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Re-inventing Music Distribution

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Abstract

The music industry is in the throes of a revolution, due to the proliferation of new compression technologies and the widespread availability of both original and pirated content on the Internet. This article describes the current developments affecting this industry and posits that major players in this domain need to re-invent their business models in order to embrace and extend this revolution. By moving toward a commonly available audio file formats such as MP3, and supporting technological solutions for copy protection and digital watermarking, record labels need to capture the distribution efficiencies and customer value that can be realized by moving to the online model.

The Digital Distribution Revolution

In early 1999, several threats looked significant enough to undermine the very foundations of the industry, and the way business was done. Firstly, consumers increasingly purchased their music online, through online retailers like Amazon.com, CDnow, etc., and this had led to increased price competition and increased customer acquisition costs for the traditional retailers. Many traditional retailers had to rethink their revenue model either due to the advent of pure online retailers or their own migration to the hybrid physical-online model (Rao, 1998). Secondly, in addition to the gradual drift towards online retailing, the Internet had also brought a more immediate and equally serious threat: the online (and in a majority of cases, illegal) distribution of music through various compressed audio formats, had clearly sent panic signals across the industry. Streaming audio and compression technologies had made spectacular progress since their inception in late 1995 and early 1996. The earliest signs that near CD-quality music could be transmitted on the Internet came with the release of Real Network's RealAudio 5.0, by which files could be stored and streamed relatively efficiently over a 28.8K modem. But this was just a hint of the developments to follow. In a few months, another spectacularly successful format had emerged, the MP3 format. Under this format, files were compressed in compliance with the standards established by the Moving Picture Experts Group. Established in January 1998 by the International Organization for Standardization (ISO), MPEG had grown to include some 350 experts, hailing from academia and 200 companies and organizations around the world. The MP3 format allowed for an almost tenfold reduction in file size from previous methods of compression, without a discernible loss in quality. The acceptance of MP3, and the proliferation of ripper-programs that enabled audiophiles to copy tracks from CD-ROMs and post them online, had turned the online digital music trickle into a flood. In late 1998, the MP3 phenomenon had gone "mainstream" on the Internet, when the Internet portal Lycos.com began to offer a unique MP3 search engine. The bulk of traffic in MP3's was clearly illegal and violated copyright. However, MP3 had proliferated virus-like in a networked environment, where legislation and policing of any kind were neither forthcoming nor made sense and was almost impossible to implement. MP3 also gained widespread attention when Michael Robertson, a pioneer and evangelist of the format, established a web-site dedicated to resources for MP3 buffs. Around 500,000 music files available for free download on the Internet by February 1998.

The online medium was beginning to alter the way musical content was created, promoted and eventually distributed. A number of bands had gravitated toward the MP3 format, creating and promoting new singles online, due to cost and reach considerations. Some bands like Widespread Panic complemented this type of promotion with online marketing efforts, often aided by a loyal group of fans (WSJ, 1999). It was likely that small to medium sized bands could easily migrate to the online distribution format, in order to attract and gain an initial audience, and ultimately build their identity. The arrival of a secure standard for distribution would be vital to legitimizing their efforts and enabling them to earn both recognition and financial rewards for their creative efforts. Insofar as final distribution was concerned, the trend was towards the ubiquitous availability of music. Rio, a portable MP3 player that retailed for $199, would enable users to download their own compilations as and when they required. The "empeg-car" player was geared toward the car user. A future version promised the ready availability of 500 albums (or over 7000 singles) for the road at CD quality.

Reacting to Change

The music industry had been scrambling to react to the far-reaching effects of this revolution. In early 1999, IBM had developed a new compression technology that would compete with MP3. IBM had launched the Electronic Music Management System (EMMS) would enable entire albums to be distributed online. This had

