

DRM – Intrusion or Solution?

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Abstract: DRM could be the solution to the content industry's P2P dilemma, but content owners' desire to monitor and control the consumer's use of content can be perceived as an intrusion of privacy. High control makes consumers less active and low control invites them to experiment and to gain experience. Digital music files can easily be spread. Therefore legal services prefer keeping control over the music. This study reveals that consumers are one step ahead of the content industry, finding ways to circumvent protection and laws, and that the music industry is awaiting the "right" DRM business model. Online Music sellers basically rely on B2C DRM business models, but attempts have been made with C2C models, using consumers as distributors, and ISP models, where ISPs pay to collecting societies for all file transfers of copyrighted material in their networks. Future models include licensing models, micro models, and no copyright at all.

1. Introduction

DRM or Digital Rights Management is a term frequently referred to, both in copyright legislation as well as by content owners seeking to control use of their intellectual property. However, the concept encompasses two very separate issues. DRM systems can have a monitoring function (observing what is transferred over the network), as well as a controlling function (affecting what consumers can/cannot do with content in the network or on their own computers), or a mixture of both.

Content owners desire as a rule, to both monitor and control the ways the consumer uses their content. It has become more and more difficult, however, to distinguish between monitoring and control aspects of DRM systems. Consumers may accept monitoring to a certain extent but not all forms of control. High control makes consumers less active and low control invites consumers to experiment and to gain experience. Low control generates traffic in the network and can allow for new and unexpected applications to emerge. On the other hand low control may facilitate for illegal activities to flourish.

DRM systems can also encompass different levels of intrusion. A highly intrusive system allows the copyright owner access to the equipment a consumer uses to play or store digitised materials, as well as the ability to control such usage. A highly non-intrusive system merely observes in general terms which materials are consumed, but not in detail by whom, where and when.

In the U.S. as well as in Sweden and other European countries, content owners and their representatives have started several legal processes to stop and prevent illegal distribution of copyrighted material. In March of 2005, the Swedish Branch of IFPI, the Swedish Performing Rights Society (STIM) and the Swedish Anti-Piracy Bureau (Antipiratbyrån) together with three content owners, applied for and were granted a court order for an "intrusive investigation" (the term intrusive investigation, or 'intrångsundersökning' in Swedish, was implemented in Swedish Copyright law a few years back) on the premises of a Swedish ISP, claiming that they would find 12 named, copyright protected works owned by the

content owners. [1] To be able to perform this investigation the ISP was not notified in advance to prevent the company from deleting the works in question from their server, and the server was to be confiscated awaiting technical investigation. This event merely shows the need for all parties to seriously addressing the DRM issue in a positive and solution-oriented manner.

2. Objectives

The objective of this study was to test the validity of a hypothesis that DRM systems must not be overly intrusive to enjoy long-term consumer acceptance and thereby be successful. Foremost the Online Music Industry was studied to verify or reject the hypothesis. Furthermore the objective was to refine solutions for balancing the demands of security/integrity and control and to suggest business models and design solutions for such DRM systems. The study would investigate, among other things, the possibilities to apply similar methods as are used for auctions and similar applications where the individual behaviour is confidential but the result for the whole group is open.

3. Methodology

The analysis is based on the following framework that considers the balance between control – monitoring, on the one hand, and intrusive – non-intrusive technologies on the other.

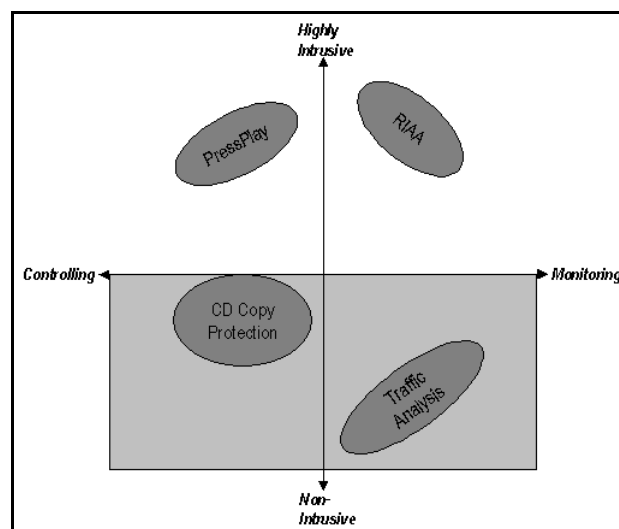


Figure 1. DRM Security/Integrity Issues

In the NW (i.e. highly intrusive/controlling segment) and NE segments in figure 1 above one can find examples of DRM activities which have not fully met with consumer acceptance, or have risked a severe consumer backlash. Highly intrusive DRM systems are those, for instance, which involve a supplier having direct access to a consumer's hard disk with the ability to reform or even erase different files remotely. An example from the NW area is the now defunct music service Pressplay. Here, on-line users could subscribe to a music service, but what they had bought became erased once the monthly subscription lapsed. In the NE segment we have the monitoring used by the Record industry in the USA to find "illegal" files on consumers' hard discs, trace their origin, and in some cases even sue some such consumers.

In the SW segment we find some current methods for hindering the copying of commercial CDs, most of which are not particularly foolproof; the control function is clear, but so are the rules of play for the consumer. Finally in the SE segment one can conceive a number of DRM systems which monitor actual usage of protected content openly for the consumer, the only purpose being to facilitate a fair distribution of potential revenues. Our

hypothesis is that DRM systems which will work and be acceptable to both users and suppliers must reside primarily in the SW and SE segments (the grey area in figure 1).

