



## **Broadband technologies transforming business models and challenging regulatory frameworks – lessons from the music industry**

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### **MusicLessons – Deliverable 8b**

#### **Impact assessment on policies, directives and business models – Final thoughts**

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**Abstract:** This report is the eighth deliverable in the project Musiclessons, presenting preliminary conclusions from the results from seven earlier reports. A second report will include results from workshops and dissemination activities.

Work package 5 (WP5) focused on data collection and research into new business models analysing Internet applications labelled Peer-to-Peer (P2P) or file sharing. P2P applications leverage unused resources and user creativity present at the edges of Internet as discussed in WP 2. A key task was to understand technical developments and correlations with consumer behaviour and changes in value chains and business models. WP3 established a coherent picture of the users of P2P, their motives and the effects on the general pattern of music and content consumption. In WP4 policy incompatibilities were identified; this involved identifying existing legal and technical constraints on improved policy decision-making, particularly in the area of balancing conflicting demands.

This report presents the most important conclusions and policy recommendations, which may not be obvious to outsiders observing the media industry in times of rapid technological change. Some sectors of the media industry (music, film) have seemingly suffered more from this change than others, responding with rhetoric, intentionally incorrect interpretation of statistics and heavy lobbying, rather than accepting consumer preferences. Decision-makers can draw hasty conclusions from not being aware of all the facts. Not so obvious is the change of the web from a one-way, read-only medium to a more two-way, participatory, collaborative and interconnected medium. Cultural diversity has moved from main-stream and traditional media to the Internet as users have become both creators and consumers of content. Some current legislation builds on old technology resulting in unnecessary incompatibilities with today's realities, as well as the protection of old business models in established industries rather than supporting creativity, innovation and emerging business models.

Keyword list: Information Society policies, IPR legislation, P2P, Music, Internet, User behaviour, Business models

## Executive summary

1. The personal computer has brought about new patterns of user communication and user interaction. The technological advances have gradually increased the spectrum of content in the user activities, from primitive PC software and games of the early times to advanced multimedia objects of today. The new technology offers increased opportunities for the users; a corresponding weakened control of the content is experienced by the suppliers.

2. A lesson learnt from our research activities is that content in digitalised form is complementary to, rather than substituting content in physical form. Users are prepared to pay for the digitalised content if the conditions are fair and the users' interests are recognised and respected by the suppliers. In most cases it means that the content industry is required to adapt their marketing routines, pricing regimes etc to the new situation.

3. Peer-to-peer (P2P) is a key technology to meet the future challenges on the Internet capacity. ADSL is a business model that does not meet the requirements from the emerging user participation in content creation and must be replaced by symmetrical communication solutions.

4. Another lesson learnt is how oligopolistic industries with far reached control of distribution and marketing channels react on the emerging technologies and new patterns of user behaviour:

- a) By legal means trying to impede the development and use of the new technology.
- b) By slowly offering legal alternatives, but on conditions in order to minimize the perceived negative impact on physical distribution and to maximize the obstacle for new competitors.
- c) By experimenting with Digital Rights Management Technologies with the aim to control *who* is consuming the item sold, *how*, *when* and *where*.
- d) By co-ordinated lobbying activities on a global level to influence politicians to adopt changes in the Intellectual Property regimes in their favour.

### **5. Musiclessons' conclusions and recommendations to the European Commission are:**

a) Needs of creators and innovators are not necessary the same as the needs and demands of major content owners. A content owner such as a publishing house is a business model for distributing the author's work. The economy depends less on this specific manner of distribution than it does on the work of authors who provide the economy with creative input. Regulatory means should not be used to protect any particular business model.

b) With the introduction of information technology, structural changes are inevitable, thereby threatening the positions of established actors but at the same time offering opportunities for new business to develop. Who defends the interests and promote all those small and upcoming companies that we, as yet do not know? The political focus should highlight the needs of emerging firms and industries rather than on support for incumbent businesses and their models..

c) Policy makers must avoid drawing hasty conclusions from statistics demonstrating simplistic causal relationships between new technology and negative effects on existing business.

d) Technology development is always ahead of the legal regime. The result is that visions based on the reality of today's technology tend to get out of phase with the legal regime. There is an urgent need to seek improvements in the Intellectual Property framework in the context of rapid technological change and globalisation.

e) We question the assumption that users of new collaborative software (Peer-to-Peer i.e. file sharing) are incompatible with the existing legal copyright protection scheme and mutually incompatible with the notion of legal one-to-one distribution systems.

f) Users of collaborative software do not comprise homogenous groups but consist of different categories including those who are the most important consumers, purchasers and early adopters of cultural goods and new delivery mechanisms. By dismissing them as criminals one is doing a major disservice to creativity and the important goals of cultural diversity in the EU.

g) Cultural diversity has moved from main-stream and traditional media (television, radio and newspapers) to the Internet. The web has moved relatively quickly from a predominantly one-way (client – server), read-only medium to a more two-way, participatory, collaborative and interconnected medium (server – server).

h) EU policy incompatibilities must be addressed. Lacking coherence only benefits the big, predominantly non-European content owners at a time when there is a trade deficit regarding media products.

i) Horizontal integration, where one company in a business buys another in the same sector, has been the focus for competition law. However when conglomerates link up vertically extra synergies arise between different divisions and more subtle forms of market manipulation are possible and indeed are exercised. An analytical focus on the phenomenon of collective dominance should be a major priority

j) The IPR (and indeed the patent) regime seem to be getting more and more out of phase with technological developments. Previous policy statements emphasising the need for balancing different interests /goals seem to have moved out of focus. As more and more citizens have the opportunity to become creators/innovators, a Draconian IPR regime can hinder development potential in Europe. This applies not only to the audio and audio-visual sectors but also to the whole area of software development (the open Source, Open Content movements). "Balance" must again find its place at the top of the policy agenda.

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## A user driven web

### *New patterns in user activities*

The MusicLessons project has enabled us to expose the fundamental change in patterns of user participation in the creation of content. What originally appeared during the 1980's in small groups of computer enthusiast is now proliferating among large segments of the populations in the industrialised world. This has been possible due to improvements in PC technology, e.g. processor speed and storage capacity, together with advances in communication such as broadband technology, the Internet protocol and other software innovations.

Users have responded in the development of new patterns of *user communication* and *user interaction*. The technological advances have gradually increased the spectrum of content in the user activities, from primitive PC software and games of the early times to advanced multimedia objects of today.

Now the digitisation of media together with globalisation trends is creating radically new market conditions for the commercial actors where new distribution channels are one obvious effect. Perhaps more important are the new forms of user behaviour in the process of selecting and customising content, and to an increasing degree, in the creation of content.

The average user is both a creator and consumer of new content. The web has moved relatively quickly from a predominantly one-way (client – server), read-only medium to a more two-way, participatory, collaborative and interconnected medium (server – server). This is not highlighted or even observed in the i2010-A European Information Society for growth and employment.

Research in new collaborative environments should take this into account. Today's proposed research directions do not envisage the average user to be part of collaborative environments.

### *User driven media and entertainment*

The web will become a user driven media and entertainment channel. A large number of media areas start to evolve. Some old will erode and society will experience many new clashes between the users' interests and large established private actors. The following list shows where the users are active.

<b>New media areas on the web</b>	<b>Examples</b>
New portals	Digg.com
Directories	Open Project Directory (dmoz.org)
Encyclopaedias	Wikipedia.com
Hand books	Wikitravel.com
Photography	Flickr.com
Short films	Atomfilm.com
Broadcast	Youtube.com

Video clips	Video.google.com
Services	File sharing of content (LimeWire), creation of directory (SKYPE)
New areas	Private blogs
Others	Online communities

Many of these areas are potential users of peer-to-peer technology since server based solutions costs too much and income is low – at least in the beginning.

A large number of new media areas will start to evolve. Some old will erode and society will experience many new clashes between the users' interests and large established private actors. Many of these actors are potential users of P2P technology since client-server based solutions (hub and spoke structure) costs too much and income is low – at least in the beginning. Traditional advertising will not be able to pay for all the new development. Users will be bored and conventional advertising will be complemented by embedded advertising.

### ***Users are not unwilling to pay for content***

The existence of free and open content on the Internet can at first sight look like a main obstacle to any legal content business and thus this phenomenon should be counteracted in every possible way. But one lesson from what happened when music became digital is that there has not to be a contradiction between legal music business and the opportunity of a free access to music, provided that the users and the consumers desires are respected. Interviews with heavy file shares show that even those who are downloading hundreds of tunes are willing to pay for music if it can be done in an easy way, the selection is great and diversified, the quality high and the price is fair.

Understanding users preferences and what they are willing to pay for provides an important input to designing business ideas and business models. This gives input not only to the offerings but also delivery mechanisms and what technology to use.

### ***“Mediatization” and “internetization”***

File sharing of music on the Internet has shown that the Internet as a medium in several ways differs from traditional mass media like broadcast media (television and radio) and printed media (newspapers and books). Internet is user driven, communication between peers is crucial, the diversity is enormous, there are no bottlenecks etc.

What has happened up to now is that the old media has invaded the Internet with their traditional content. Content on the Internet is similar to the content of the old mass media. We

refer to this influence from traditional mass media on Internet as the “mediatization” of Internet.

But Internet users do not want to pay the price twice and new alternative ways to share and produce content are developing online. The old media try to learn what Internet users want.

That Internet thus acts as the starting point of media production influencing the traditional mass media and leading to the Internet becoming integrated into old media. We call this process the “internetization” of mass media.

Musiclessons research shows that both processes exist simultaneously. Appendix 1 analyses the two processes further.

## Business reactions

### *PC and piracy: A twin birth*

The new technology offers increased opportunities for the users and a corresponding weakened control of the content is experienced by the suppliers. This process is alternatively described as the “empowerment of the users” or “digital piracy” depending on from which side the opinion is expressed.

From the very start these user activities have been looked upon with dismay by the established business companies. The so-called digital piracy was born with the first PC software, when an angry Bill Gates, then 19 years old, wrote an open letter to the Homebrew Computer Club in 1975 accusing members of theft.

