

The Music Industry in the Digital World: Waves of Changes¹

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Introduction

The music industry was born about a century ago when technological innovations allowed capturing, storing and replaying sound. Ever since, the industry has faced and adapted to many technological advances. Sound technologies evolved from mono to hi-fidelity stereo to Dolby® surround sound. Storage media technologies evolved from vinyl (physical, vibration-based) to audiocassettes (magnetic) to CDs and mini-discs (digital). Replay devices evolved from gramophones to large, in-house stereo systems to compact and portable audio devices. During these transitions, industry players either quickly adapted to the changes caused by the newer technologies or simply vanished from the scene. (For a historical perspective on technological evolution in the music industry, read *America on Road: A History of Recorded Sound*, by Andre J. Millard, 1995, Cambridge Uni. Press)

Today, the industry is again on the verge of major changes brought on by the rapid evolution of the Internet and the merger of audio and computing technologies. This paper discusses these changes and their possible impacts on the industry structure and its major constituents.

The Current Industry Structure

The music industry (Figure 1) is built around three major processes:

¹ The author gratefully acknowledges the valuable comments of Prof. Barry Blecherman on an early version of this paper.

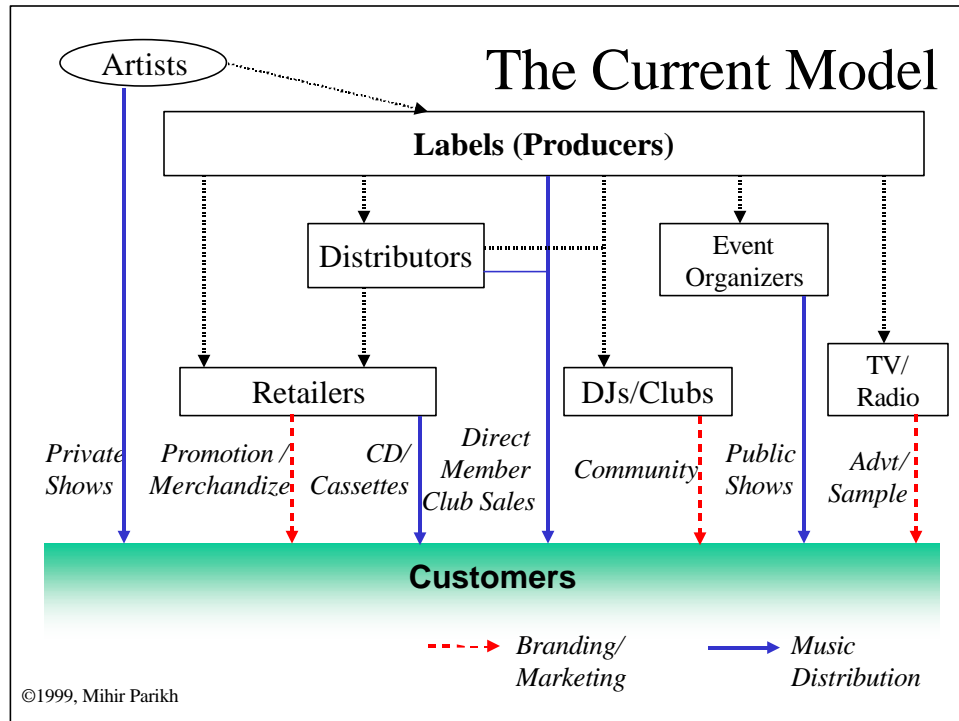


Figure 1: The Current Industry Structure

1. *Creation of music:* Musicians, lyricists and recording artists (all combined as artists) with creativity and talent create music. This is a creative process, but it also requires collaboration and coordination among a diverse set of entities.
2. *Marketing of music:* Marketing includes branding, information dissemination and community building. Major channels for branding and information dissemination are professional promoters, disk jockeys, dance clubs, television and radio stations. These channels propagate information about new releases and provide samples of music to the music lovers and potential customers. They also help develop communities of music fans with similar tastes. Another channel for branding is retailers who, in addition to selling music, sell promotional and associated merchandise.
3. *Distribution of music:* Music is a "liquid" product. Unless it is stored on "containers", such as CDs and audiocassettes, it perishes. Retailers, such as Virgin and Borders, keep these "containers" in their stores for the music lovers to buy them as they would buy cloths and toys. Another method of music distribution is through private and public shows.