Our focus was on studying how monitoring and controlling through DRM systems is used in the music industry. A number of different music services have been categorised based on the levels of intrusiveness and control in their embedded DRM systems. The lowest level of intrusiveness, as defined above, is characterized by interested parties merely collecting personal information about consumers use and habits, albeit often without their consent. The highest degree refers to companies having the ability to reform or even erase files remotely.

4. Business Models

In most cases consumers have been one step ahead of the music and film industries. From yesterday's sneaker-nets to today's "illegal" Peer-to-Peer (P2P) networks, users have always been pioneering the quest to circumvent protection mechanisms as well as laws and regulations. [2] Users have tended to opt for the easiest approach in order to acquire music. A new and in many cases better way of distributing music arose with the advent of the MP3 format. Adjacent to the MP3 format, MPEG2 and MPEG4 formats have simplified and improved movie distribution. These inventions led users to come up with new, ingenious, yet often illegal ways of copying and distributing music and movies. In the music area this also led to new ways of marketing and making music available, especially for bands that were practically unknown, except for a local community. These bands could release their songs on the net and receive feedback from all over the world.

The introduction of MP3 also led to a quick rise in popularity for P2P networks, which are far from being invented by any copyright infringers, and the popularity is still rising. With millions of music files available just a click away, and "free" of charge (i.e. no added charges), there is no reason for the networks not to increase in popularity and number of users. The simplicity and "low cost" are the main reasons for people to download copyright protected music from P2P networks, even if it means they are criminals, and aware of it. Why pay for something free? In comparison to purchasing music in a legal online music store, there are also other aspects to a P2P network that makes it far superior [4]:

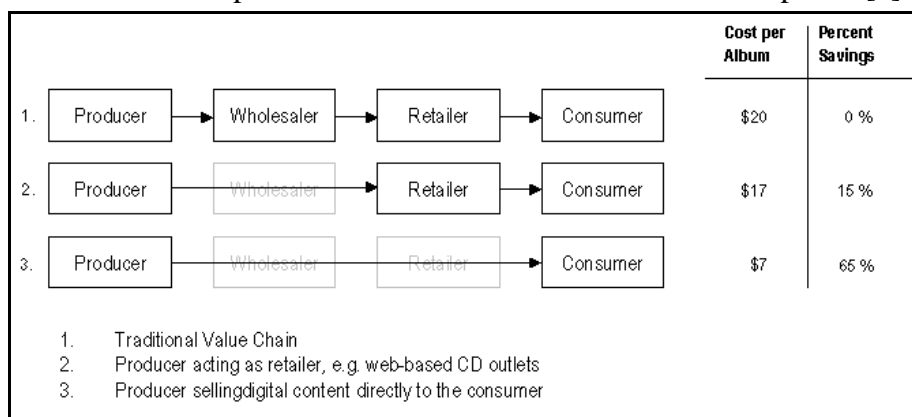


Figure 2 - Different value chains for the music industry[3]

- the recording industry has been very reluctant to embrace the new opportunities made possible with new technology
- the music industry is awaiting the right model enabling safe distribution and ensuring high revenues – many proposed new models have been opposed by the industry
- major labels have just recently started to accept the potential when combining traditional value chains with digital technology – several levels in the value chain can be eliminated resulting in reduced cost, and thus higher revenues. (see figure 2, above).

When extending the third value chain to include the following step, where the consumer looks for the physical experience (i.e. concerts, CDs, t-shirts and souvenirs, etc), only a fraction of the revenue stream comes from sales of recordings on physical carriers. [5] The changing prerequisites of the market have forced many record companies to try to reduce their reliance on mechanical revenues. [6]

Some of the advantages from a producer/consumer perspective with the third value chain, apart from fewer value adding steps, is a closer contact with the consumers, reduced selling time, lesser need of warehouses and, perhaps most importantly, more customers. There are also environmental advantages, assuming that the first value chain implies an overproduction of the physical carriers, and heavy environmental load due to physical transports. However, music services today are generally not profitable since most of the revenues goes to the music industry. [7] It can even be argued that offering music free over the net, where a vast audience can be reached using file-sharing technologies, in fact can be more profitable than producing physical products before reaching the market. [8]

Consumers and producers of digital content, as well as network and service providers, must make efforts to reach compromises and overcome cooperation issues in order for the digital-content services and market to evolve. [9] The three parties, including the network operators, are inter-dependant, thus, in a long-term perspective, lawsuits, piracy, and other malicious activities will be counter productive. Below, some essential issues are listed, which, in the relationship between the producer and consumer – which either directly or indirectly involves the network and service providers – will make digital music distribution truly accepted. [10]

Control over files – digitally distributed music tracks can easily be spread to other users; legal services tend to prefer keeping control over the music using a central server to keep track of all downloads and streams, central server facilitates payment regulation and access control. Control over revenues – the recording industry seeks to adopt a way of collecting and distributing royalties generated from digital music services; few online stores today have been able to gain the major record labels' confidence. Satisfying consumer needs – attracting customers is crucial for business success, thus the service must satisfy real consumer needs.

4.1 – The virtual and the physical.

