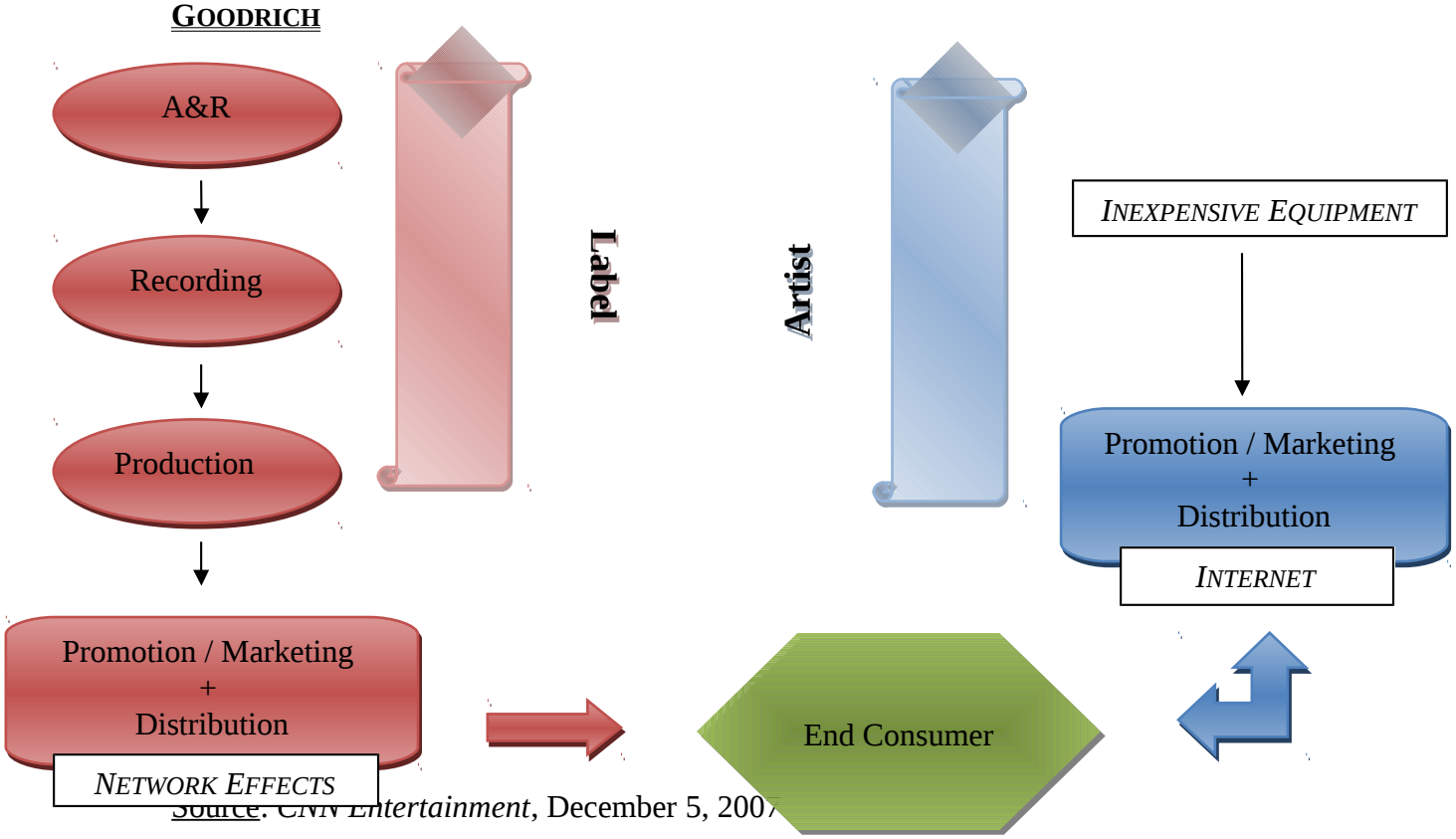


GRAPH 5
2007 Product Segmentation
Source: *Integrated Record Production/Distribution in the US - Industry Report (p 8)*



Product/Services	Share
CDs	72.6%
Digital Sales	18.0%
DVDs	5.5%
Singles	3.0%
Other Physical	0.9%