One can expect so called digital piracy to continue. The ordinary user will have difficulties to assess if a specific content is copyright protected or not. Old and traditional content is generally not clearly labelled like for instance content created with a Creative Commons licence. The traditional media industry must be influenced to clearly mark up their content in such a way that there is no doubt which rules shall apply.

During the 1980’s and 1990’s little attention was paid to these developments outside the affected industries. Both the *computer software* and *computer games* industries were new and experienced a strong expansion compared to almost any other business sectors which probably contributed to the small amount of attention that was paid to their complaints. The next media sector to be affected was *pornography*, by tradition a commercial area with very little transparency about market developments, business figures, working conditions etc.

It was not until the new user activities expanded into the *music* field in late 1990’s that a greater public became aware of what was going on. A few years later the *film* industry got involved as well. Now the business models of established industries were challenged, industries with strong degrees of vertical integration between different divisions, with huge amounts of capital invested in production and distribution facilities and with tough market requirements in terms of high and stable return on investment from the capital markets.

### *Lawsuits against technology*

Among the first strategies of the entertainment industries were lawsuits. Historically this is nothing new – the audio and audio-visual cassette met the same response twenty years earlier. Lawsuits were directed firstly against firms that could be related to the software technology used for the distribution of content among users, then against individual users. In parallel, information campaigns were directed to the public and heavy lobbying activities targeted national and international legislative institutions.

The main messages to the public have been that a) the sales of records, films etc are suffering due to illegal file sharing of copyright protected content, b) artists, composers and other creators are deprived due remunerations for their works and c) people working in the distribution chains such as cinemas and record stores are losing their jobs.

Major characteristics of such information campaigns have been

1. Statistics from surveys of file sharing activities, but only referring to figures that are supporting their claims, never mentioning facts in the same surveys that support alternative or conflicting interpretations.
2. Quoting (the very few) independent scientists that support their claims, never mentioning the great number of independent scientists, research institutions (such as the OECD) drawing other conclusions.
3. Repeating simple false slogans such as “file sharing is theft” and “nobody pays for something he or she could get for free”.

The reason for using rather sloppily the term “theft” instead of the correct description “copyright infringement” is probably the ambition to induce a stronger moral aversion among the public against file sharing.

The lobbying activities are aiming at the achievement in the short run of a stiffened application of copyright infringement, and in the long run to strengthen the Intellectual Property regulations in their favour. Above all major content owners desire to hinder a shift from producer-led marketing to consumer-led marketing.

Knowledge of these realities is often very low among politicians and decision-makers. Input comes from the media and strong lobbying organisations. Very little attention is paid to non-biased reports. New knowledge is seldom sought after. As a result lobbyists get too much elbow-room.

### ***Different reactions from other media industries***

New digital technology has not only affected the classical entertainment industries. Other examples of industries that are affected are *newspapers*, *photography* and *digital books*. Interestingly these industries have been far keener to find new business opportunities and adapt to new user behaviour not using lawsuits than their colleagues in the traditional audio-visual industries.

IP *telephony* is causing the telecom operators large reductions of income. New user behaviour on the net causes the operators to abandon the old traditional copper network. Telecom operators have embraced the new technology starting to introduce IP telephony simply because it gives them a possibility to enter new markets by bundling services (“Triple Play”) in a more effective way.

The *broadcasting* industry is probably the next in line to experience a transformation similar to the telecom operators. Some<sup>1</sup> of them are realising that the new technology is vital for their survival and start to experiment with customers.

The broadcasting industry is internally building up knowledge of how to exploit P2P technology to transform the distribution of content so that high-quality audio and video files and streams can be distributed at affordable costs. Broadcasters will pay less for bandwidth and will have more incentive to invest in original content.

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<sup>1</sup> BBC with the peer-to-peer experiment iMP

## Effects of peer-to-peer activities on music sales

### *Peer-to-peer stimulates the interest of music*

In contrast to the claims of the music record industries, the results from Musiclessons show that file sharing of music in the P2P networks stimulates the interest for music. Even if old favourites are most popular, many down loaders also discover new music and new artists, and many of them later buy a CD or visit a concert with this artist. It also happens frequently that down loaders buy music that they have downloaded and already listened to. Most often it happens for heavy down loaders, which once again show that file shares also are big spenders on legal music downloads.

The majority of file shares say that they buy the same amount or more music than before, but there is a minority of 10-35 percent who say that their downloading have decreased their purchases. How strong this negative effects is on music sales is however impossible to say.

For the understanding of the drivers of file sharing, i.e. what motivates users to share digitised content, as well as the effects from file sharing, it is necessary to distinguish between those whose major interest is the content – games, music, films - and those with a major interest in computers. In the first case, consumption of content is the objective with the computer as a tool, while the reverse situation holds for the second category. Here management of computers and new challenging applications are the preferred activities and content being means.

Among the *computer enthusiasts* a strong tendency of content accumulation is observed. High capacity hard disk drives are often filled up with different kinds of content to an extent that is far beyond the possibilities of personal consumption. An un-proportionate part of the file sharing traffic can be attributed to this category. Documented data of this kind is seldom available but informal estimates from broadband operators indicate that 10% of the file sharers generate 90% of the traffic.

For those who go for the content, two groups can be observed. The *samplers* use file sharing as means for filtering e.g. songs, now and then ending up buying records with favourite artists, composers or songs. Here the file sharing complements or replaces other ways of sampling, e.g. listening to the radio or borrowing records from friends. In the many surveys of file sharing of mp3 files available, a majority of the samplers say that they buy approximately the same amount of records as before, while the other part claim that they buy more records than before due to the file sharing. The file sharing allows them to discover a broader supply of music than by traditional media.

The other group are called *free-riders*, claiming that the file sharing have replaced – entirely or a part – of what was earlier spent on records. However, within this group it is often said that the expenditure on entertainment has not been reduced but is distributed in another way, for example more money is spent on concerts or on other media. Monthly bills for mobile phones are probably play an important role in how the younger age group use their wallets.

### ***The music industry was too slow to meet the new demand***

It is obvious from the findings that the important reductions in record sales in some countries during the early 2000's cannot be attributed to file sharing practices. Among those who are interested in music there are three tendencies - more/unchanged/less records bought. These trends more or less balancing each other. The computer enthusiast would not in any case have bought the records in proportion to what they are storing on the hard disk. They can not afford it, nor can they earn money on it.

Even insiders from the media industry admit the relevance of such observations. A study commissioned by the Canadian recording industry's trade body in 2005 concluded that boredom caused by records being played over and over again on the radio was a far greater threat to music sales than file sharers' activities<sup>2</sup>.

The decline of music sales happened when a new compressed digital format, MP3, was introduced and no legal attractive music sites were there online to meet the demand of the young consumers. The future is then not so much in the hands of the file shares but in the hands of the music business.

Be sceptical and do not trust all statistics, especially not in times of rapid changes. And do not believe in simple causal relationships.

During the last years more and more people have got access to broadband and there has been a steady increase in the number of file shares with small dips when some individual has been charged by the content industry. At the same time the number of sold music units have also increased in USA, provided that both digital and physical units are counted<sup>3</sup>.

Research shows that there are numerous examples how content distribution through different media channels helps these channels to mutually reinforce each other. The availability of a newspaper on the web does not reduce sales of paper issues and the borrowing of books in the library stimulates – not replaces – the sales of books.

The substitution effect is hard to find and the misgivings about the devastating effects of music file sharing have not been justified.. This is a lesson that can be learned also in other business areas.

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<sup>2</sup> Consumer Study of Radio and Music Survey Results. Canadian Recording Industry Association, February 2006

<sup>3</sup> Recording Industry Association of America, 2006

### ***New business models***

A key result in our investigations is the understanding of file sharers' motives and effects. We defined three categories of file sharers, "free riders", "samplers" and "computer enthusiasts". Most of the input supporting this categorisation comes from analyses of file sharing of music but, via extrapolation, we see no reason to doubt that at least the categories "free-riders" and "samplers" will be relevant for most content. Regarding file sharers as customers with specific experiences and demands and a business plan approach to serve such customers with relevant services we could derive a number of business models

- Licensing model
- Advertising/promotion model
- Subscription/retail/e-commerce model

Most of them mimic similar models in the physical world or already existing models on the web, but with considerable effects on the value chain. All stakeholders in the value chain (creators/developers, publishers, distributors, retailers, consumers) and society will experience both positive and negative effects.

The analysis shows that in order to fully appreciate the new business models some new technology is needed. DRM (Digital Rights Management) may be one such technology. But DRM systems, if applied too intrusively or in a manner which consumers regard as too restrictive, could backfire on the whole of the IPR regime. The properties of DRM is further analysed below in this document and in Appendix 2.

## Qualities of P2P Technology

### *P2P is necessary in an “on demand” society with “no lock-ins”*

Simple capacity discussions show clearly that the peer-to-peer technology will be important and necessary in the future. The tainted reputation it has been given by the established content industry could have severe negative implications in the immediate future.

Operators report unofficially that ~80 percent of the traffic in the network comes from P2P. This type of traffic is steadily increasing and sometimes goes temporarily down when the debate on file sharing and IPR is high. ~20 percent of the traffic is client-server oriented according to the old Internet paradigm.

If we try to scale these figures on a global basis, with ubiquitous entertainment on demand as the Bangemann report primarily suggested as driver for convergence, simple calculations will show that client-server solutions will never scale. Peer-to-peer technology will be necessary. The European Broadcasting Union is experimenting with P2P systems using similar arguments<sup>4</sup>

In a peer-to-peer environment the users and the creators co-operate. The users pay for the distribution infrastructure and secure the long-term storage of content in their own servers.

But not only network capacity and users efforts are important. One application area, in which P2P probably has lost some of its value as a tool, is for example distance learning. Reasons for this include a) the "illegal stamp" leading to a tarnished reputation resulting from content industry campaigns and rhetoric (heavily influencing many politicians' views) and b) problems regarding which rules apply when students share copyrighted materials, for instance doubts about whether all rights holders given their permission for P2P usage.