Many business initiatives that started in the virtual world with very high expectations have now incorporated physical attributes that are characteristic for traditional consumer-producer relationships. Evidence from the music industry suggests that the huge availability of music in the virtual market has triggered an equally impressive increase in consumer demand for physical experiences in form e.g. live concerts. The virtual cannot exist without some physical connection in the digital economy. However, assuming that the physical artefacts can have a variety of qualities, some prerequisites are essential for both customer and content-owner satisfaction:

1. a token for the customer that provides exclusive access or even status
2. an artefact that provides content owners “sufficient” possibilities to monitor and control the customer without placing unreasonable demands as regards e.g. privacy
3. a solution where limits to the consumer's freedom to experiment and adapt are on an acceptable level

4.2 – B2C (business-to-consumer) DRM business models

The B2C models are classical supplier-recipient payment models, where the supplier (business) delivers all the products to all recipients (consumers), whose payment is then trans-

ferred back to the supplier, although advance payments to personal accounts and subscription solutions exist.

Online Music sellers basically rely in the main on B2C models. iTunes and Napster2.0 are two different examples, with the former relying on unit sales via downloads, and the latter offering a subscription model. Music downloaded via the subscription model usually results in all purchases being un-accessible once the subscription is cancelled. iTunes and Wal-Mart offer the possibility to purchase single tracks that can be copied to physical carriers (CDs or DVDs) for unlimited use. Other B2C models are:

- Advertising models; content providers (mainly small and unsigned acts) can upload music for free distribution and rely only on revenue from ad sales or promotions
- Value-added models; adding a case and a book with lyrics to the CD, or a membership to a fan-site where extra tracks and videos can be downloaded

The advantage of the B2C models is the fact that content is stored on a central server, making DRM much easier to control. The negative impact of the B2C model is that when starting an online business, the outlay for buying a server, maintaining it plus the cost of purchasing adequate software, may result in the initial costs being too significant for an entrepreneur to regard the model as viable. Another drawback is the sensitivity of the system. If the server goes down, everything stops and customers may opt to visit another store instead and the business loses predicted revenue. [11]

4.3 – C2C (Consumer to Consumer) DRM business models

There have also been attempts to introduce C2C models, where the producer uses the consumers' computers to distribute music, and a central server to validate the copyright status of the files to be distributed. Only approved files are distributed and sold through the network. Weedshare and Altnet are two examples. Altnet even uses the P2P client KaZaA as an infrastructure for distribution, thus creating an overlay network on top of the Internet [6]. The drawback of the Altnet solution is that once the DRM protection is removed the copyright owner loses the ability to profit on his or her creative work.

In the C2C models the supplier makes the recipients act both as distributors and customers, and as a consequence the supplier is able to reduce its cost for distribution. It is fair to say that this way of distributing legal music online has its origin in the rise and fall of P2P networks such as Gnutella.

The subscription C2C model also exists, which is almost identical to the B2C case, except for the use of consumers in a P2P service for distribution, however, traffic is monitored and only approved tracks can be distributed.

4.4 – ISP (Internet Service Provider) DRM business models

A third group of business model where the problem of digital rights owners' revenues could be solved are the ISP models, where the ISPs pay a certain fee per subscriber to the owners. This is based on the facts that a fast connection is required to easily download music, movies and games, and that the ISPs already charge the subscriber a monthly fee for unlimited use. This is the model used in another service, PlayloderMSP, which was launched commercially in early 2004 [12]. Playloder MSP is a partnership between the music site playloder.com and the broadband service provider Bulldog, and offers fast broadband access to the internet, guaranteed quality, legal music – no additional charges for music service, files are guaranteed quality with full information, no spoofs, no viruses, no lawyers, and one inclusive price

By using fingerprinting technology the downloading can be monitored, facilitating the fair distribution of royalties to the rights owners. Playloder MSP works as a "walled gar-

den” where users can share music with each other inside but not outside the network. Only tracks from recording companies that have a deal with Playlouder MSP are swapped and it also allows high-speed transfers between the users.

Similar to the above is the model where ISPs are treated as digital retailers with some content responsibility. In this model the ISPs would control all file distribution over the Internet. This would involve watermarking and fingerprinting technology to monitor all files transferred from websites and P2P networks.

5. DRM Business models for the future

The future business models that the study included can be grouped into one out of three different categories; licensing models, micro models, and no copyright. The models attempt in different ways to compensate creators for usage of copyrighted works.

Licensing models can, in its turn, be grouped into three different categories; “Voluntary Collective Licensing” (VCL), “Individual Licenses”, or “Statutory Licensing”, each having its pros and cons. VCL is based on the model used by radio for more than 70 years, where major labels join forces and offers licenses that allow stations to play their music. In the online-music case this would eliminate the basis for a majority of all lawsuits, and no need to change the copyright law. [13] Individual Licenses is a scheme where the individual consumer (voluntarily) buys a license to freely download and share files on the Internet, using whatever technological solution is best for the purpose, i.e. not only P2P. Copyright owners will in turn receive statutory license fees, fairly distributed amongst them. Companies offering content for these licensees could make different offers, e.g. monthly license fees or per downloaded file, allowing the consumer to choose according to their preference. Statutory Licensing is a more controversial scheme. Government would here force the copyright owners to make all their works available and in turn they would receive some kind of compensation. These licenses have been used earlier in history with pianolas, cable TV, etc.

There are mainly two different kinds of micro models; “Micro-Refunds” and “Micro-Payments”. The micro-refund scheme involves collecting small fees for each copyrighted work accessed and totalling them into a monthly bill. This has been seen as problematic in earlier studies, due to two different reasons; collecting all bills into one bill that is paid by the consumer could result in the consumer experiencing it is expensive and is reluctant to continue using the service, or the consumer receives too many bills and experience problems to see “the whole picture”. Both reasons are recognised by the content providers as well as the network operators. [9] The micro-payment scheme is also called voluntary tipping as it is based on voluntary payments for content that is free to download. Freeware programs are proof that the scheme works, but not all agree. Content owners argue that consumers’ voluntariness can not be trusted, and consumers think micro-payments makes it hard to understand the total cost of the content accessed.

