

Exploring innovation in action: The changing nature of the music industry

April 1st 2006 . Apart from being a traditional day for playing practical jokes, this was the day on which another landmark in the rapidly changing world of music was reached. 'Crazy' – a track by Gnarlz Barkley – made pop history as the UK's first song to top the charts based on download sales alone. Commenting on the fact that the song had been downloaded more than 31,000 times but was only released for sale in the shops on April 3rd, Gennaro Castaldo, spokesman for retailer HMV, said: *"This not only represents a watershed in how the charts are compiled, but shows that legal downloads have come of age.....if physical copies fly off the shelves at the same rate it could vie for a place as the year's biggest seller"*.

One of the less visible but highly challenging aspects of the Internet is the impact it has had – and is having – on the entertainment business. This is particularly the case with music. At one level its impacts could be assumed to be confined to providing new 'e-tailing' channels through which you can obtain the latest CD of your preference – for example from Amazon.com or CD-Now or 100 other websites. These innovations increase the choice and tailoring of the music purchasing service and demonstrate some of the 'richness/reach' economic shifts of the new Internet game.

But beneath this updating of essentially the same transaction lies a more fundamental shift – in the ways in which music is created and distributed and in the business model on which the whole music industry is currently predicated. In essence the old model involved a complex network in which songwriters and artists depended on A&R (artists and repertoire) to select a few acts, production staff who would record in complex and expensive studios, other production staff who would oversee the manufacture of physical discs, tapes and CDs and marketing and distribution staff who would ensure the product was publicized and disseminated to an increasingly global market.

Several key changes have undermined this structure and brought with it significant disruption to the industry. Old competencies may no longer be relevant whilst acquiring new ones becomes a matter of urgency. Even well-established names like Sony find it difficult to stay ahead whilst new entrants are able to exploit the economics of the Internet. At the heart of the change is the potential for creating, storing and distributing music in digital format – a problem which many researchers have worked on for some time. One solution, developed by one of the Fraunhofer Institutes in Germany, is a standard based on the Motion Picture Experts Group (MPEG) level 3 protocol – MP3. MP3 offers a powerful algorithm for managing one of the big problems in transmitting music files – that of compression. Normal audio files cover a wide range of frequencies and are thus very large and not suitable for fast transfer across the Internet – especially with a population who may only be using relatively slow modems. With MP3 effective compression is achieved by cutting out those frequencies which the human ear cannot detect – with the result that the files to be transferred are much smaller.

As a result MP3 files can be moved across the Internet quickly and shared widely. Various programs exist for transferring normal audio files and inputs – such as CDs – into MP3 and back again.

What does this mean for the music business? In the first instance aspiring musicians no longer need to depend on being picked up by A&R staff from major companies who can bear the costs of recording and production of a physical CD. Instead they can use home recording software and either produce a CD themselves or else go straight to MP3 – and then distribute the product globally via newsgroups, chatrooms, etc. In the process they effectively create a parallel and much more direct music industry which leaves existing players and artists on the sidelines. Such changes are not necessarily threatening. For many people the lowering of entry barriers has opened up the possibility of participating in the music business – for example, by making and sharing music without the complexities and costs of a formal recording contract and the resources of a major record company. There is also scope for innovation around the periphery – for example in the music publishing sector where sheet music and lyrics are also susceptible to lowering of barriers through the application of digital technology. Journalism and related activities become increasingly open – now music reviews and other forms of commentary become possible via specialist user groups and channels on the Web whereas before they were the province of a few magazine titles. Compiling popularity charts – and the related advertising – is also opened up as the medium switches from physical CDs and tapes distributed and sold via established channels to new media such as MP3 distributed via the Internet.

As if this were not enough the industry is also challenged from another source – the sharing of music between different people connected via the Internet. Although technically illegal this practice of sharing between people's record collections has always taken place – but not on the scale which the Internet threatens to facilitate. Much of the established music industry is concerned with legal issues – how to protect copyright and how to ensure that royalties are paid in the right proportions to those who participate in production and distribution. But when people can share music in MP3 format and distribute it globally the potential for policing the system and collecting royalties becomes extremely difficult to sustain.