### *ADSL is not a broadband technology to build on for the future*

ADSL is an old business model from mid 1980s. ADSL was invented for the telecom operators to compete with cable operators. The asymmetric communication (a lot downstream to the customer and just a little upstream) supports only the operators and not the customers. It is not only peer-to-peer networks that require symmetric network capability. Today there are many new services that requires symmetric communication which did not exist mid 1980. IP-telephony is one example. File sharing networks is another. Several of the applications mentioned earlier – photography, broadcast and video – require high upstream capacity:

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<sup>4</sup> Internet is becoming an important delivery media for broadcast content, and 'legacy' methods for content delivery over the Internet have grown very costly. P2P solutions have the potential to become a complementary way of media delivery to the public, overcoming the traditional shortcomings of Internet 'unicast' delivery," according to EBU Technical Director Phil Laven. EBU demonstrated P2P systems at International Broadcasting Convention 8-12 September 2006 with the additional argument "With rich media demand online resulting in significant bandwidth congestion, P2P can help broadcasters overcome the "bandwidth crunch". P2P is a potential means for cost-efficient media distribution facility of radio and television programmes".

Even working from home requires often high upstream capacity. Many that work from home and produce for instance large documents hesitate to upload these from home due to the time it takes. The same goes for sending e-mails with large attachments from home.

In broadband statistics it is often said that that 90+% of the customers have or can have “broadband” at home. Most of these figures relates to ADSL. For the future real symmetric broadband (~100 Mbit/s) should be supported and not ADSL.

Governments must realise that current investments in broadband based on ADSL will be obsolete and encourage new symmetric broadband technologies instead. The report i2010-A European Information Society for growth and employment proposes “A Single European Information Space” but does not recognise users needs for symmetric high bandwidth communications, which will be necessary in the future for rich and diverse content and digital services.

## The economics of structural change

### *Technology shifts follow logical patterns*

During its short history, information technology (earlier; electronics, computer technology) has initiated profound changes in the production and distribution of goods, services and knowledge. In the 1970's – 1980's the manufacturing industries were affected and during the 1980's – 1990's the same occurred in office work. We are now experiencing how radical changes is taking place in fields of content creation giving users new tools and roles on a global scene.

As in the previous applications of information technology, structural changes are inevitable, thereby threatening the positions of established actors but at the same time offering opportunities for new business to develop. With increased user participation and user control, the crucial innovative part of new business focus on new ways of interaction with the users and experimenting with new and better adapted business models.

This process has been described as “creative destruction” with the old structures eventually being replaced by the new ones<sup>5</sup>. However, during the early stages of economic and social change, analysts often pay more attention to what is going away than what is struggling to be born. To use Schumpeter's phrasing, it is easier to see precisely the destructive side of creative destruction, than it is to see the creative side.

### *Business strategies for emerging technologies*

One of the lessons learnt from our research project is how an oligopolistic industry, that has acquired a far-reaching control of distribution and marketing channels, reacts to the emerging technology and the new patterns of consumption induced.

In a first phase legal measures are taken to impede peer-to-peer technology and associated software development. In a next step legal alternatives are offered, but to prices much higher than what would be motivated by the new technology and in the interest of the consumers. Instead the price level of mp3-songs are set to minimize a possible negative impact in the sales of traditional records, and to maximize the obstacles for new competitors to enter the market.

During the whole process there is a continuous experimenting with DRM-technologies, with the aim of exerting increased control on *who* is listening to the music item sold, *how*, *when* and *where*. Our research points in certain directions what the user will accept. We have previously mentioned the intense lobbying activities to bring about changes in the Intellectual Property regulations for the further sharpening of the legal weapon.

To contribute to an improved understanding of DRM in the media marketplace and to give concrete guidance for evaluating DRM we have developed a single approach to DRM. A three step top down model has been developed:

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<sup>5</sup> Joseph Schumpeter, *Capitalism, Socialism, and democracy*. New York: Harper and Row, 1942.

1. Considering the qualities in a future information society
2. An evaluation method of DRM systems
3. User acceptance

The approach is presented in Appendix 2.

Policy-makers must understand users concern regarding DRM and act accordingly. If controlling and intrusive DRM systems are accepted means of protecting content and its use, then there is an imminent risk the users will escape to more anonymous P2P networks (“darknets”).

The record industry has chosen the strategy of collective power of a conglomerate or group of related companies to achieve (unreasonable?) synergy advantages via coordinated control over rights ownership, rights exploitation (production rights), and in some cases distribution rights. This strategy stands in sharp contrast to the newspaper experience. From the very start of the Internet, the newspaper industry has been experimenting with the digital technology for new forms of distribution of their creative content and the testing of new business models. This process has not been without conflicts with the creators of the text and image content; i.e. the journalists and photographers, regarding copyright issues. But nowhere the argument is heard that “reading a newspaper on-line is theft” and that “digital piracy is killing the newspaper industry”.

When a new disruptive technology strikes on a vertically and horizontally integrated business it is evident that some pipe will burst somewhere. Finding an immediate cure can seem to be hopeless. Fighting back is one popular strategy but being adaptive and open for experiments could be far more advantageous for industry, society and innovation in the long term.

### *The iTunes example*

Apple has showed that well-constructed dedicated download site can very well compete with the file sharing networks. With iTunes, a user friendly way to organize all kind of digital music they have now acquired 85% of the legal digital music market in US. Of particular interest in the Apple case is the wide diversity of choice purchases reflect – the old 80/20 Top Hits/every thing else rule does no seem to be valid any longer when consumers have a greater range of choice, old and new. This will inevitably affect the business models with a few super stars sold globally that the major record companies seek to defend.

On the other hand, Apple’s iTunes experience has a downside for creators (composers and artists) – their share of what consumers pay is extremely small and the producers share correspondingly high. The artist gets a fixed royalty per sale, rather than a share of a licence fee – the latter is much higher in most contracts, up to 50% of the record company’s revenue from licensing. Major record company’s have also introduced an extra deduction from artists royalties of 50% for “costs associated with establishing a new distribution channel” in the context of a new technology.

This could force many creators to seek other alternatives to reach an audience, via for examples solutions such as Creative Commons. A deeper analysis of this is provided in Appendix 3

But iTunes is not without competition. When mobile telephones reach the same quality for sound reproduction it is expected that the user will prioritise the mobile telephone. Competition comes maybe not so much from costs but from how much space there is in the users pockets for carrying around gadgets.

### ***Economic consequences of a shift from physical to virtual sales of recorded music***

The on-going shift of sales from physical formats to on-line delivery of files has led to a remarkable redistribution of revenues between producers and creators (authors/artists). The four major global producers, in particular, have been able to use their exclusive rights over recordings to a) initially delay the launch of comprehensive legal sites, and b) extract huge percentages from distributors' revenues, whilst still adhering to royalty principles from the physical world as regards composer and artist royalties. Composers and artists can end up earning less per digital sale than the credit card company that handles the transaction if the present regime continue to exist. In Appendix 3 an analysis of the economic consequences is presented.

### ***Collective dominance and on-line issues***

A closer focus on the phenomenon of collective dominance should be a major priority. In deliverable 6, we described and defined such dominance as the actions of vertically integrated conglomerates aimed at gaining synergy advantages in markets via joint actions involving different divisions or via agreements with outside partners.

The understandable focus on monopoly institutions such as music copyright collection societies, has led to analyses that neglect the more subtle forms of market manipulation which large, vertically integrated media conglomerates can and do exercise. We have already quoted the example of divergent policies between the Internal market directorate as regards the market for on-line licensing of music and the Competition Directorate (Anti-trust unit). These assume that monopoly CRMs have absolute power to set tariffs. An analysis of the relationship between large exploiters of music (producers such as record companies or broadcasters) and large rights holders (e.g. music publishers) shows that this assumption is simplistic. Heavy lobbying from different sectors of the market has given the impression that a Chinese wall exists between divisions in vertically integrated media conglomerates. Such is not the case. If it were, then the CEOs of such conglomerates would be doing a disservice to their shareholders.

In Appendix 4 an analysis of collective dominance and on-line issues is provided.

### *Effects on the economy and its actors*

The computer era is characterised by an exceptional development in data processing, communication and storing capacity. The results are dramatic:

- Any media content in digital format can be globally distributed and stored at practically no costs, due to the exceptional advances in computer component technologies.
- New media content can be created at low costs, due to that the fixed costs of Internet have already incurred.
- In any area of human interest the Internet offers an unparalleled information overview at any time of the day and at no cost., due to the network externalities.

The traditional cost related barriers of entry to business have been drastically reduced. This development have paved the way for new entrepreneurs. The established media conglomerates, many of them exercising a strong collective dominance, have responded to the challenge by using copyright laws against new ways of content creation and content distribution.

From an economic standpoint the motive to allow a creator or publisher the monopoly for a limited time – representing a cost to society – is to encourage creative works and innovations, which provides benefits to society. What we actually see happening is that the media conglomerates are becoming repositories for copyrights, whilst actively exploiting only a small percentage at any point in time. Similar phenomena can be involved in the computer software arena, where “trolls” purchase patents without having any immediate intention to turn them into market products. These new rights holders can utilise copyright (and indeed patent laws) laws to hinder innovations, their diffusion and use. This is in complete contrast to the societal intentions.

The economic effects on the actors involved could be outlined as follows:

- **Established record companies:** Increased competition and weakened market control causes a downward press on prices and corporate profits. Distribution channels are rationalised and contracts with creators are renegotiated. The new technology offers both threats and opportunities; a successful adaptation to new condition may lead to future prosperity, while failure to adapt will make companies disappear. In a longer perspective a widened market for music is expected.
- **Creators:** In the short run, reduced earnings from royalties are expected. Record companies will insist on renegotiate contracts. Then new channels of production and distribution offer new opportunities to reach the audience. Increased earnings from concerts and direct record sales will follow. An expanding music market characterised by increased diversity is developing.
- **User/consumers:** Reduced prices on CD-records contribute to a consumer surplus to be used on music or other consumption topics. As a by-product the users develop their skills in advanced Internet handling, an advantage on a future labour market. The pattern of music consumption will change into a kind of ubiquitous listening.