A No-Copyright scheme is foreseen by some for the music industry. Concerts and commercials are important sources of revenue for artists today, and it is even argued that only the top-10 percent of the artists make money selling records. Because of this some people, including David Bowie [14], believe that copyright is an old relic that will not be part of the future. Another person who agrees with this is Wilfred Dolfsma, assistant professor at Delft University of Technology, who affirms that copyright for the music industry has served its purpose [15]. Bain & Company presented a report in 1999 [16] which analysed the revenues and the profit of the record industry. According to their findings the retail sale of music generates only 10 percent of the total profit. The main profit share resulted from advertising revenues and concerts.

6. Likely effects or results

The content industry can position itself between two extreme ends of a spectrum when considering implementing a DRM system. The first option is to stay with the traditional solution of seeking a maximum of control over consumer usage. This is characterized by restricting the content that is sold such as limiting the number of times content can be burned, copied and transferred. Since basically all systems can be circumvented it is imperative, in order to protect both rights owner and the content available, to have some sort of law enforcing body. This is the current model used in the U.S. where the RIAA is filing lawsuits against copyright infringers, and is being picked up in many European countries, e.g. Sweden. The problem with these highly intrusive and controlling DRM systems is that they can lead to consumer resistance as there is a clash with the traditional interpretation of ownership from the physical world. People are used to the physical ownership interpretation – in which you can do practically anything within reason with your bought CDs, such as making a copy at convenience, lending the CD to a friend, etc. – and they expect similar rules to apply for “legally” downloaded songs. Another, rather controversial, method that could be used to prevent “illegal” P2P file sharing is to infect the system with malignant “anti-piracy” viruses, which has just started to appear in P2P networks [17]. Some even argue that the music industry is responsible for these occurrences, though there is no evidence to back such an accusation. Furthermore, actions like this could easily backfire, resulting in evermore troublesome bad-will and bad business.

In the wake of the “intrusive investigation” mentioned in the introduction, lawsuits against the initial plaintiffs have been coming thick and fast. One reason is that the Swedish Anti Piracy Bureau had used a mole inside the ISP organisation to secure evidence in advance, or to “plant evidence” according to some critics. Another reason is that the listed works, in fact, were not found. This is, by some, proof that the investigation was illegal, based on guesses or defiance, or that the problem is not as big as the music industry implies. The Swedish Data Inspection Board stated in early June [18] that the actions taken by the Swedish Anti Piracy Bureau were in fact violating the Personal Information Act (personuppgiftslagen). It is only legal for public bodies to register information on criminal activities. Public manifestations against intrusiveness and control mechanisms have been organised by “pirates” in various places of the world, and at some occasions anti-piracy organisations have tried to intervene, both legally and illegally [19].

The second option will be viewed by content owners as somewhat controversial. This would require that the whole online music distribution must be redesigned in order to function. The idea is inspired by the non-intrusive model used by collecting societies all over. The approach is to monitor all transfers of music files through P2P networks, web pages etc. and by doing so gaining an overview of how collected money is to be distributed. How the money should be collected is debatable, but there are several alternatives that can be used, e.g. included in the subscription fee for the broadband service. This strategy is not intrusive since only the traffic is monitored, and not by whom a file is downloaded.

7. Conclusions

Our research has shown that the media industry has always been very reluctant in implementing new technology. This phenomenon can be enlightened with several examples, one being the introduction of the radio. However, once demand from the public has reached a critical level, the industry has been forced to accept a change. These changes have then proved to benefit both parties resulting in higher earnings for the industry. The same resistance to adopting new solutions can be clearly observed in the digital music industry.

Since P2P services enable lower costs, more power and more efficient utilisation of resources, they can be of crucial importance for businesses in the future. Although there are

many advantages with P2P services there are still several areas that need to be investigated or improved, in particular how property rights should be managed in such environments.

Even though an entirely new distribution channel has been revealed with the advent of Internet, music services, for instance, have not yet been able to fully exploit its potential. As a consequence, the public has not embraced en masse available “legal” services even though one can see the huge popularity of the so-called “illegal” P2P-networks.

Internationally, voices have been heard stating that the music industry will win the fight to get the legislation they want, but they will lose the battle against technology development, and always have. The music industry, though, will eventually, in its turn, overcome this obstacle and regain control.

There is a need to investigate further the qualities of the physical/virtual relationships in these contexts, and to verify with tests that suitable combinations of physical/virtual products and services can provide both consumers and content owners with greater possibilities to experiment with new applications

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Can Copyright survive the Music Industry's digital strategies?

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Abstract

The digital revolution has unleashed a variety of emotions and passions in the music industry. Two extremes have dominated analysis, strategy and decision-making, namely fear and greed. The *fear* stems from loss of control if consumers can make any number of perfect copies that can be transported instantaneously around the world. The *greed* follows from the theoretical possibility to use DRM and copy protection technologies to control how often, when, where, or even on which technological platform consumers can enjoy their music, in ways never possible in the analogue world. Much industry effort and rhetoric has been focused on hindering the spread of file sharing networks (P2P) but with little apparent success.

The paper presents two alternative future scenarios. In the first, file sharing networks become legal via some form of blanket or compulsory licensing regime, probably involving a sharing of revenues between copyright holders and providers of broadband services. In the second, music industry efforts to heighten excludability, i.e. to extend control over how consumers can or cannot use copyrighted materials, lead to a powerful backlash, which could result in a significant decrease in the understanding of and respect for copyright in society, and ultimately cause the collapse of the copyright system.