Labels (such as Sony Music, Bertelsmann Music Group, EMI Recorded Music, Warner Music Group, and Universal Music Group) play a major role in all three processes by providing initial capital and marketing know-how to create, market and distribute music.

This industry structure has evolved over many decades. However, it is relatively inefficient. It incorporates three levels of intermediaries between the artists (creators of music) and the customers (listeners of music). Each intermediary adds a layer of cost and profit leading to overall higher cost to the consumers. On the other hand, one may argue that these intermediaries have economies of scale and economies of scope to achieve lower costs. In addition, they may have gone through a learning curve of optimizing distribution channels to minimize costs.

Some companies have tried to reduce this cost by combining roles of multiple intermediaries. For example, BMG Music Club and Columbia House, ventures of Bertelsmann Music Group and Sony Music Group respectively, have been selling CDs and audiocassettes directly to their club members at lower costs. The success of this concept shows a need to reduce the cost by increasing transactional efficiency. In addition, to reduce the cost of promotion and distribution, music is sold in an album of many solos (songs or instrumental pieces) forcing artists to develop several solos to make their music commercially viable. This practice invariably leads to inclusion of several “not-so-good” songs in an album. This also forces buyers to buy an album in order to get one or two solos of their choice. We have seen this phenomenon in software industry, too. Microsoft is currently prosecuted by the U.S. Justice Department for bundling Explorer, an Internet browser, with Windows, an operating system. Computer users have to buy (included in the total price) the browser to get the operating system, even if they wish not get the browser.

Under the current structure, the most dominating force in the industry is labels. Labels command tremendous power by controlling major marketing and distribution channels and by binding their artists to long-term contracts. Having very limited access to marketing and distribution channels, most emerging artists cannot compete on their own. They either end up joining a label or remain small in a niche market. This allows labels to walk away with the lion’s share of profit. In general, labels collect about 85 to 90 percent of the profit from music sales².

The First Wave

The first wave of changes came about three years ago with the emergence of the Internet. The ubiquity and immediacy of the Internet provides a huge, frictionless environment to match buyers with sellers. Like in many other industries, such as book selling, toys selling, and stock trading, the Internet has affected the retail part of the music industry. Figure 2 shows the impact the first wave on the music industry.

² Hillis, Scott (June 9, 1999-3:43 PM ET). Cox Unit Invests in Internet Music Firm, *Yahoo!News*. <http://daillynews.yahoo.com>.