- **Society:** The consumer surplus from reduced prices due to increased competition will have an expanding effect on the economy as a whole. External effects from Internet use lead to improved information overview and decision making in everyday life. Together with positive effects from structural change the performance of the economy will be improved.

This is further analysed in Appendix 5.

## Policy recommendations

### *Europe's content industry at a crossroads – passive support for old business models or promotion of new opportunities?*

The European Commission and the member governments are now facing two alternative ways of promoting the European content industry. One way is the safeguarding of the traditional market order with passive users. They may either pay for those products and services the industry chooses to supply and accepting the conditions, or refrain from buying. With this alternative the main role of information technology should be to simplify the development of any DRM measures that guarantees the control of suppliers of the content. Expanded legal support should be offered to the content industries to defend their Intellectual Property Rights.

In the first case the media industry will decide the cultural range and limit availability through traditional channels. In the second case the cultural range will be larger through user participation. New applications and content will be stimulated as well as new distribution methods.

The other way of action is to recognize the opportunities of new user participation stemming from the advances in information technology and the new patterns of user interaction. Now the strategy of public measures should be to encourage user engagement in content development and content distribution instead of creating obstacles. These measures could be of both a technical and a regulatory nature.

We could also be witnessing a more profound change in society, with a political divide between younger generations who have grown up with the Internet and its various applications, and older generations, not least politicians, who seek to hinder the habits of millions. The possible societal and political ramifications of this need to be carefully analysed.

### *Who will promote all those emerging firms and industries that we still are not aware of?*

The difficulties of recognizing the new opportunities, perhaps at the expense of strong business interests should not be underestimated. The established industries are well organised with many supporters, sometimes on influential political levels. The question then becomes: who will talk in favour of all those emerging firms and industries that we still are not aware of? This is probably the greatest challenge of the European Commission on this subject.

Comparing the different strategies of the newspapers industry and record industry provides a good argument to agree with the US Committee for Economic Development in a recent report on digital Intellectual Property. The Committee warns against quick legislative or regulatory solutions for the problems of digital copyright, as such measures

*“...pose risks to innovation and economic growth and are likely to have unintended consequences in a period of rapid technological change,...”<sup>6</sup>.*

Further the Committee concludes that

*“We should not turn to law or regulation to protect any particular business model.”*

### ***A focus on collective dominance***

A closer focus on collective dominance should be a major priority. Competition Law has tended to focus on horizontal integration, where one company in a business buys another in the same sector. Collective dominance does not emerge as a spectacular competition problem if one has a very simplistic view of the market. But when conglomerates linkup (vertical integration), then extra synergies arise between different divisions and more subtle forms of market manipulation can and do exercise. This is particularly true in the music sector. Media conglomerates have been able to develop such strategies over the years to hinder new competitors or business models. One can expect that they will continue to do so and that these strategies will affect other sectors than just music.

### ***A new IPR regime?***

New initiatives such Creative Commons may show a way forward and ideas may be taken from the Open Source environment in computer software and applications. Consider how much copyright protected material is listed by search engines like Google and Yahoo. If a search engine shall avoid copyright protected material the server owner must specify which material not to list. The server owner seldom knows this. A Creative Commons approach could solve this – i.e. content is always accompanied with rules specifying how it may be used.

DRM is in conflict with open content and software developed under the Creative Commons and Open Source regimes. To grant an unbiased and neutral view it is vital to understand that DRM involves social, economic, legal and technical aspects and must be solved with an interdisciplinary approach.

There is a reason to examine whether improvements in the existing Intellectual Property framework could be made, especially in the context of rapid technological change and globalisation. A recent initiative by the British Government in this context is worthwhile considering.

First, the Intellectual Property as a critical component of Europe’s present and future success in the global economy is acknowledged, especially in the creative industries.<sup>7</sup> Then it is emphasized that

<sup>6</sup> Promoting innovation and economic growth: The special problem of digital intellectual property. A report by the Digital Connections Council of the Committee for Economic Development, Washington 2004

<sup>7</sup> Gowers Review of Intellectual Property, London 2006

*“The IP framework must balance the need to encourage firms and individuals to innovate and invest in new ideas and creative works with the need to ensure that markets remain competitive and that future innovation is not impeded.”*

This echoes statements from the European Commission during the 1990s, when it was emphasised that IPRs must be respected, but not in such a rigorous way that the development of new business models is hampered.

The situation mid 2000: The legal regime is supporting large content owners. Technology is allowing many consumers to circum-navigate the regime. New business models reflecting new technology at odds with the legal regime.

The rights of content owners must balance reasonable interests of consumers (protection versus “fair use”).

### ***Musiclessons research raises serious questions about EU policy incompatibilities.***

The overall goals of the Lisbon Agenda are very general and very clear. When they get subdivided into different areas of the various Commission directorates, the coherence starts to falter. We have identified a number of cases where speedy coordination and possible policy reappraisal is necessary.

- The Information Society directorate is keen to promote broadband, and make it an interesting proposal for investors. Peer-to-peer applications are driving broadband, and will continue to do so as they become more and more widespread.
- The legal authorities, backed up by heavy lobbying from the content industry, and directives from WIPO dating from the mid-1990s, are enforcing legislation aimed at making file-sharing illegal. The notion that a file with copyrighted material may not be down/uploaded without all the rights holders permission makes it impossible for the average user to distinguish between content which rights holders desire to be available and the opposite.
- A rigid interpretation of copyright law has put a major focus on monopoly institutions such as music copyright collection societies, but neglected the more subtle forms of market manipulation which large, vertically integrated media conglomerates can and do exercise. In September 2005, the Internal Market Directorate expressed concerns with the slow growth of the on-line music market. Their solution was not to simplify licensing systems by allowing any collecting society to become a one-stop shop in Europe. This, they wrote, could lead to a collapse of tariffs and hurt creativity. In January 2006, in response to a licensing complaint for a large broadcaster, the Competition Directorate recommended an enforced dismantling of agreements between collecting societies so that any of them could offer a 1-stop shop solution. This reflects a serious lack of policy coherence at directorate level
- The notion of cultural diversity is probably accepted as being of importance by all directorates. Cultural diversity is most prominent in the various file-sharing networks

– thus the new features of legal downloading sites reflect a far greater product range than traditional music Top 20 lists.

- A Modernisation of the Television Without Frontiers Directive (TVWF) is underway. As in the previous directive<sup>8</sup> from 1998 it is still said that the “country of origin” principle should prevail and enhance media pluralism and diversity. Appendix 6 casts light on how the old directive is circumvented resulting in overall in less cultural diversity and new ways for privately owned TV channels to maximise audience and advertising and to minimise the program cost. Internet offers the same possibilities to circumvent the “country of origin” principle. The risk impending risk is that policy incoherencies will appear.

The above are just a few examples of what we regard to be a serious trend, which must be speedily addressed.

A lack of coherence only benefits large predominantly non-European content owners at a time when there is a trade deficit between Europe and her trading partners regarding media products .

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<sup>8</sup> 'Television without Frontiers' Directive (89/552/EEC)

## **Appendix 1: “Mediatization” and “internetization”**

### ***Introduction***

File sharing of music on the Internet has shown that Internet as a medium in several ways differs from traditional mass media like broadcast media (television and radio) and printed media (newspapers and books). Internet is user driven, communication between peers is crucial, the diversity is enormous, there are no bottlenecks etc.

What has happened up to now is that the old media has invaded Internet with their traditional content. Newspapers have developed an Internet edition based on the traditional printed edition. The only difference between online and offline version is that breaking news can be published earlier in the Internet edition as Internet is continuous and news can be updated anytime. We can call this influence from traditional mass media on Internet as the “mediatization” of Internet. The content on Internet looks like the content of the old mass media.

A survey of European newspapers shows that there are no major differences between the Internet version and the printed edition. The conditions are similar when it comes to television channels. Here Internet can also be used as a complement where additional content can be published.

But can it be the other way round? That Internet acts as the starting point of media production influencing the traditional mass media? If so is the case we can call it “internetization” of mass media.

One of the findings from Musiclessons is that both processes exist simultaneously. It starts with the “mediatization” of the Internet and here we can recognize several phases. In the beginning most people use traditional media and only a few use Internet. The old media first try to neglect Internet but when Internet becomes more popular they publish what they already got online and try to earn money a second time. They are trying to “mediatize” Internet. But Internet users do not want to pay the price twice and new alternative ways to share and produce content is developing online. The old media tries to learn what Internet users want, and now Internet becomes a part of the old media. The “internetization” of the old media starts and new business models are tested.

### ***Music***

The traditional music industry first tried to neglect Internet. When they realized that many young people looked for music online and not at the music stores, they started to sell the old top list music online with the old price and in the traditional CD-format. They tried to “mediatize” Internet. It did not work. Music was shared for free on the P2P networks between Internet users. The music industry tried to stop and criminalize the file sharing. It did not work. Music was shared not only by P2P networks, but also through e-mail and instant messages. Outsiders, like Apple, developed a dedicated music website with a great variety of music. Single tunes could be listened to and bought at an acceptable price, a software was made available that allowed the users to organize their music in their own way and an attractive

hardware, the iPod was offered. Music was “internetized” and the old music industry now also tries to develop similar music websites.

### ***Newspapers***

If we look at newspapers and the Internet we can find similar phases even if the development has not been so fast. In the first phase the newspapers invaded the Internet. In most cases that meant to open a website that looked like the offline newspaper. They tried to “mediate” the new medium. In the next phase the website was utilizing some of the potential of Internet like audio and video features and an archive. A complementary relation between the offline and online version started to develop. At this time news from other sources than the traditional newspapers and news agencies are published online. The sources are alternative outsiders like Indy media or blogs or communities. There is also the possibility to subscribe to personalized news. A third phase, still on an experimental stage, is now in sight where the users are taking a more active part in the production of the online content (citizen journalism) and there is also a search for a way to get an economic return. In this third phase the news production starts from communication and sharing of news online. Newspapers are being “internetized”.