The paper is based on research data from a variety of sources and disciplines as well as historical comparisons with other previous cases of disruptive technologies and related industry responses.

Introduction - A long history of disruptive technologies

Disruptive technologies have a long history in the media industry, as well as corresponding attempts by established players to thwart their introduction (Kusak & Leonard, 2005). Thus pianola manufacturers tried to ban the introduction of the gramophone record, music publishers tried to stop radio in the USA from playing music – the argument was that both would kill the existing music industry. Similar arguments have been used over the decades as technology has brought us television, the sound cassette (cf. the “home taping “ debate in

the 1970s/1980s), the VCR and now digital networks with file swapping opportunities via Peer-to-Peer technologies.

P2P, however, is the first case on record of the music industry going beyond efforts to block technology by taking those developing and selling it to court, and focusing instead on legal actions against random choices of individual users. The strategy's aim of stopping individuals swapping copyrighted materials via P2P networks has not had a spectacular success. The industry, and indeed society as a whole, since industry actions are supported by current legislation, is at a crossroads position. Will the music industry, consumer groups and involved technology providers find a solution that legalises file sharing (with some form of revenue generation and distribution system)? Or will the fight be extended with more Draconian sanctions, coupled with the risk that the delicate balance between consumers' and rights holders' interests, on which copyright relies for survival, will be disrupted, leading to a possible collapse of societal support for the IPR regime?

Powerful emotions in tandem – fear and greed.

The digital revolution has unleashed a variety of emotions and passions in the music industry. Two extremes have dominated analysis, strategy and decision-making, namely fear and greed. The *fear* stems from loss of control if consumers can make any number of perfect copies that can be transported instantaneously around the world. This entails a major threat to the perceived ability of producers to retain their exclusive rights.

The *greed* follows from the theoretical possibility to use Digital Rights Management (DRM) and copy protection technologies to control how often, when, where, or even on which technological platform consumers can enjoy their music, in ways never possible in the analogue world.

The mixed effects of fear and greed has fuelled a very confusing public debate, characterised by claims and counter claims, and considerable invective intertwined with frequent references to moral standards regarding ownership of property. Those who venture any opinions which can be presented as “pro P2P” have been dismissed as being against the whole principle of intellectual property rights and related moral standards. As De Cleen (2005) concludes, “Given the power of the copyright lobby in influencing legislation and its prominent position in general debates on culture, a more critical treatment of cultural industry discourse by academics is desirable”.

An economic analysis of excludability

Economists analysing copyright in the digital era have highlighted the dangers of using the law to “heighten excludability”, i.e. to use exclusive rights to expand control over what

consumers can or cannot do (with or without demands for payment). As excludability increases, so does the initial potential for higher revenues. But so do the costs for policing and implementing such copyright-based demands (Pickard 2004). At some point the costs will exceed revenue increases and the activity will become counter-productive. This has already happened with file-sharing.

There is no publicly available data to indicate that the substantial revenues gleaned from fines and out of court settlements with file-sharers have led to an extra cent in royalties to artists and composers. The costs have been swallowed up by lawyers' fees and trade bodies' costs. And file sharing is still increasing according to Big Champagne, a monitoring firm regularly used by the major record companies for P2P intelligence . P2P file-sharing grew 14% in the USA in January 2006 compared to the figure for January 2005, with an estimated average number of 7 million simultaneous users (Anonymous, Music and Copyright, 2006). The point where costs outweigh revenue increases has already been passed. This suggests that a speedy solution that legalises and monetises file sharing should be an imperative and attractive business solution.

Economists also observe another danger with a continued heightening of excludability. The purpose of copyright is not only to protect a work, but also to create more innovation and economic value (Towse, 2001). Control that limits the ability to adapt or improve existing ideas can hinder innovation. One can also reach a point where demands placed on consumers clash with general concepts of what is reasonable regarding limitations on ownership of a cultural product. The SONY-BMG "root kit" debacle (Billboard 2006-01-07), involving espionage and risks to a customer's property brings us closer and closer to this point where societal understanding of and respect for copyright could collapse. It has certainly given anti-music industry consumer groups all the free ammunition they could ever dream of. Copyright is a very vulnerable animal, requiring for its survival a careful balance of interests between users and creators. Current music industry strategies that focus so heavily on what users cannot do, with very little mention of the positive role as a economic incentive to create, could lead to collapse of the very source of income they are supposed to defend. As Frith (2004) points out in his introduction to the 2nd edition of "Music and Copyright" – "the notion of fair use – once essential in the attempt to balance the interests of authors and users of a work – has been systematically marginalised"

A pragmatic vision - P2P becomes legal

The following prediction is proposed. Factors supporting the vision will then be enumerated.

File-sharing within a variety of P2P networks will be come legalised within three to five years, based on some form of simple licensing system which allows consumers to share content (and opinions of the same), and to even modify content within acceptable limitations of moral rights. Revenues will be generated and distributed to rights holders according to best possible non-intrusive monitoring of what is actually shared. The use of intrusive DRM systems to control and spy on individual's activities will be rejected by consumers.