been developed in collaboration with Warner Music, Universal, EMI, Sony and BMG (the Madison Project). However, it would be a matter of time before the success of this initiative can be assessed. IBM had already indicated that this format would not be compatible with current MP3 devices like the Rio, for security purposes, which made the acceptance of this format extremely unattractive to existing MP3 consumers. One of the assumptions of this plan was that the delivery of music would increasingly move to broadband. At the end of 1998, broadband technologies penetrated around 310,000 households in the US, or 1.3% of on-line households. It was projected that this figure would swell to 30% of on-line households by 2002 (Forrester Research, 1998, a). It was likely that this assumption would be tested by time and infrastructural hurdles to rolling out broadband technology across a broad spectrum of the market. The other assumption was that the security of this method of digital delivery would be foolproof. This was yet to be tested as EMMS was still in a developmental phase. Also, any method that relied purely on software encryption was vulnerable to future break-ins. The Recording Industry Association of America (RIIA) was vehemently fighting the illegal use of MP3 for music distribution. The RIAA had launched Secure Digital Music Initiative in December 1998, with a view to developing a secure audio format that would prevent illegal copying. The success of this project was questioned by industry analysts, given the proliferation of formats like MP3 and the difficulties in enforcement.

Other competing formats that had emerged on the horizon were Liquid Audio and AT&T's a2b platform. The Liquid Audio format offered even better technical quality than MP3, and perhaps the best possible copyright protection for publishers and artists. This technology allowed the downloading of singles for a set price (around 99 cents per track), but these could not be copied elsewhere once downloaded to the user's computer. Although the tracks could be written onto a CD-ROM, they also carried an identifier (the Liquid Passport), which carried the customer's credit card number. Even if a customer passed on the CD to a friend, the track couldn't be decoded without the original Passport. A detriment to copying was thus built in into the Liquid Audio technology. Although this technology offered the necessary copyright protection, it was unclear if the recording industry would embrace such a format. The reason for this was very simple: it made little sense to charge $6 for a new CD with 10-12 tracks online, when the same CD was being sold in stores at anywhere from $12-$20. Clearly, there was a conflict of interest in parallel channels of distribution, and this did not bode well for the future. However, industry observers predicted that digital downloads of music would account for around 3% to 5% of music retailing revenues by 2002 mainly due to bandwidth limitations and portability issues.

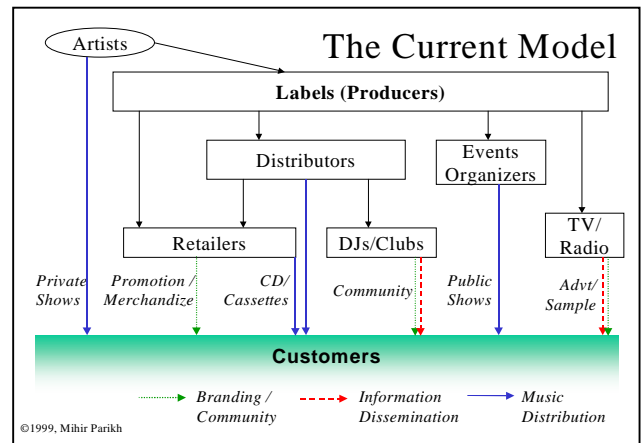## Changing Industry Structure

Figure 1: The Current Industry Structure

Figure 1 shows the current structure of the music industry where marketing and distribution of music is carried out through several channels in three categories: Music distribution, information dissemination and branding/community building. The major channels for music distribution are retailers (Virgin, Borders, etc.), distributors (BMG, Columbia House, etc.), and private and public shows. The major channels for information dissemination are professional promoters, disk jockeys, dance clubs, television and radio stations. They propagate information about new releases and provide samples of music to the music lovers and potential customers. They also help create brands and develop communities of music fans with similar tastes. Another major channel for branding is retailers, who in addition to selling music, are vital to promotional and associated merchandise sales. This structure of the industry is relatively inefficient, as there are three groups of intermediaries between artists and customers. Each intermediary adds a layer of cost and profit leading to higher final cost. This provides opportunities to new players who can potentially reduce the final cost by bypassing an existing intermediary. The success of BMG (Bertlesmann) and Columbia House (Sony) in direct selling the music at a lower cost has proven this to some extent.

Under the current structure, the most dominating force in the industry are the labels or producers. They command significant control by controlling most of the major marketing and distribution channels and binding 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 invariably allows labels to walk away with the lion's share of profit.