### ***Television***

The websites of television channels first looked like the newspapers websites. That was the first phase. But when more people got a broadband connection it became possible to download video and first the short 5-minutes news but later also the longer 30 minutes news programmes. Internet was used as an archive and a place where to read about the latest news. As a sign of the “mediatization” of Internet you can watch the broadcast television online. Sometimes there was also a background article complementing the broadcast news. In this second phase chatting online after a television program was introduced as a continuation of the program and a way to communicate with the audience. Many television programs have also their own websites and they are popular. The third phase, the “internetization” of television, has only just started. Television is about to start to cooperate with the users to produce television programs, like in an open content project. Here there is also user driven alternatives like YouTube (user produced videos) and other activities in many different communities.

### ***Conclusion***

New media in the form of Internet individualize communication. Old media distributes standardized content to an anonymous audience; the new media provide their users with content according to individual needs and interests. Broadcasting transforms into narrow-casting. Furthermore, the interactivity of the new media turns recipients into communicators. This is what we have called the “internetization” of media, and that is what we have found is happening in the P2P networks on Internet among music file shares.

But Internet is also invaded by the old media. You can listen to radio, watch television and read a book on the Internet. Internet is “mediatized” and the old media is still in phase two where only a few characteristics of Internet are utilized, like storage and chatting. But

there are more new ways to share content created outside the traditional media as step three suggests in the list below. This list shows some general steps in the media development process.

0. Old media and media industry first neglect and then hinder the development of Internet.
1. When the number of Internet users are increasing old media want to be modern and publish a website with old content and format.
2. Offline and online versions are coordinated and some Internet characteristics like interactivity (chatting) and storage (archive) are utilized.
3. Collaborative working is the starting point similar to the activities in open content and open source projects.

## Appendix 2: A single approach to DRM

### *Introduction*

This paper seeks to contribute to the understanding of DRM (Digital Rights Management) in the media marketplace and give concrete guidance for evaluating DRM. By DRM we broadly mean all measures used to protect content in digital media devices and services.

The growth of the Internet and digital media has created both opportunities and new threats for content creators. Advances in digital technology offer new ways of creating, marketing, disseminating, interacting content, with possibilities to reach new markets have not existed before. These technologies also allow private individuals to create content. It is notable that all new occurrences in new media on the Internet have not been created by the traditional media industry but by a few individuals. Some examples are Napster, Kazaa, Google and YouTube. At the same time the technologies have created major challenges for copyright holders seeking to exercise control over the distribution of their works and protection against piracy. Digital rights management (DRM) represents a response to these issues. Some spokesmen<sup>9</sup> argue that DRM can facilitate new business models while others<sup>10</sup> argue that DRM will not stop piracy but make users frustrated, even hindering them from realising the full potential of digital media.

Creative content will continue to move on-line and creators will continue to migrate to digital media. As a consequence DRM is likely to continue to play an important role in the media market place.

To support decision makers in their approach to DRM we here give a three-step model where the first step supports a general contemplation on the properties of a future society. The second step provides some tools needed to be able to look forward and judge the pros and cons in DRM systems. The third step involves users acceptance of DRM systems.

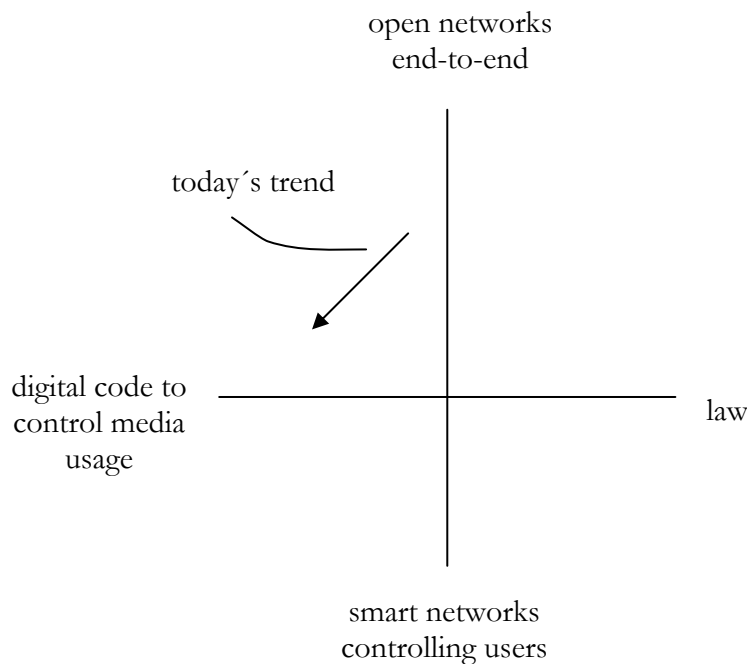
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<sup>9</sup> [DRM as an Enabler of Business Models: ISPs as Digital Retailers](#)

<sup>10</sup> P. Biddle, P. England, M. Peinado, B. Willman, Microsoft Corporation, The Darknet and the Future of Content Distribution.

S. Haber, B. Horne, J. Pato, T. Sander, R. E. Tarjan, Hewlett-Packard Company. If Piracy is the Problem, Is DRM the Answer?

In a top down approach to DRM one has to start considering what type of society to promote for the future. Should law or technology be the governing tools for maintaining the order. Inspired by a talk by Nicklas Lundblad<sup>11</sup> we can draw the following picture:



### ***A three step model in a single approach to DRM***

#### ***Step one. General qualities in a future information society.***

On the horizontal axis we balance law and digital code to control media behaviour in the society and on the vertical axis we balance networks that users can feel are open and non-controlling with smart networks with far reaching possibilities to control users. Taking decisions on which quadrant is the most important will define the future society and how

<sup>11</sup> Director at Stockholms e-handelskammare and advisor to the EU-Commission.

technology can be used in that society. Today's society is in the NW quadrant today but developing along the direction indicated by arrow.

***Step two. Evaluate the impact of DRM systems.***

If step one leads to that DRM becoming increasingly integrated into media that users buy, it will be important to understand how to evaluate the impact of DRM on the media and users experience. Different DRM systems will provide different properties and capabilities for the users. Some properties may not be accepted by users but we will discuss user acceptance later.

Some users may be informed and able to compare media products incorporating DRM and act accordingly but the majority of the users are not aware of DRM. Indicare<sup>12</sup> made in 2005 a study of the awareness of DRM among European digital music users. The discouraging result was that on the average 63% of the users had not heard of DRM at all.

A report "Evaluating DRM: Building a Marketplace for the Convergent World" from the Center for Democracy & Technology, Washington, USA, presents an attempt how to evaluate DRM in the market place in terms of questions reviewers of DRM systems should be asking. These questions include:

Transparency:

Are users given sufficient information about any impact the DRM system can have on potential uses of the content or interoperability with different terminals. Is the information given sufficiently clear, easy to find and given at relevant times.

Effects of use:

What are the limits of use? Does the DRM system allow for time shifts, place shifts, sharing within reasonable limits, creative modifications within reasonable limits? Is there a risk to lose control if a company goes out of business?

Collateral impact:

Is there any risk for users privacy to be exposed? What type of information is "phoned home"? Any risk that users terminals will stop working?

Purpose and user benefit:

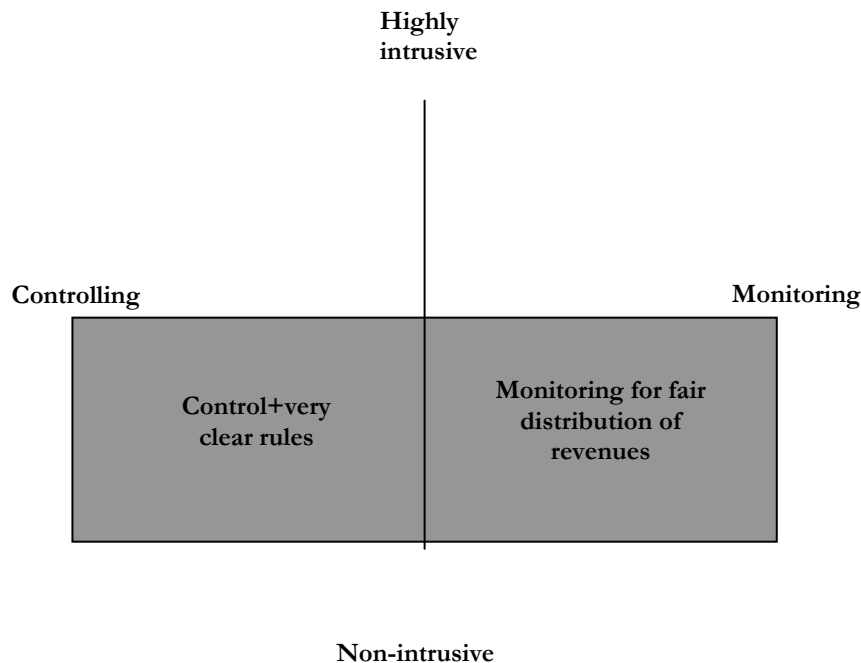
Is the DRM introduced to lock users into old business models or to limit users choices or to innovate new business models?

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<sup>12</sup> *Nicole Dufft et al.*, Digital Music Usage and DRM: Results from an European Consumer Survey, 39 (May 24, 2005) at [http://www.indicare.org/tiki-download\\_file.php?fileId=110](http://www.indicare.org/tiki-download_file.php?fileId=110).

***Step three. User acceptance.***

Understand user acceptance/rejection of DRM. The Musiclessons project has carried out a specific study 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. The analysis was based on the framework that considers the balance between control – monitoring, on the one hand, and intrusive – non-intrusive technologies on the other. High control makes users less active and low control invites them to experiment and to gain experience. One of the observations in the study is that users are not infrequently one step ahead of the content industry and find ways to circumvent DRM. It is likely that the users will continue to be one step ahead as long as DRM control prevents users from experimentation and imposes a strict control of usage. Another conclusion in the study is that users and content owners will find a mutual area where DRM is accepted by both parties for future development of business models. The grey area in the figure below indicates this.