Prerequisites and current observations:

- Refined query and search tools in P2P networks allowing users to find a “needle in a haystack”, thus supporting general goals of cultural diversity and creative activity/interactivity, rather than mere short cuts to newly released popular content. Current studies of requests in P2P networks suggest a shift from Top 10 hits to a broader range of above all older and more obscure works.
- A non-intrusive DRM system intended primarily for monitoring usage via collecting aggregated data, rather than for controlling what individual users can or cannot do. Some form of watermarking or tagging will be required to identify works that are swapped. Consumers will reject highly intrusive DRM systems.
- An awareness amongst legal authorities of a) that file sharing is so widespread in networks that tend to become more and more anonymous that current legal actions cannot stop it, and b) that the possible imposition of some form of compulsory licensing might be necessary if major content owners refuse to voluntarily embrace the notion of legal P2P networks. A related factor is the negative effect on society's overall respect for the law when specific legislation cannot be effectively enforced.
- Growing awareness that actions aimed at chasing users of popular P2P networks such as Kazaa, combined with actions to clog up such networks by filling them with polluted files (“spoofing”) will lead avid file sharers to seek more anonymous networks where it is harder to be identified. This development towards “darknets” could cause considerable societal problems as regards fighting other forms of criminal activities and has even caused concern among senior Microsoft researchers (Biddle, England, Peinada & Willen 2005)

- Growing ground-swell pressure from those who are developing new business models for the so-called “free download” environment of the Internet, as well as a growing awareness amongst major content owners that activities within P2P networks are a vital source of marketing intelligence. An increasing need to be able to inform P2P users that specific material is available for consumption, encouraging movements such as Creative Commons.
- Growing concern amongst creators and performers that the emerging “legal download” services give the producers a very large percentage of the proceeds, but leave very little for performers and writers. This was the main reason for the French performers organisation, Spedidam, to lobby the French parliament in 2005 to introduce a so-called “global licence” to make P2P legal. Revenues generated would be distributed between producers, performers and authors/publishers (Spedidam 2005).
- Growing appreciation of the need to be able to access existing content of different forms and use it as an inspiration for new ideas, alternatively as base material which can be modified/improved (open content).
- A growing number of studies, some even financed by the music industry, that conclude that avid file-sharers include groups of individuals who are the most active consumers of culture and cultural products such as CDs, legal downloads and concert tickets (Beauvillain 2000, Musically 2005, CRIA Canada 2006).
- An acceptance by telecom operators providing Broadband services of the need to be involved in the billing process (revenue sharing, subscription, micro-billing etc.), as opposed to a rejection based on lack of conduit responsibility in accordance with the WIPO 1996 Copyright treaty and the EU Copyright Directive of 2001.
- A speedy and proactive policy by authors’ collective management societies to start the process of negotiating with those who provide and derive revenues from broadband Internet access services

Historical support for the vision.

There have been numerous cases of disruptive technologies affecting the media industry and unleashing widespread attempts by incumbents to thwart such developments. When radio was introduced in the USA, music publishers tried to block the use of music in this new medium. By and by, a blanket licence solution was agreed, and radio became the most important marketing channel for recorded music.

The film industry worked hard to have the video cassette declared illegal (Sony Betamax case) but failed in the US Supreme Court – the same device then became one of the industry’s most important sources of revenue. The recording industry applied similar tactics in the UK when trying to outlaw the dual head cassette recorder (the Amstrad case) but lost. Research into “home taping” showed that this was a vital communications channel for the marketing of new acts. Cassette levies were also introduced in some countries, providing extra revenue for rights holders.

We can see similar developments as digital technology for producing, storing and distributing content has become more ubiquitous and cheaper. The case of P2P technology is somewhat unique in an historical perspective. This is the first time the content industry’s lawyers have gone beyond trying to block technologies or those who develop/sell them, and targeted, often randomly, individual consumers who use them to get hold of or swap content.

The historical lesson is that such disruptive technologies for distributing content can never be blocked. In every case some form of economic agreement has emerged allowing them to develop further, usually in combination with new business models that have generated new revenues for content owners.

Current research findings

As in the case of analogue home taping on sound cassettes in the 1980s, more and more research indicates that many file sharers are in fact heavy consumers of cultural products and experiences. Many concert promoters believe the rise in concert revenues is a direct result of the marketing value of file sharing. Consuming content in the virtual space seems to trigger off demands for related physical experiences.

According to Selg et al (2005), file sharers can be divided into three main groups:

- The free riders. Those who prior to P2P copied content from radio or TV channels, but rarely invested much in original products (CDs or VHS tapes).
- The enthusiasts/samplers. Those with a considerable interest in cultural products, who often use the Internet to sample products, and not infrequently pay to experience the genuine product (physical or via live concerts, or widescreen in a cinema).
- The squirrels (or data nerds). Those who store and swap huge quantities of content, but can rarely consume more than a tiny fraction of the same. The trend towards more anonymous networks has encouraged such persons to transfer larger and larger

quantities of data over the Internet when creating networks of trusted partners, often involving some elements of encryption.

The 2005 move to make P2P legitimate in France via “global license” is an interesting development. This is heavily supported by organisations such as Adami and Spedidam (representing performers’ rights). In this context they are taking a totally opposite view from that of IFPI, RIAA and indeed many other performer organisations in northern Europe. The French proposal is based on producing a license fee that is negotiated between rights holders (performers, composers and producers) and consumer organisations. Billing would be via the ISP or telecom company invoice. The proposal was initially approved as an amendment to a Copyright Bill in December 2005, a decision which will be subject to a new round of voting in the French parliament in 2006.

The content industry’s ambivalent strategies

The major content industry players’ strategic responses to P2P development have been characterised by paranoia. When Austrian programmer, Walter Ritter (31), developed and made available for free the PearLyrics software in 2005, a major publisher, Warner Chappell, immediately sent in lawyers and threatened to sue if the demands of a “cease and desist” letter were not adhered to. The application allowed those who downloaded music from iTunes to search the Web for available lyrics. “This is just a hobby of mine” said Ritter, and added “I like to create simple applications that provide good usability”. Later Warner Chappell apologised after discovering that his application probably was not illegal! A typical music industry response of “squash first, question later a new technology” (Billboard 24 December 2005).