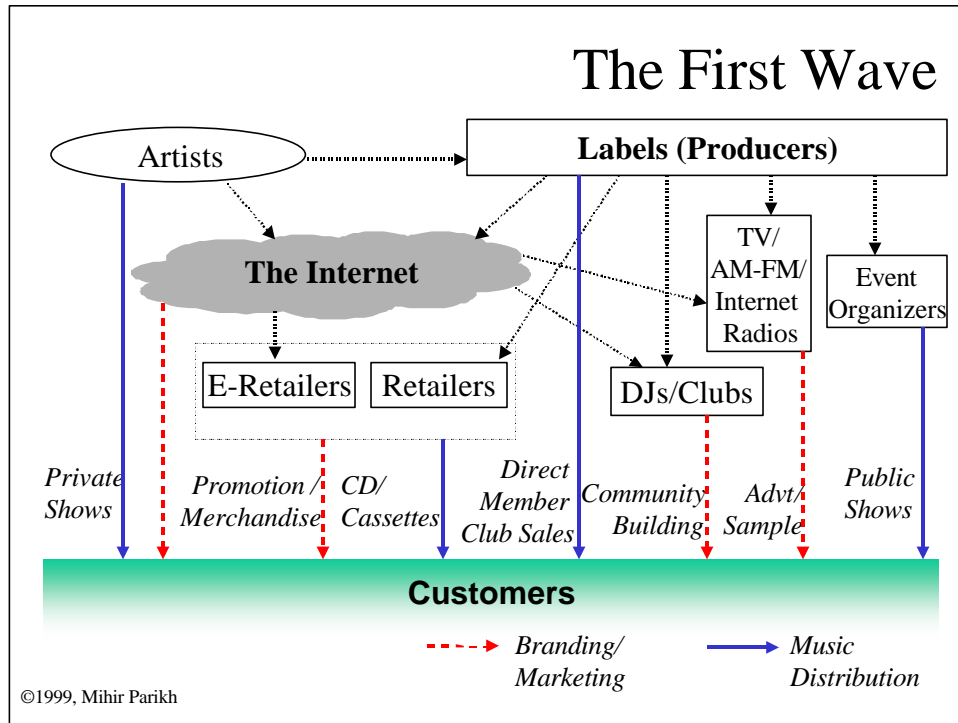


Figure 2: The First Wave

Several e-retailers, such as CDNow, BuyMusic.com, and Amazon.com, have emerged to sell CDs and audiocassettes over the Internet. Their success has prompted several physical retailers, such as Virgin, Tower Records and Sam Goody to go online. In addition, a new type of information disseminators—Internet-radios, such as Spinner.com, NetRadio, and Rolling Stone Radio—have also emerged. These Internet-radios use streaming audio technologies to send music from a web site. Streaming audio technologies allow listeners to listen to music but restricts them from storing the music on computer hard disk. Although the quality of streamed audio is considerably lower than CDs, it has become popular because it requires lower bandwidth to transmit music files. Most Internet-radios also direct listeners to e-retailers if they want to purchase CDs or audiocassettes of their favorite artists. The revenue model of these Internet-radios comprises of the advertisements on their web sites and the commissions from the sales they directed to the affiliated e-retailers.

The first wave has reduced transaction cost by bringing efficiencies in many aspects of music retailing:

- E-retailers do not have to carry inventory. With proper coordination of front-end and back-end systems, e-retailers simply play the role of infomediary. They can have the physical goods (CDs and audiocassettes) delivered directly from the distributors' or the manufacturers' warehouses to the customers' doorsteps. This not only reduces the cost of carrying inventory but also provides flexibility that reduces the risk of changes in the consumer taste.

- E-retailers do not have to maintain a physical store. This reduces the cost of hiring sales staff, developing and maintaining physical outlets, and shrinkage.
- Use of the Internet reduces the search cost for both buyers and sellers. With few mouse-clicks, a buyer can search a CD of his favorite artist from a database of millions of CDs. The buyer can also hop from one e-retailer to another to find a lower price. He can sample the music using streaming audio technology before buying the CD. And all these can be done in the comforts of home or office without the hassles of going to a physical store and standing in the checkout lines. On the other end, sellers can also easily track music tastes of each buyer and provide customized information and better service.
- Worldwide presence of the Internet provides an instant access to the global market. Before the Internet, music retailers had to spend millions of dollars to open and setup logistics for a store in another city. Now, e-retailers can transact with customers anywhere in the world and have the CDs delivered through FedEx or UPS.

The Next Wave

The next wave of changes has already started. This wave is caused by interplay of multiple factors discussed below.

- Emerging communications technologies, such as xDSLs and cable modems, have provided the crucial infrastructure and the bandwidth needed to distribute music to the home-based Internet users through the Internet. Just a year ago, with 28.8K modem, it would have taken over twenty minutes to download a song with the file size of about three megabytes. With xDSLs and cable modems, a home-based Internet user can download the file in less than five minutes.
- The Internet had reduced the world into a small virtual village. Geographic boundaries and distances have become non-factors in distribution of music and information. Worldwide presence and interactivity of the Internet allow music lovers with same tastes to discuss and share music knowledge and actual music files. A teenager sitting in a cyber-café on a pristine island in the Gulf of Siam in Thailand can chat with a teenager in Boston to discuss an upcoming album of the hip-hop band Wu-Tang Clan.
- The merger of audio technologies with computing technologies has converted music from a "liquid" product to an information good. This has provided very sophisticated techniques to increase quality of sound by using digital noise filters and balancing. It has also provided better ways to dub and mix music. Multimedia computers store music on hard disk and provide excellent quality sound. As Ziv Navoth of Institute for Technology and Enterprise puts it, your next stereo system will come from Dell.
- Digital audio technologies have reached new heights in the last few years. Newer digital technologies, such as MP3, RealAudio, Microsoft MediaPlayer, and

LiquidAudio, compress music files to a size that is practical to transfer over the Internet. For example, a four-minute song on a CD (with older digital audio technology) takes about forty megabytes of space, but it takes only four megabytes without any perceivable loss of quality when compressed using MP3 format. This exceptional ability to compress files has made MP3 (an acronym for a digital audio compression standard-MPEG (Motion Picture Expert Group) Layer 3) very popular among the Internet-based music lovers. MP3, being an open standard (not a patented property of a company), is also well received by many audio software developers. It is becoming the de facto standard for music distribution over the Internet. Unfortunately, MP3 does not have a provision for a digital signature to identify or stop illegal music distribution. Many users use it to "rip" songs from CDs and illegally share with friends. About six months ago, Recording Industry Association of America (RIAA), a consortium of major players in the music industry, announced the Secure Digital Music Initiative (SDMI) to develop a new, secure and commercially viable digital audio standard.