GRAPH 6
Industry Value Chain, Traditional vs. New



Source: *CNN Entertainment*, December 5, 2007

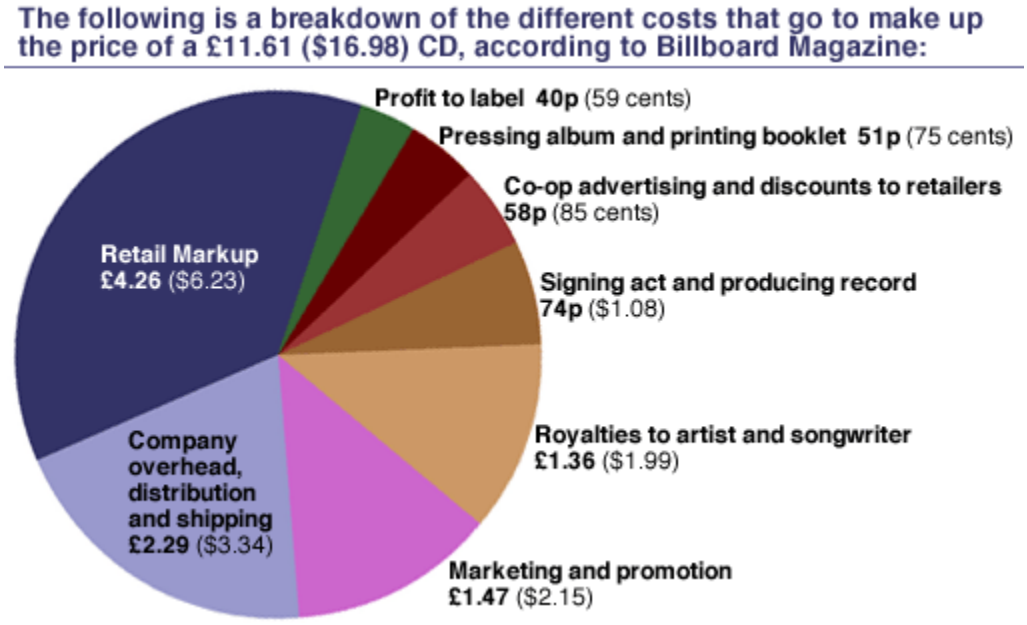


TABLE 1
Recording Industry Association of America, 1990 – 2006 Year End Shipment Statistics

2006 Year-End Shipment Statistics - Manufacturers' Unit Shipments in Millions									
	1990	1991	1992	1993	1994	1995	1996	1997	1998
CD	286.5	333.3	407.5	495.4	662.1	722.9	778.9	753.1	847
Cassette	442.2	360.1	366.4	339.5	345.4	272.6	225.3	172.6	158.5
Vinyl LP/EP	11.7	4.8	2.3	1.2	1.9	2.2	2.9	2.7	3.4
Digital Single and Album									
2006 Year-End Shipment Statistics - Retail Dollar Value in Millions, Net after Returns									
	1990	1991	1992	1993	1994	1995	1996	1997	1998
CD	3451.6	4337.7	5326.5	6511.4	8464.5	9377.4	9934.7	9915.1	11416
Cassette	3472.4	3019.6	3116.3	2915.8	2976.4	2303.6	1905.3	1522.7	1419.9
Vinyl LP/EP	86.5	29.4	13.5	10.6	17.8	25.1	36.8	33.3	34
Digital Single and Album									

2007	*2008*	*2009*	*2010*	*2011*	*projected % change based on US industry average*			
1999	2000	2001	2002	2003	2004	2005	2006	
938.9	942.5	881.9	803.3	746	767	705.4	614.9	
552.6	*497.34*	*447.61*	*402.84*	*362.56*				*-10*
123.6	76	45	31.1	17.2	5.2	2.5		
2.9	2.2	2.3	1.7	1.5	1.36	1.02		
					143.9	380.5	614	
1002.04	*1635.32*	*2668.85*	*4355.57*	*7108.29*				*63.2*
1999	2000	2001	2002	2003	2004	2005	2006	
12816.3	13124.5	12808.4	12044.1	11232.9	11446.5	10520.2	9162.9	
2007	*2008*	*2009*	*2010*	*2011*				
8567.3	*8010.94*	*7489.76*	*7002.9*	*6547.73*				
1061.6	626	362.4	209.8	108.1	23.7	13.1	*-6.5*	
31.8	27.7	27.4	20.5	21.7	19.286	14.2		
					183.4	498.9	856.4	
1493.56	*2604.77*	*4542.721*	*7922.5*	*13816.85*				*63.2*