### Appendix 3: Economic consequences of a shift from physical to virtual sales of recorded music.

#### Analysis

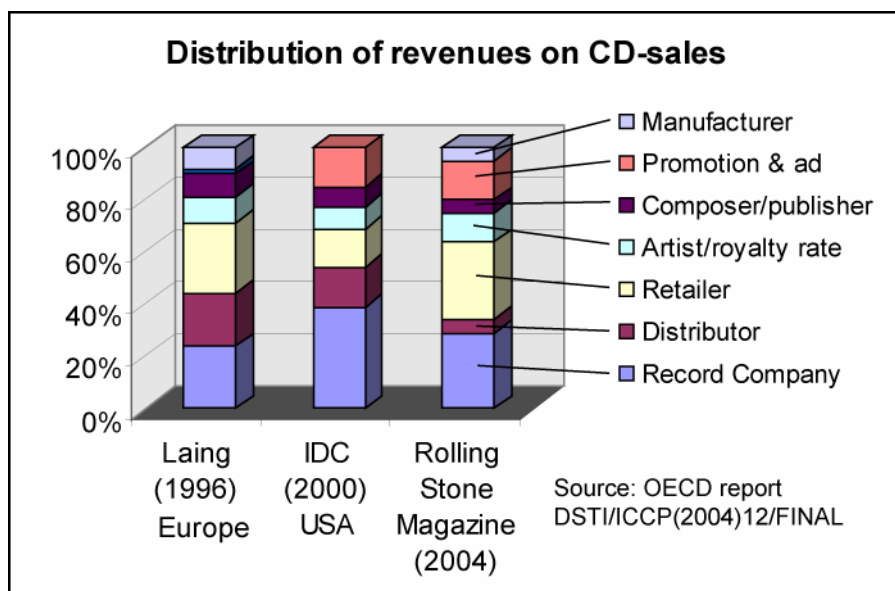
Estimating a figure for the average profit a record company makes from the sale of a physical CD is a tricky operation. Major record companies pay out huge advances to attractive artists and marketing investments for the same artists can also be quite extensive. An artist that sells under 100,000 copies internationally can become an uninteresting proposition for such global players. For a smaller independent company, the calculations are totally different.

This is why different estimates of the breakdown of what the consumer pays for a CD can vary considerably, as an OECD discovered when comparing a number of different studies (see diagram below). Large companies offer rebates for bulk purchases by major retailers. Some retailers even use CDs as loss-making products that attract customers to the store.

What is clear that certain fixed costs related to manufacture and distribution disappear or are replaced by cheaper alternatives when sales go digital.

In the OECD report, three analyses show record company income varying between 20 and 40% of the consumer price (excluding sales taxes). The highest figure (IDC) appears to include promotion and advertising costs.

Retail and wholesale costs amount to an average of 45% in the physical case.



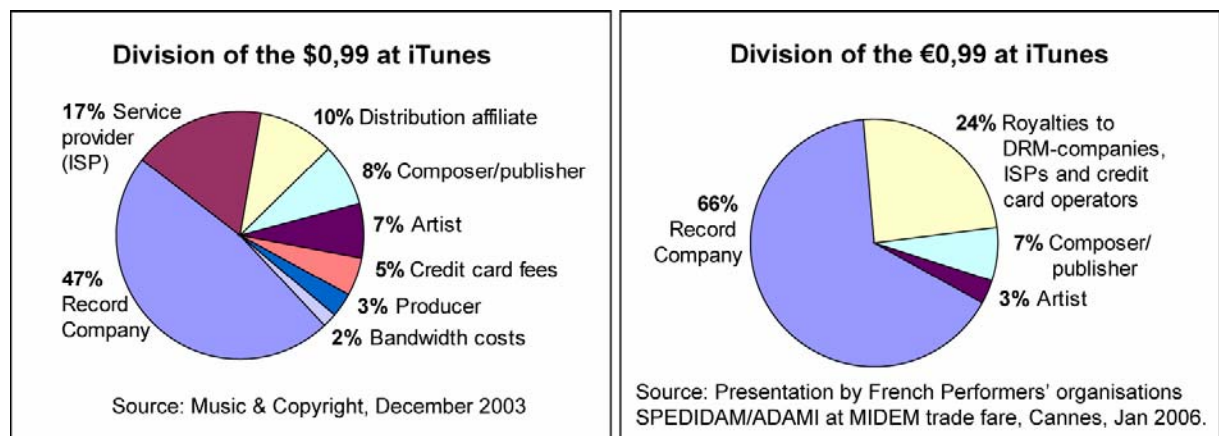
Digital distribution via legal sites (on a pay per work or subscription based business model) have developed sluggishly. Independent companies have been at the forefront, often willing to distribute MP3 files without DRM restrictions applied. The Orchard based in the UK was an

early example – more recently eMusic has emerged as an important source of music on MP3s from independent companies.

The major record companies were slower to grasp the opportunities, mainly for fear of losing control. Two half-hearted experiments (PressPlay and MusicNet) were initiated respectively and separately by two and three of the then 5 major companies shortly after the demise of the first Napster P2P network. They folded in 2003. Apple provided the perfect opportunity in 2004 when it decided to use music to sell iPods. The majors could more or less specify all conditions, with the exception of a standard unit price (99 cents per work).

The two analyses of digital sales revenues below show a remarkable increase in the producer share, compared to physical CDs, to almost 50% in the case of iTunes in the USA, and to 66% with iTunes France.

The digital equivalent of wholesale/retail amounts to 34% in the USA and 24% according to the French analysis.



Artists and composers seem to be left with the crumbs that fall off the table. The major record companies have claimed that allowing iTunes to sell their recordings is not the same as giving iTunes a licence to sell, but the equivalent of delivering units to a physical retail store. The artist thus gets a fixed royalty per sale, rather than a share of a licence fee – the latter is much higher in most contracts, up to 50% of the record company's revenue from licensing. Major record companies have also introduced an extra deduction from artists royalties of 50% for "costs associated with establishing a new distribution channel" in the context of a new technology.

In the case of composers and music publishers, the percentages are the same as in the physical world, although costs for manufacturing and many distribution costs are smaller or non-existent. Of the 8% in the US iTunes example, approximately 1 – 1 1/2% go to the collecting society that distributes the revenues. Many publishing contracts specify that the remainder is split between publisher and composer – leaving between 3 and 4% for the composer share, i.e. less than the credit card company revenue.

The breakdown leaves a minimal profit for the provider of the legal service – indeed Apple's iTunes can hardly be regarded as a profit-seeking retailer, but rather a marketing tool for hardware iPods.

The overall result is a market where price competition between retailers is minimal, and where creators get far less and producers far more. We see how the major record company's strategy has achieved a staggering redistribution of revenues between creators and producers.

One can fear that the majors will refer to this distribution of revenues as a precedence in future digital distribution via legal sites.



## Appendix 4 Collective dominance and on-line issues

### *Background*

The slow development of an on-line market for music sales has often been blamed on a) piracy via P2P networks offering “free” music, and b) the existing structures of intermediaries that collect and distribute revenues to rights holders. The latter has led to a close scrutiny in the music sector of the workings of various collective rights management societies (CRMs) also known as collecting societies that represent authors and publishers, performers or even producers.

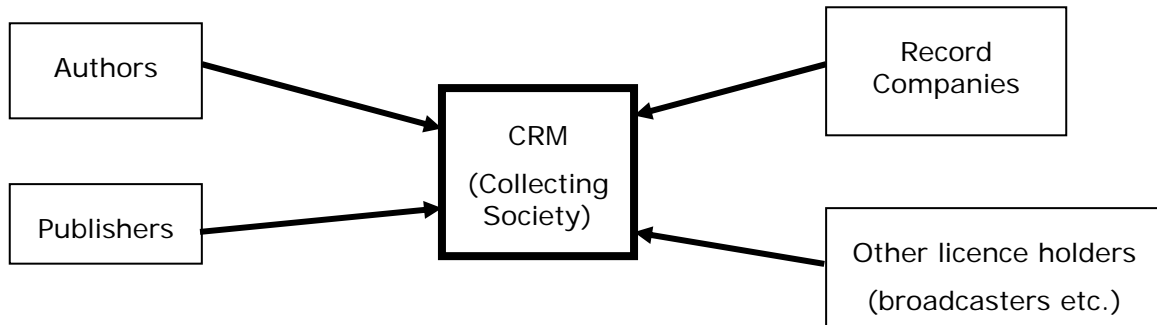
### *Analysis*

Competition Law has tended to focus on horizontal integration, where one company in a business buys another in the same sector. But when conglomerates link up, then extra synergies arise between different divisions. This is particularly true in the music sector. Over the years the same 4 or 5 conglomerates have purchase both record companies, and music publishing firms. Music publishing ceased long ago to be dependent on producing goods such as sheet music, and became instead repositories for rights, where active promotion only involves a few individual works. Much of the revenue flows comes more or less automatically, when, for instance, radio stations perform musical works. The combination of production rights (e.g. recordings) and primary publishing rights offers numerous opportunities for collective dominance. It also places the CRMs in a situation where the negotiating regime between rights holders and rights exploiters becomes perverse (both are owned by the same conglomerate).

In the past there was only a partial overlap between rights held by a conglomerate’s publishing division and its recording division. As the conglomerates merge, this overlap grows, offering even more opportunities to exercise collective dominance.