- With the emergence of MP3, new portable audio devices that support it have emerged. These devices download music from computer hard disks and allow music lovers to carry it with them on person or in the car. These devices are smaller than CD-players and use no moving part to avoid skips. This makes them ideal portable devices, especially during jogging and exercising. Diamond Multimedia's Rio player (PMP300 model retails as low as \$109 with rebates) holds up to 60 minutes of music, fits in a shirt pocket and costs about same as a portable CD player. Recently, several companies (MP3.com-hardware list) including Creative Labs (Nomad player) and Samsung (Yepp player) have developed portable MP3 devices.
- Over the last few years, the Internet-based consumers (still a small but rapidly growing portion of the overall population) have developed two strong habits for information goods—one is to download them from the Internet and the second is to get them free. It, first, started with computer software. Most computer users have routinely downloaded freeware (free to use) and shareware software (free use for a certain time period, then pay a nominal registration fee for the continual use). These habits strengthened with the migration of the publishing industry over the Internet. All major newspapers and magazines provided and most of them still continue to provide their content, for which the print subscribers would pay, free of charge over the Internet in exchange for "eyeballs" and resulting advertising revenue. These habits are now affecting music, a newly recognized information good. The convergence of computing with audio technology and the advent of MP3 and other digital formats has allowed music lovers to freely download and distribute both legal and pirated music over the Internet.

The changes caused by this wave are much stronger and swifter than those from the first wave. They are powerful enough to alter the whole structure of the industry. Figure 3 shows the effects of these factors on the structure of the music industry.

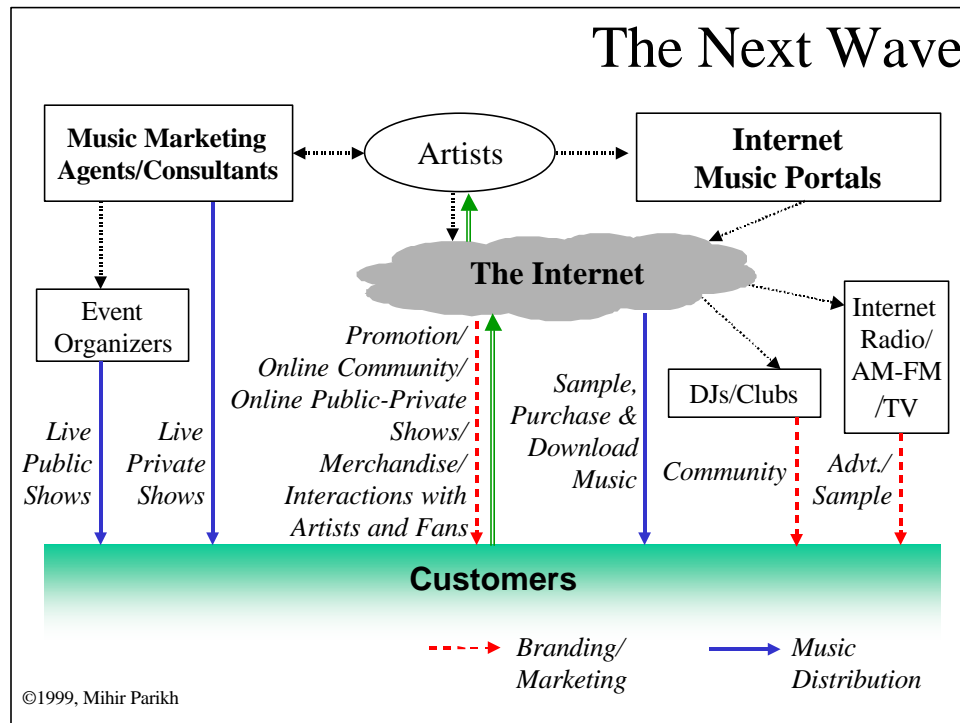


Figure 3: The Next Wave

The new structure outlines the destruction of the old supply chain in the music industry. Labels, as we know them, will disappear and their role will change to conform to the new structure of the industry or will substantially reduce. Distributors, physical retailers, and e-retailers of CDs will be gradually marginalized as music in "bits and bytes" will not need CDs and audiocassettes to hold it. Customers, including the ones who bought CDs and cassettes over the Internet during the first wave, will now download music and store it on computer hard disks, on portable players, or on information appliances of the future. The primary channel for marketing and distributing music will be the Internet. The new Internet-based information dissemination model will replace the old logistics-focused transportation model.