A policy that frightens the second file sharer category identified above (“enthusiasts”) away for P2P can clearly have devastating long-term consequences for the content industry. The fact that major record companies are investing more and more in “sniffing” activities, monitoring what is requested and exchanged on P2P networks is an indication of the relevance of the “enthusiasts” activities. Companies involving in “sniffing” have developed expertise for analysing P2P traffic which probably produced results that are just as good/bad as some of the traditional sampling techniques used by many existing collective management societies for analysing, for example, radio or concert performances.

Two other content industry strategies involve suing and spoofing (Edström-Frejman 2005). Via high profile legal actions individuals are taken to court for illegal down or uploading (a

policy of affecting consumer behaviour via creating fear). Spoofing involves filling P2P networks with false files that clog up the system (a policy of affecting consumer behaviour via annoyance).

The latter form of pollution could produce a severe backlash for the record companies. A spoof often consists of a genuine sample of a work followed by a huge amount of incomprehensible data. Producing such a combination can probably be viewed as incompatible with the moral rights of the creators involved; unless all have given their permission, then this is hardly legal, at least in relation to copyright law in continental Europe. As yet this has not been tested in the courts. Also, since this is a form of marketing via making parts of works available in digital networks, record companies should license this in advance with authors collective management societies – this has not happened, presumably because the record industry prefers to retain a very low key profile regarding its activities in such pollution strategies.

Differences of opinions in the industry

One can witness an emerging split of opinions between those representing composers (e.g. publishers and collective management societies) and producers and their organisations (IFPI, RIAA, MPAA etc.). One European collecting society representing composers and publishers has already decided to distance itself from any actions by the IFPI involving high profile court cases against individual file sharers.

Tensions between smaller “independent” record companies and the majors are also emerging. A Canadian management/production firm, The Nettwerk, has publicly announced its intention to pay for the legal costs and any fines incurred by the family of a 13 year old girl who downloaded a track of her favourite artists, Avril Lavigne . the family is being sued by the US trade body, RIAA, and Avril Lavigne is on the Nettwerk’s artists roster.

The German Association of Independent Record Labels, VUT, in connection with an initiative labelled “Respect the music – Copy Protection Free Campaign” has produced a manifesto with the claim that “the legal persecution of P2P users turns fans into criminals and does not solve the problem of piracy” (www.respect-the-music.com/index.html.en 2005)

Despite these differing voices, and with rhetoric from the major record companies suggesting that all file sharing is illegal, then those who wish to have their works available in P2P networks (for marketing purposes) seek new ways to inform consumers that they do accept such forms of distribution. The growing popularity of the Creative Commons movement is an example of smaller content creators/owners reacting to the major players. The creative

commons principle of making available content in the public domain (as long as there is no commercial abuse) is seen by music publishers as a major threat to their survival, and could well enhance conflicts between different players in the content industry value chain. This value chain is already in a state of flux with the many different middlemen role being questioned by more and more creators/artists. Publishers are moving into areas previously the domain of record companies; record companies are trying to extend their access to revenues from traditional physical sound carriers, not only to virtual equivalents, but also to other physical areas (merchandising, concert revenues).

Further examples of demands related to exclusive rights.

Examples of “heightened exclusivity” referred to above, continue to emerge and amaze. “Podcasting” is a new phenomenon, where products such as radio programmes can be downloaded from the Internet and listened to at a later time or date. Licensing this new animal has clearly been a problem for the music industry, thus the delay in providing simple solutions to e.g. broadcasters. In March 2006, the UK copyright society PRS/MCPS announced a practical solution. For a fixed scale of fees, podcasters can make programmes with music content available via the Internet – undoubtedly a welcome development for broadcasters wishing to use this new channel to reach consumers. But, there are a number of conditions in the small print that raise a whole new set of issues. Podcasters are required to “obscure at least 10 (ten) seconds at the beginning and end of each individual track played in a podcast with speech or a station ID”. What’s more: “Music may not constitute more than 80% of any podcast. No individual piece of music may be played more than once in a podcast. Podcasters may “not produce podcasts that contain recordings from a single artists or that have more than 30% of the musical works written by the same composer”(PRS/MCPS 2006).

The aim is clear – to make it as difficult as possible for a user to copy any music off a podcast. But the cost of this is, undoubtedly an increased degree of interference in the editorial integrity of the producer compiling the podcast. Issues of moral rights are also raised – does every artist or composer want a chattering DJ or a Station ID eclipsing the sounds they produced as an introduction to a song? Any song with an introduction less than 10 seconds will presumably never be included, irrespective of its quality and interest.

A heated debate has been raging in the USA since late 2005 over music industry demands that receivers of digital or high definition radio should include protection devices which make it impossible to copy anything that is broadcast. This is another type of demand based on existing copyright legislation which could easily clash with consumers views of what is reasonable as regards limitations on usage.

Telecom operators' strategies.

P2P accounts for a major share of the traffic that makes the broadband networks "tick". International conventions (e.g. WIPO Copyright Convention 1996) allow the operators of digital networks abdication of so-called "conduit responsibility". Operators, up to now, have been unwilling to engage in any discussions which might lead to assuming joint responsibility with rightsholders for any form of revenue generation/distribution arising from P2P activities in their networks.

But this will inevitably change. Some interesting developments can already be discerned in the mobile sector. At least one Swedish operator keen to establish 3G network businesses has been offering "unlimited downloads" of several thousand songs to subscribers as part of their subscription fee. This trend is likely to continue, and this, once again supports the initial hypothesis.