It has been made much more so by another technological development – that of person-to-person or P2P networking. Sean Fanning, an 18-year-old student with the nickname 'the Napster', was intrigued by the challenge of being able to enable his friends to 'see' and share between their own personal record collections. He argued that if they held these in MP3 format then it should be possible to set up some kind of central exchange program which facilitated their sharing.

The result – the Napster.com site – offered sophisticated software which enabled P2P transactions. The Napster server did not actually hold any music on its files – but every day millions of swaps were made by people around the world exchanging their music collections. Needless to say this posed a huge threat to the established music business since it involved no payment of royalties. A number of high-profile lawsuits followed but whilst Napster's activities have been curbed the problem did not go away. There are now many other sites emulating and extending what Napster started – sites such as Gnutella, Kazaa, Limewire took the P2P idea further and enabled exchange of many different file formats – text, video, etc. In Napster's own case the phenomenally successful site concluded a deal with entertainment giant Bertelsman which paved the way for subscription-based services which provide some revenue stream to deal with the royalty issue.

Expectations that legal protection would limit the impact of this revolution have been dampened by a US Court of Appeal ruling which rejected claims that P2P violated copyright law. Their judgment said, 'History has shown that time and market forces often provide equilibrium in balancing interests, whether the new technology be a player piano, a copier, a tape recorder, a video recorder, a PC, a karaoke machine or an MP3 player' (Personal Computer World, November 2004, p. 32).

Significantly the new opportunities opened up by this were seized not by music industry firms but by computer companies, especially Apple. In parallel with the launch of their successful iPod personal MP3 player they opened a site called iTunes which offered users a choice of thousands of tracks for download at 99c each. In its first weeks of operation it recorded 1m hits in February 2006 the billionth song, (["Speed of Sound,"](#)) was purchased as part of Coldplay's "[X&Y](#)" album by Alex Ostrovsky from West Bloomfield, Michigan. *"I hope that every customer, artist, and music company executive takes a moment today to reflect on what we've achieved together during the past three years,"* said Steve Jobs, Apple's CEO. *"Over one billion songs have now been legally purchased and downloaded around the globe, representing a major force against music piracy and the future of music distribution as we move from CDs to the Internet."*

This has been a dramatic shift, reaching the point where more singles were bought as downloads in 2005 than as CDs, and where the overall shift to a majority of purchases being by download is expected to take place during 2006. New players are coming to dominate the game – for example, Tesco and Microsoft. And the changes don't stop there. In February 2006 the Arctic Monkeys topped the UK album charts and walked off with a fistful of awards from the music business – yet their rise to prominence had been entirely via 'viral marketing' across the internet rather than by conventional advertising and promotion. Playing gigs around the northern English town of Sheffield, the band simply gave away CDs of their early songs to their fans, who then obligingly spread them around on the Internet. *"They came to the attention of the public via the Internet, and you had chat rooms, everyone talking about them,"* says a slightly worried Gennaro Castaldo of HMV Records. David Sinclair, a rock journalist suggests that *"It's a big wakeup call to all the record companies, the establishment, if you like. ... This lot caught them all napping "We are living in a completely different era, which the Arctic Monkeys have done an awful lot to bring about."*

The writing may be on the wall for the music industry in the same way as the low cost airline business has transformed the travel business. And behind the music business the next target may be the movie and entertainment industry where there are already worrying similarities. Or the growing computer games sector with shifts towards more small-scale developers emulating the Arctic Monkeys and using viral marketing to build a sales base.

Subsequent developments have shown an acceleration in the pace of change and an explosion in the variety of new business models better adapted to create and

capture value from the industry. For example, the US music download business has become dominated by Apple and Amazon (with 70% and 10% respectively of the market) – two companies which have their roots in very different worlds. Whilst the volume of downloads has increased significantly there is now competition from alternative business models; for example streaming services like Spotify allow users to rent access to millions of music and other audio titles without having to 'own' any of them. And behind the music business the same pattern is playing out in films and entertainment, computer games and other areas. With the advent of 3D printing and low cost design it becomes possible to make similar models work in the sphere of physical products as well