Artists will move closer to the center of the power structure. They will gain more control over marketing and distribution of their music. More and more artists will choose to remain independent (not affiliated with any labels). They will set up their own web sites to promote and distribute their music. Several artists, such as Beastie Boys, Public Enemy and Wide Spread Panic, have been on the forefront of embracing these changes and are already offering their songs free of charge using MP3. They have become the evangelists and promoters of this new wave. Beastie Boys was an out-of-favor band from 80s wishing to come back into the limelight again. As it also happened in other industries, such as computers and investment banking, the group "destroyed" the supply chain and made its copyrighted music freely available on the Internet through MP3 to win back its fans. This has not only broken the stronghold of labels on the distribution channels but also developed a new channel for emerging and out-of-favor artists. Public Enemy is a rap group. Even before the emergence of the Internet, the rap music industry was

fragmented. Most major labels historically stayed away from rap music because of the fear of public backlash on profane lyrics and controversial music, such as “Cop Killer” from Ice-T and “Bush Killa” from Paris. Over 75% of the music sold by the industry came from independent or quasi-dependent labels³. This independence provided flexibility and swiftness to rap artists and labels to quickly move into the digital space. Alex Grove of *Red Herring* notes that the spokespersons of these groups, Mike “D” Diamond (Beastie Boys) and Chuck D (Public Enemy), sound more like venture capitalists than artists⁴.

As artists gain more control they will become more conscious about the business similar to professional athletes. Like the athletes, most artists do not have the skills and/or interests in merging their exceptional (music) talents with business sense, so they will hire professional agents and marketing consultants to advice and manage their career. A major responsibility of these agents, unlike that of labels, will be to protect the interests of their client artists. These agents will manage relationships with event organizers and private shows. They will also provide professional services to develop and maintain their client artists’ web sites and their contracts with the Internet music portals. Exclusive, life long contracts, currently a common practice, will become the things of past.

Another intermediary—Internet music portals—will also emerge to play the combined role of labels, distributors and retailers. They will affiliate with many artists through non-exclusive contract to promote the artists. They will become the hubs for the music fans to “hang out” in the virtual world and to get music from multiple artists at a single source. Lycos.com, MP3.com and Rioport are primitive examples of the future Internet music portals. Since it will be futile to fully protect intellectual property rights, price of music (per song) will go down in some cases to even zero. Under this scenario, currently insignificant revenue sources, such as live events and merchandise, and newer revenue sources, such as online advertisements, online shows and Internet-based broadcasts, will become major components of the future revenue model. These Internet music portals will primarily capitalize on these sources rather than sales of CDs as labels have done it.

This radically new industry structure leads to new forms of disintermediation and reintermediation. Unfortunately, for the labels, these changes cannot be stopped or reversed. If labels act smartly and move swiftly, they can easily transform themselves into the new intermediaries and still be able to survive in the long run. An investment in Spinner.Com by Sony Music indicates that major labels have started to recognize the

³ Tucker, Bruce (1993). Tommy Boy Can CD Future. *Fast Company*, November 1993. <http://www.fastcompany.com/online/00/tboy.html>

⁴ Grove, Alex (1999). Digital Entertainment: Mixing It Up. *Red Herring*, January 1999. <http://www.redherring.com/mag/issue62/intro.html>

force of the next wave⁵. However, a factor that works against them is the speed at which these changes are happening. The speed demands them to dismantle their current supply chains. However, they are reluctant to do that. Perhaps, because they are afraid of alienating music retailers, who see this as a bad dream that will fade tomorrow morning, too early in this game. We have also witnessed this reluctance in other industries, such as personal computers (by Compaq and HP vs. Dell) and book selling (by Borders and Walden vs. Amazon.com). Today, labels have immense clout over the industry, but any delay in changing their business models will lead to the rise and strengthening of competitive forces, which will dominate the industry by being there first as the new intermediaries. The future leaders of this industry will deliver a creative combination of music, content, community and custom marketing, that enhances all aspects of the music experience.

⁵ Raik-Allen, Georgie (1999). Players Line Up for Battle Over Online Music Industry. *Red Herring*, February 1999. <http://www.redherring.com/insider/1999/0202/news-music.com>