Final word

All the above trends and analyses provide collective support for the hypothesis that P2P will become legal within the none-too-distant future, as long as the prerequisites can be satisfied. This will involve the right mix of partners and technology grabbing the initiative at the right point in time. Even if the recent debates in the French parliament did not lead to a new regime for P2P, the initiative has served to bring the debate out into the open.

As to which alternative scenario will become a reality, the jury is still out. Since immaterial rights are likely to play an increasing role in any revenue collection and payment system for digital distribution channels, the odds are on a pragmatic solution. This would be one that recognizes that current legislation is out of tune with reality in society, both technological reality, and the reality of citizens' perceptions as regards ownership and control

(Blomkvist,U., Fritzell,M.,Oloffson,M. 2005)

An alternative development to the pragmatic vision, based on unfettered actions triggered off by fear and greed, should be viewed in the context of this warning by Pickard (2004): "Contemporary legal measures to provide increased production for virtual products represent the use of law to heighten excludability, but in doing so, they run the serious risk of destroying the recognized social benefits of the development and spread of information,

knowledge, and cultural products that have been previously recognized in all copyright law”.

Pickard’s strong warning was published in 2004. Other voices with similar conclusions have been heard even before the terms file-sharing, DRM and copy protection even entered the debate. Klimis (1999) is his study of “disintermediation and re-intermediation in the music industry” concluded from a study of major record companies’ digital strategies that: “Whilst not questioning the significance of copyright industries or the need for protection of the creator of intellectual property, an undisputable conclusion of this research is that concentration of copyright in the hands of a few is hindering rather than promoting new multimedia and e-commerce industries”.

It is clear that by powerfully broadcasting a message that file sharing is illegal – an incorrect statement if all rights holders desire to make their files available in a P2P network – then the development of new business models which use the Internet primarily as a marketing channel will be thwarted. When the rhetoric is supported by references to moral and legal factors necessary for the copyright system, then maybe the pragmatic way forward, via legalising and monetising P2P, will not materialise. This, according to the analysis above, will only leave the other alternative, that where copyright itself becomes the victim.

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i2010 EU conference, THE GREAT PANEL

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Title: Policy Incompatibilities – legal regimes, today’s realities, dynamic visions and goals. Some experiences from the EU-funded MusicLessons project (www.musiclessons.se)

Presentation summary

Decision-making in the European Commission involves two overall forces that drive the hierarchy. On the one hand there are International agreements, conventions, and resulting legal frameworks that member states are required to implement. The WIPO 1996 Copyright Treaty and Competition Law are examples. But policy and actions are also driven by visions and realities that vary over time. With conventions often based on knowledge and negotiations up to a decade old, policy incompatibilities can emerge as a) member states implement convention-related directives, and b) as policy makers adapt to today’s realities, not least in the field of technology.

Media and communication policies always reflect a mixture of economic, technological and cultural impulses and visions, and are frequently coloured by the lobbying activities of parties with resources and clear impressions of their vested interests. The same can be said of policies that have emerged from the notion of the Information Society. The vision is a society where digital technologies are seen as the key to new and more effective ways for citizens, businesses and governments to share and store services and products, and partake actively in everyday life. The implementation involves a patchwork quilt of different types of legislation and initiatives; often these take the form of policies that seem to move in mutually incompatible directions. Several examples have been identified in the MusicLessons project.

As overall policies such as the Lisbon agenda, and more recently i2010 filter down to the various directorates of the European Commission, opportunities arise for further problems of coordination. Legal authorities briefed with the task of implementing the Copyright Directive, often encouraged by heavy lobbying from major international content-owning conglomerates, seek to hinder “illegal down- and up-loading of content in digital networks”. On the other hand, the main driving force for achieving the spread of broadband is often the same traffic, for example in file-sharing networks.

Our analysis suggests that several decision-making entities are affected by the above:

- Legal concerning intellectual property issues,
- Information Society directorate (more recently incorporating audio-visual activities) covering access to infrastructures and e-applications,
- Internal Market and Competition directorates (sometimes with overlapping responsibilities) looking at monopolies, mergers, access to the market,
- Culture and the issues of protecting and developing European cultural heritage (with the issue and the competitive potential of cultural diversity enjoying higher and higher status in the political debate)

The analyses in this report from the Music Lessons project remind one, once again, of the constant need in the policy area to consider not only technological issues, but to focus on the interaction between technological, economic and social/cultural factors. Cultural issues of range of choice, diversity etc. cannot be analyzed without taking account of trade and economic issues. Different policies interact with each other - sometimes incompatibilities arise. Policies must live a dynamic life.

The short report to the panel will focus on a number of particular areas that feature in the first i2010 report to the European Parliament where such incompatibilities can be

noted. They include the conflict between the widespread control opportunities that digital copyright law offers content owners (via DRM systems), as opposed to the desires to develop new business models, encourage infrastructure improvements and access (e.g. broadband roll-out), creativity amongst citizens and innovation that is based on the improvement of existing ideas. Cultural diversity, the most important driver behind innovative potential in Europe, can become marginalised in the wake of these incompatibilities.

A particular example concerns the pan-European licensing of on-line services. This illustrates how i2010 goals as regards e-commerce can clash with analyses based on a strict interpretation of competition law. The result can be harmful for innovative SMEs, give unreasonable support to existing oligopolies, increase rather than decrease existing trade deficits in cultural products from the creative industries, and ultimately be devastating for the growth of a knowledge-based, competitive society in Europe.