The emergence of the Internet and development of compression and streaming technologies for audio storage and distribution provide opportunities for radical changes in the industry structure. The first wave of the change came at the lower level of music distribution. Several on-line retailers (Music Boulevard, CDNow, Amazon.Com, etc.) popped up to sell CDs and audiocassettes through the Internet. This eliminated the costs of carrying inventory, keeping sales staff and developing physical outlets leading to lower final costs and reduced prices. Although this did not change the overall structure of the industry, it certainly changed the buyer behavior. The customers, who used to go to physical stores to purchase music, started sampling and buying music (still in the old media—CDs and cassettes) through the on-line retailers.
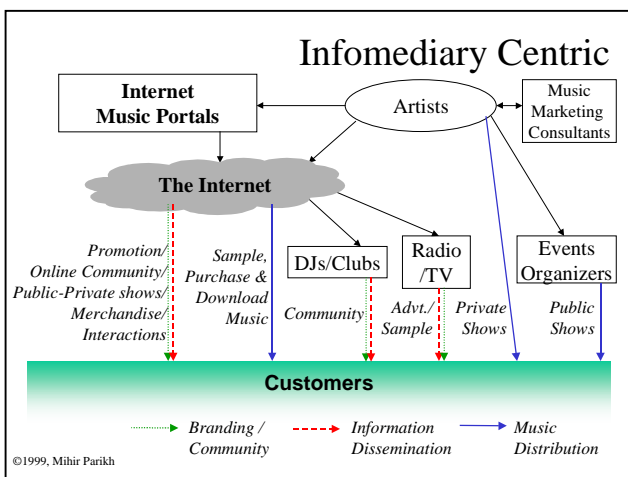

Figure 2: The Emerging Structure

The second wave of change, which is beginning to happen right now, may fundamentally change the structure of the industry. New digital audio formats (MP3, RealAudio, LiquidAudio, a2b, etc.) make music downloadable directly through the Internet. The customers, who bought CDs and cassettes over the Internet, can now download music and store it on the hard disks of their computers or on their portable players. They can also create customized CDs with CD writers. In the long run, this may even altogether eliminate old containers of music—CDs and cassettes. Music in the future will be carried on portable equipment such as Rio or Empeg-Car.

This provides new opportunities to emerging artists to independently promote and distribute their music through the Internet without the support and clout of labels. The primary channel to market and distribute music becomes the Internet. This shifts the power structure in the industry from labels to artists. However, not all artists will have skills and interests in marketing and distributing music. This will lead to an emergence of

new intermediaries, which we call—Internet music portals (Lycos and MP3.com are primitive examples) (Figure 2). These intermediaries will evolve to play a combine role of labels, distributors and retailers. Thus, reduce the inefficiencies in the current industry structure and tremendously lower the final cost.

This evolving industry structure would lead to new forms of disintermediation and reintermediation. Unfortunately, for labels, these changes cannot be stopped or reversed. If labels act smart and move swiftly they can easily transform themselves into the new intermediaries and still be able to survive in the long run. However, a factor that works against labels is the speed at which these changes are happening. The speed enforces labels to immediately dismantle their current supply chains, which they are reluctant to do. We have seen this behavior also in other industries, for example, PCs (Compaq vs. Dell) and books (Amazon.com vs. Borders). Today, labels have immense clout over the industry, but any further 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 flag-bearers of this industry will deliver a creative combination of music, content, community and custom marketing, that enhances all aspects of the customers music consumption experience.

Other Implications

The booming music industry, that relied extensively on a physical distribution network until the recent past, had been profoundly affected by the connectivity and efficiencies offered by the Internet. Further, radical changes in audio compression and distribution (especially the MP3 phenomenon) had also led to the flaunting of copyright laws, and threatened the core of the leading industry players' business and revenue models. In order to compete effectively in this radically altered landscape, the big players needed to come up with suitable standards (or embrace an existing and popular standard like MP3), and enforce practical legislation. They needed to support and promote technological solutions for copy protection and digital watermarking. In addition, they needed to use the Internet and digitally distributed music content to educate consumers, create and reinforce brand awareness and recognition, promoting music events, and establish communities of interest.

These revolutionary changes are not limited to just the music industry. The entire entertainment industry will have to wake up to the new opportunities and challenges posed by new technologies like digital production, storage and distribution, broadband, and the move towards networked appliances.

Please contact authors for references.