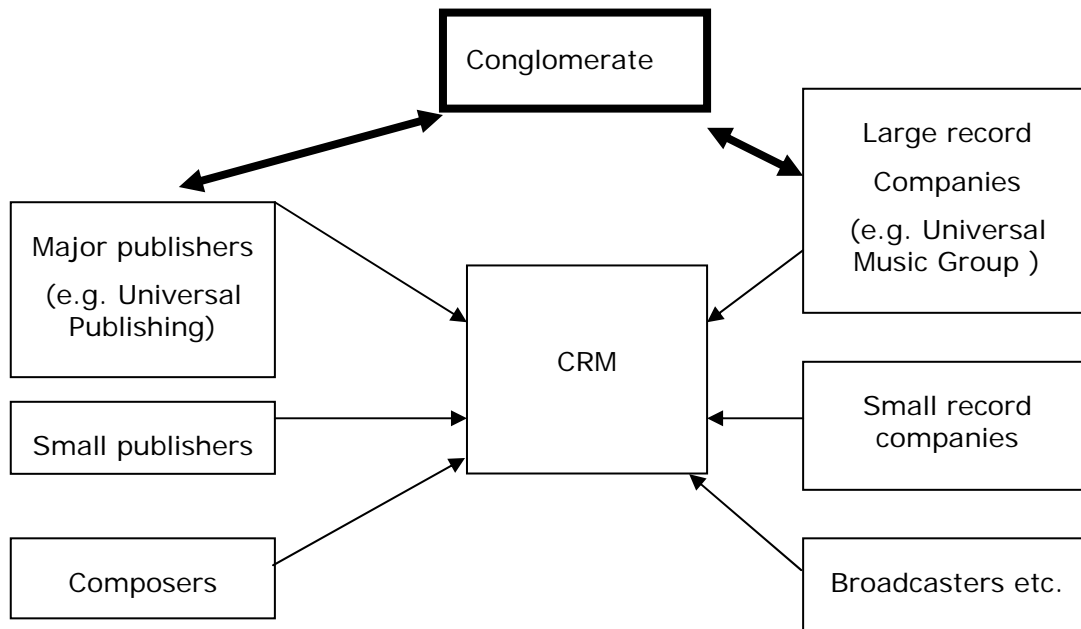
A current example concerns the move by Universal Publishing to purchase the music-publishing arm of Bertelsmann, BMG Publishing. BMG Publishing was put up for sale and a number of contenders showed interest. Universal Publishing won the bidding only after a separate deal was done between Bertelsmann and Universal Music (Universal’s record company) to drop a legal suit against Bertelsmann dating back to their purchase of the first Napster company, shortly before it was closed. Universal got in effect a small rebate on the 1.3 billion Euros it paid for BMG publishing, and Bertelsmann avoided a continuation of an irritating legal feud.

Collective dominance does not emerge as a spectacular competition problem if one has a very simplistic view of the market for music rights as in Diagram 1.



*Diagram 1*

The above view suggests that CRMs are omnipotent with the ability to unilaterally decide tariffs. In actual fact, the CRMs can become almost impotent if collective dominance rules supreme, and there is a major degree of collusion between publishing and production activities.



*Diagram 2*

In reality the major conglomerates are active “on both sides” in the CRM through different divisions as Diagram 2 shows. It is naïve to believe that in critical issues the matters have not been discussed and agreed upon “at the top”. This illustrates the difficulties facing a monopoly CRM that is charged with the task of treating both users and right holders in a non-discriminatory fashion.

Much of the discussion and analysis concerning recent mergers or merger attempts (EMI-Time Warner 2002, BMG-Sony Records 2005) has focused on market share in specific business sectors, and not on the combined effects of both controlling huge repositories of rights, as well as production activities and even distribution facilities.

Enforced divestment has not even been considered in these analyses.

### ***Using collective dominance to hinder new competitors or business models***

Despite calls from the Commission, in line with the Lisbon agenda and other future visions, for the development of new business models, increased access to on-line services, and consumer participation in interactive services, progress has been slow. Often this has been the result of strategies by major players. They have a) been slow to make products where they control the rights available to consumers, b) have often bought up start-up companies and then let them disappear, or b) sued entrepreneurs for copyright infringement.

An interesting example of a major player strategy to control use of music on the Internet was provided as early as 2000 by the case of the file sharing application company Scour.com., which (like Napster) offered a "file swapping" application. This allowed users to share music (and even video) titles stored on their computer's hard disk. The music and film industries claimed that this was the same as stealing since it would seem to discourage users from buying physical products or even paying for digital variants. File swapping adherents claimed that it was merely a digital equivalent of lending a personal CD to a friend. Scour was sued by both the US recording industry and the film industry in July of 2000. To alleviate its problems, Scour filed for bankruptcy and offered to sell its assets to another e-commerce firm, listen.com. All five major record companies had a financial interest in listen.com. A spokesperson for the Recording Industry Association of America (RIAA) said that cancellation of the suit against Scour would be dependent on its new owner, listen.com, shutting down its "file exchange service and search engine" (Anonymous, 2000b). BMG, via its parent company Bertelsmann, applied an even more direct strategy to come to terms with file swapping companies. In 2000, Bertelsmann did a deal directly with Napster while a legal case for damages driven by the RIAA was still in progress. This legal suit, as already mentioned, was only solved recently (July 2006) when Universal wished to purchase BMG Publishing

Legal suits and buy-ups have been one part of the majors' strategy. Another has involved encryption and watermarking technologies which block file copying and follow files as they move around networks. An industrial consortium was formed to agree on standards for these technologies, standards which it was hoped would be introduced into music players by the consumer electronics industry (e.g., MP3 players). The so-called Secure Digital Music Initiative (SDMI) attracted almost one hundred different collaborators, many with very divergent agendas. In order to prove its invincibility, the consortium challenged hackers and computer scientists in 2000 to crack the codes. Within a week, brains at Princeton University had

achieved this, picking up a \$10,000 reward. As predicted by a number of observers, SDMI folded in late 2000. The RIAA considered taking legal action against the researchers at Princeton when they planned to publish their results in an academic journal (the RIAA claimed this was contravening the Millennium Copyright Law's ban on spreading information about how to crack DRM systems)

Moving back to the current situation, the growth of Internet ventures based on consumers creating their own content has become both the focus of major conglomerates wrath, and an attractive investment site for media giants. The Murdoch empire has bought MySpace, and the small print on their contracts indicate that MySpace could have extensive rights over materials which are posted to the site. And while Sony-BMG records has indicated a desire for a tie up with You Tube where consumers place their videos, or variants of commercial videos, Universal has indicated that such interactive activities will be the next target for its copyright infringement battles. "They owe us millions" according to senior Universal executive Doug Morris quoted in Billboard (May 6, 2006).

The activities of the vertically integrated media conglomerates can be seen as a worrying game, driven by emotions of fear and greed. Fear about losing control over copyrights, and greed inspired by the notion that DRM systems can offer an almost total degree of control over what the consumer can or cannot do. Collective dominance makes this unholy cocktail even more dangerous.

## Appendix 5: The economics of computers, Internet and new software applications

### *The Solow paradox reconsidered*

Since the 1970's and the start of integrating computers in manufacturing processes, office work etc, there has been an intense debate about the contribution of ICT to productivity. It is often referred to as the Solow paradox after an observation of the U.S. economist in 1987 that

*"You can see the computer age everywhere but in the productivity statistics."<sup>13</sup>*

However in the late 1990's the effects of ICT implementation in all parts of the western economies appeared in the GNP statistics. It was first expressed as accelerating growth in labour productivity due to the sharp increase in computing capacity. Later on this tendency was repeated as the multi-factor productivity growth, indicating significant spill-overs (or positive externalities) generated by the use of ICT<sup>14</sup>.

Among economists there seem to be a general opinion that investments in ICT have to be combined with adjustments in labour skills and organisational changes in order to influence productivity in a significant way. Such processes are often time consuming. (Interview with Prof. Kurt Lundgren, Royal Institute of Technology)

Comparisons are often made with other general purpose technologies such as the steam engine and electricity. Heavy investments in electric power plants, electric machinery and labour skills, starting in the 1880's was not mirrored in the GNP statistics until the 1920's<sup>15</sup>.

### *A drop in costs without precedence*

The computer era is characterised by an exceptional development in data processing, communication and storing capacity. Modern processors have 100 000 times the capacity of the popular Intel 8080 processor of the first PC generation<sup>16</sup>. According to a Canadian survey the storage cost of 1 gigabyte today is less than 1 CAN\$. The (hypothetic) cost of a corresponding data volume in the beginning of the 1980's would have been 370 000 CAN\$<sup>17</sup>.

At the same time the prices of computers are going down, not only when inflation is taken into account but also in absolute terms.

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<sup>13</sup> Wikipedia, eng version

<sup>14</sup> See e.g. Schreyer, P. (2000), The contribution of information and communication technology to output growth: a study of the G7 countries, OECD, DSTI/DOC(2000)2, March 23

<sup>15</sup> David, P.A. (1991). Computer and Dynamo: The Modern Productivity Paradox in a Not-too-distant Mirror, in Technology and Productivity. Paris: OECD.

<sup>16</sup> Wikipedia, eng.version

<sup>17</sup> Historical Notes about the Cost of Hard Drive Storage Space, <http://www.alts.net/ns1625/winchest.html>

The economics of Internet can be characterised by high fixed costs and very low flexible costs. The fixed costs involve the building up of a worldwide communication infrastructure and with all firms and individuals on a global level connecting to the net after having invested in computer hardware and software. Once the infrastructure has been established, a minor waste of electric energy represents the variable cost of surfing on the net.

By the same reasoning the marginal cost of Internet, i.e. the cost of an extra user entering the net, or for one user to stay connected on the net another couple of minutes, is neglectable. According to economic theory, the price of a good or a service should be equal to the marginal cost of production, given it is under perfect market conditions (perfect competition, perfect information among the actors on the market). That means in the Internet case a price close to zero.

Another characteristic is the positive network externalities of Internet, meaning that one user indirectly benefits from other users. Peer-to-Peer (P2P) systems add the possibility to browse other users collections and to sample and taste-make. The perceived individual value increases with the number of Internet users.

To summarise

- Any media content in digital format can be globally distributed and stored at practically no costs, due to the exceptional advances in computer component technologies.
- New media content can be created at low costs, due to that the fixed costs of Internet have already incurred.
- In any area of human interest the Internet offers an unparalleled information overview at any time of the day and at no cost., due to the network externalities.

### ***The economics of technical change***

Rationalisation is the standard motive to implement new technology. Together with the redesign of products, processes or organisational structures, the new technology improves the relation between output and costs. While this is beneficial for some actors, others may experience reduced incomes or loss of jobs.

For society as a whole, the outcome is generally positive, thus structural change is generally encouraged by economic policy. The major argument is the *compensation mechanisms* associated with rationalisations initiated by the use of new technology.

Firstly, there are *direct* compensation mechanisms, in the sense that some jobs will disappear due to new technology but other jobs will be created. Sometimes the additional jobs take place among business partners, which is referred to as *indirect* compensation mechanisms.