TABLE 2

Source: *Verona Schuler Stevenson Communications Industry Forecast (p 52-53).*

Growth of Hours per Person per Year Using Consumer Media

Year	*Network-Affiliated Stations*	*Independent & Public Stations*	*Total Broadcast Television*	*Basic Cable & Satellite Networks*	*Premium Cable & Satellite Services*	*Total Cable & Satellite TV#*	*Total TV***	*Broadcast & Satellite Radio‡*
2000*†	15.9%	–52.0%	–0.6%	2.7%	32.2%	6.9%	2.7%	0.4%
2001	–7.0	0.5	–6.1	10.2	11.7	10.4	1.5	1.0
2002	–4.2	2.0	–3.4	8.7	2.0	7.5	2.0	4.2
2003	–3.7	0.6	–3.1	4.8	10.8	5.8	1.6	1.1
2004	–3.0	–0.5	–2.7	3.1	–0.7	2.5	0.2	–1.7
2005	0.1	0.1	0.1	2.0	–8.9	0.1	0.1	–0.8
2006	1.1	–1.3	0.7	0.6	–1.3	0.3	0.5	–0.3
2007	–0.9	–0.9	–0.9	–0.9	9.1	0.7	0.0	–0.1
2008	–0.8	1.6	–0.4	1.5	1.6	1.6	0.7	1.0
2009	1.2	–1.1	0.9	0.7	–10.1	–1.1	–0.3	0.0
Compound Annual Growth								
1999-2004	–0.7	–13.2	–3.2	5.9	10.6	6.6	1.6	1.0
2004-2009	0.1	–0.3	0.1	0.8	–2.2	0.3	0.2	0.0

Newspapers[‡**]	*Recorded Music*[‡#]	*Consumer Internet*	*Consumer Magazines*[‡]	*Consumer Books*[‡]	*Videogames*[‡]	*Home Video*[§‡]	*Box Office*	*Interactive TV & Wireless Content*[‖]	*Total*[***]
–2.1%	–8.2%	59.1%	0.7%	–8.2%	11.4%	4.5%	–5.0%	—	1.6%
–1.8	–11.2	26.1	–5.8	–1.4	2.0	11.2	3.4	—	0.7
–1.5	–12.4	12.1	–1.9	3.0	6.7	20.8	8.1	—	2.2
–1.2	–8.2	11.5	–2.7	–0.2	7.4	4.9	–4.3	90.3%	1.2
–2.1	0.8	7.5	1.9	–1.0	2.4	12.0	–4.3	59.7	0.3
–2.3	–3.3	4.1	0.4	–1.3	0.5	13.4	–1.5	41.4	0.1
–2.3	–2.5	3.6	–1.8	–0.3	5.7	10.2	–0.2	26.9	0.5
–2.6	0.1	2.8	–0.1	0.2	5.5	8.2	–0.6	35.3	0.5
–2.8	–3.4	2.3	0.1	0.1	7.9	4.9	–1.1	20.6	0.9
–3.0	–2.3	1.9	–0.4	–0.2	2.5	3.8	0.5	33.4	0.2
–1.7	–8.0	21.9	–1.6	–1.6	5.9	10.5	–0.6	—	1.2
–2.6	–2.3	2.9	–0.4	–0.3	4.4	8.0	–0.6	31.3	0.4

TABLE 3
Source: *Verona Schuler Stevenson Communications Industry Forecast (p 57-58).*

Growth of Consumer Spending per Person per Year

Year	Broadcast TV	Cable & Satellite TV	Total TV	Home Video	Consumer Internet	Consumer Books
2000	—	5.4%	5.4%	1.6%	45.2%	–1.7%
2001	—	8.1	8.1	13.5	39.1	–1.7
2002	—	9.6	9.6	17.0	24.8	3.9
2003	—	7.2	7.2	12.9	17.2	2.3
2004	—	6.2	6.2	2.5	12.8	0.0
2005	—	5.7	5.7	10.6	10.5	1.9
2006	—	4.8	4.8	9.0	10.7	–0.1
2007	—	4.6	4.6	6.7	9.4	2.2
2008	—	4.2	4.2	6.5	9.0	0.0
2009	—	4.0	4.0	5.0	7.1	0.7
Compound Annual Growth						
1999-2004	—	7.3	7.3	9.3	27.2	0.5
2004-2009	—	4.7	4.7	7.5	9.4	0.9

Newspapers	Recorded Music	Consumer Magazines	Box Office	Videogames	Interactive TV & Wireless Content	Broadcast & Satellite Radio	Total
–0.6%	–3.0%	–0.9%	1.5%	–1.2%	182.0%	—	3.9%
0.9%	–5.2	–1.3	8.5	4.6	132.1	—	7.3
1.1	–9.3	–0.1	11.8	10.8	1,413.5	8,299.3%	9.2
–0.6	–7.1	–1.7	–1.5	1.0	121.0	429.1	6.3
–2.0	1.3	1.7	–0.6	0.9	79.9	208.5	4.9
–2.8	–3.5	2.0	0.2	1.7	51.0	130.0	5.9
–2.4	–3.9	–0.5	0.7	7.9	34.1	76.3	5.5
–2.1	–0.9	1.9	1.5	7.6	22.3	47.7	5.5
–1.7	–4.1	1.4	1.2	9.7	15.1	32.0	4.9
–1.4	–2.5	0.8	2.2	3.9	11.8	22.3	4.2
0.2	–4.7	–0.5	3.8	3.1	230.4	—	6.3
–2.1	–3.0	1.1	1.1	6.1	26.1	57.4	5.2

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