Secondly, there is a *price effect*. A reduction in price of a product due the rationalisation may, depending on the price elasticity of the product, increase sales. The additional activities due to the growth in sales volume may also invoke additional employment, thus compensating for the initial loss.

Thirdly, there is an *income effect*. The reduction in costs may be transformed into increased profits and/or wages. The additional incomes will induce additional consumption, creating an expansion in other parts of the economy.

Fourthly, new technology may *lower the barriers of entry* for new entrepreneurs, speeding up the rate of innovation and increase competition pressure. This aspect is of particular importance in the case of Internet technologies all will be examined a little closer.

### ***Lowering barriers of entry***

As a general observation, new applied technologies pave the way for new enterprises, at the same time challenging the market positions of established business. As already mentioned, the traditional cost related barriers of entry have been drastically reduced by the recent developments in Internet technology. With very small financial resources it is possible to start a new business:

- New software applications with only a few months' development efforts behind, may in a very short time attract millions of users.
- Based on the concept of users as creators of new content in collaborative efforts, new media repositories, wikis etc are established. A few of them have in a very short time grown enormously in size.

Users also enter as distributors of digitalised media, often with simple PC tools as email, instant messaging and P2P software.

This represents a tremendous challenge to many established industries, many of them exercising a strong collective dominance on their market as earlier described. To defend their positions against new competitors, heavy use of legal means are of particular importance. These include lawsuits against software companies as well as individual users of file sharing services. Other measures are campaigns and heavy lobbying activities directed to governments and politicians, making them change laws and the applications of laws in favour of established trades.

### ***Copyright law against competitors***

From economic standpoint, the way copyright regulations are used by traditional industries to prevent the diffusion and use of Internet technologies is worth commenting..

Copyright law provides a creator with a monopoly over the distribution and sale of a work for a limited time. Like any monopoly, it imposes costs on society to be carried out collectively. But the laws allow the copyright monopoly to exist because “it provides a benefit to society by providing an incentive for the production of new creative works, which often require substantial investment in order to come into being<sup>18</sup>.

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<sup>18</sup> Promoting innovation and economic growth: The special problem of digital intellectual property. A report by the Digital Connections Council of the Committee for Economic Development, Washington 2004

Copyright law balances protection of initial creators with the importance of the competitive supply of follow-on innovation. Copyright law is (or should be) cautious about providing control to the initial innovator that would allow barring of subsequent innovators or control over the scope and direction of their innovation. Such caution is important in the digital world, in which rapid improvements in the technology continue to expand its economic importance.

Thus, the incentives provided by copyright protection are designed to encourage innovation by creators. But copyright law also takes into account the needs of users and subsequent innovators who benefit from access to the creator's work, e.g. by the safe guarding of a public domain.

Works developed under Creative Commons and Open Source show that by no means the production of new content and software needs to be protected by a temporary monopoly.

To sum up, the arguments behind the copyright laws stressing the societal benefits of promoting innovation by means of temporary monopoly. What we actually see happening is that the media conglomerates exercise their dominance and use copyright laws to prevent innovations, their diffusion and use. This is in complete contrast to the societal intentions.

### ***Outline of economic effects***

We have identified the following steps

0. Established media conglomerates, many of them exercising a strong collective dominance on their market, with oligopolistic pricing
1. New commercial actors offer alternative ways of distribution and content creation by exploiting applications of new technology.
2. The new way of organising music production, distribution and consumption is both a substitution and a complement to existing forms. For established industries it represents both possibilities and threats, at the same time paving the way for new actors.

<b>Established record companies</b>	Direct effects	Indirect effects
Short run	Downward pressure on record prices Reduction in corporate profits	Income effect: <ul style="list-style-type: none"> <li>• Rationalisation of distribution channels</li> <li>• Renegotiation of contracts with creators</li> </ul>
Long run	Widening market for music consumption	Structural change: <ul style="list-style-type: none"> <li>• Successful adaptation to new market conditions or</li> <li>• failure to adapt, assets taken over by competitors</li> </ul>

<b>Users/consumers</b>	Direct effects	Indirect effects
Short run	Price effect: <ul style="list-style-type: none"> <li>• More records bought and/or</li> <li>• more money spent on other music related activities and/or/</li> <li>• more money spent on other consumption topics</li> </ul>	External effects: <ul style="list-style-type: none"> <li>• Development of skills in handling the Internet tool</li> </ul>
Long run	Changed pattern of music consumption	Increased employability on a future labour market

<b>Creators</b>	Direct effects	Indirect effects
Short run	Reduced earnings from royalties	Income effect: <ul style="list-style-type: none"> <li>• Renegotiation of contracts with record companies</li> </ul>
Long run	New alternative channels of production and distribution: <ul style="list-style-type: none"> <li>• Increased earnings from concerts</li> <li>• Increased earnings from direct record sales</li> </ul> Widening market for music consumption	Lower barriers of entry: <ul style="list-style-type: none"> <li>• Less dependence on a few record companies</li> <li>• Less streamlined marketing of music</li> <li>• Increased cultural diversity</li> </ul>

<b>Society</b>	Direct effects	Indirect effects
Short run	Increased consumer surplus from rationalisation of record distribution Development of skills in handling the Internet	External effects: <ul style="list-style-type: none"> <li>• Increased information overview</li> <li>• Quick and accurate decision making in everyday life</li> </ul>
Long run	Promotion of structural change by the diffusion of new technologies Internet will be a general tool for everybody	Improved performance of the economy



## Appendix 6: Diversity and regulation

The “TV without Frontiers” Directive (TVWF)<sup>i</sup> from 1998 has up to now regulated the broadcast television in Europe. The aim was to overcome protectionist regulations in the member states and stimulate the television industry in Europe. There should be no borders for TV-channels. TV signals from one country should be able to be transmitted to other countries. The important concept was the “country of origin” principle. A TV channel should follow the regulations in the country from where it was transmitted, not the regulations where it was received. Another aim with TVWF was to enhance media pluralism and diversity, by opening up national markets to more competition from other EU countries. European content should be supported.

What has happened? The number of European TV channels has increased. In 1989 there were 47 channels available in Europe; by 2002 the number had increased to more than 1500, over 600 of which were digital<sup>ii</sup> and today the number of TV channels has reached 2 500.<sup>iii</sup> That means increased consumer choice but that is somewhat illusory as many channels are bundled into vertically integrated satellite pay-TV packages. The audience to all these niche channels is very small which means that the channels have to be filled with inexpensive programs. The own production has to be reduced and replaced by inexpensive imports. The result has been a lot of new TV channels but a less proportion of European content and more of inexpensive American TV programs.

An example that confirms this conclusion about “more channels but less diversity” can we find in Sweden. According to the Swedish regulation you are not allowed to fill a TV channel with more than 10 minutes of advertisement during one hour. Advertisements aimed at children, before or after children programs, are prohibited.<sup>iv</sup> All TV channels televised from Sweden follows these rules. But TVWF allows Swedish channels to break these rules if they are just transmitted from another country (country of origin). TV3 and Channel 5 are Swedish channels, produced in Sweden in the Swedish language, but the uplink to the satellite is situated in UK. Their channels contain more than 10 minutes of advertisement every hour and their children programs precedes and follows by advertisement aimed at children. 20% of these advertisements are promoting junk food.<sup>v</sup> Ten percent or less of the programming consists of Swedish programs, a few percent from UK, nothing from other European countries and 80 percent or more from US with Swedish subtitles.<sup>vi</sup> That follows the TVWF imposed level of ten percent of European programs but nothing more.

It seems to be very easy to circumvent the “country of origin” principle. Internet is not different in this respect.

In the Commission Proposal (2005) for a Modernisation of the Television without Frontiers Directive<sup>vii</sup> it is still said that the “country of origin” principle should enhance media pluralism and diversity, by opening up national markets to more competition from other EU countries. There is no need to change either the majority share for European works or the minimum share for independent ones. “These quotas already achieve their cultural aims”

In Sweden now TV4, the commercial channel that have had the sole right to send its programs in the analogue terrestrial network, now plans to uplink their new digital channels from Finland. Then they will be allowed to insert 20% more advertisement in their programming.

The conclusion is that private owned TV channels tend to maximise advertisement and minimise the program cost and maximise the audience. That means that they are seldom promoting diversity, at least in small countries. The diversity in television, in genres, opinions or cultures, is instead upheld by the public service organisations. These are in most countries strictly regulated.

In a recent update study Sweden got a reprimand that seven of the sixteen channels in the national network covered by Article 4 of the Directive did not reach the level of 50% of European (including Swedish) content. But that was not enough. "Four of the 23 reported channels were exceptionally exempted during the reference period. The report indicated that the channels which were exceptionally exempted were small niche channels with small audience shares whose programmes were solely focused on US entertainment content."<sup>viii</sup>

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<sup>i</sup> 'Television without Frontiers' Directive (89/552/EEC)

<sup>ii</sup> Näränen, P. (2005). European Regulation of Digital Television. In A Brown and R G Picard (Eds.), *Digital Terrestrial Television in Europe*. London: Lawrence Erlbaum.

<sup>iii</sup> Proposal for a Directive of the European parliament and of the the council amending council directive 89/552/EEC on the coordination of certain provisions laid down by law, regulation or administrative action in member states concerning the pursuit of television broadcasting activities. Brussels, 13.12.2005.

<sup>iv</sup> Granskningsnämnden för radio och TV.

<sup>v</sup> Var femte reklam är skräpmat! Sveriges konsumentråd. Stockholm, 5 september 2006.

<sup>vi</sup> Findahl, O (2004). Television. In U. Carlsson and U. Facht (eds.), *Mediasverige 2004. Statistik och analys*. Nordicom-Sverige, Göteborgs universitet.

<sup>vii</sup> The Commission Proposal for a Modernisation of the Television without Frontiers Directive

<sup>viii</sup> Seventh communication on the application of Articles 4 and 5 of Directive 89/552/EEC "Television without Frontiers", as amended by Directive 97/36/EC, for the period 2003-2004. COM(2006) 459 final