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

MusicLessons – Deliverable 9

Report from workshops

Lars-Erik Eriksson
Olle Findahl
Håkan Selg
Roger Wallis
Abstract: This report is the ninth deliverable in the project MusicLessons, presenting results from five workshops held during 2005 and 2006.

Work package 6 Dissemination was responsible for arranging the workshops.

The have all been part of the projects dissemination activities which have had the objectives:

- Keep key persons informed about the transformation of value chains, business models and work organisation in the music industry as an illustration of the cultural and economic effects of broadband technologies.

- Create an understanding for the interaction between the policies and legal framework among members of the EU and market development of the music media industry with regards to new business opportunities, and SMEs, as well as cultural impact and consumer benefits.

This report contains the documentation from each one of the five workshops. Each workshop is documented with objectives, date and place, participant list, summary of discussions and conclusions, presentation material and information material if applicable. Overall conclusions from all the workshops are presented below.

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

OVERALL CONCLUSIONS FROM THE WORKSHOPS AND COMMENTS

REPORT FROM WORKSHOP 17 February 2005

REPORT FROM WORKSHOP 8 September 2005

REPORT FROM WORKSHOP 21 February 2006

REPORT FROM WORKSHOP 19 APRIL 2006

REPORT FROM WORKSHOP 4 SEPTEMBER 2006

Acknowledgement

The Musiclessons Project (Contract 006486), a Specific Support Action, is funded by the European Commission under the IST programme FP6. We wish to acknowledge the Commission for their support of the project and their assistance.
Background

Musiclessons has held five workshops in the period 1 January 2005 – 1 October 2006. They have all been part of the project dissemination activities which have had the following objectives:

- Keep key persons informed about the transformation of value chains, business models and work organisation in the music industry as an illustration of the cultural and economic effects of broadband technologies.

- Create an understanding for the interaction between the policies and legal frameworks among members states of the EU and market development of the music media industry with regards to new business opportunities, and SMEs, as well as cultural impacts and consumer benefits.

This report contains the documentation from each one of the five workshops. Each workshop is documented with objectives, date and place, participant list, summary of discussions and conclusions, presentation material and information material if applicable. Overall conclusions from all the workshops are presented below.

Overall conclusions from the workshops and comments

The first workshop was arranged on 17 February 2005 with participants mostly from the Commission. It was rather early since we started in January 2005 but together with background knowledge we had a good possibility to disseminate some results and views and get feedback. One issue that was discussed was Darknets and in particular the hypothesis that “Users will copy objects if it is possible and interesting to do so”. This issue has come up to discussion in later workshops but developed into the observation that users will migrate to more anonymous file sharing networks if the same users feel that they are criminalized, or run the risk of legal harassment. The workshop influenced the next steps of the work in workpackage 3 User Studies.

The second workshop on 8 September 2005 was arranged together with participants from different media branches that have been influenced by the Internet and in particular P2P technologies. At this workshop we tested our research findings on different user categories derived from the questions in workpackage 3. We did not get any indication that our conclusions on user categories were wrong. On the contrary.

Digital Rights Management (DRM) is a critical issue in many respects. DRM was not discussed as such but the discussion gave some input to how some practitioners reason as regards protection of content.
The third workshop took place 21 February 2006 together with civil servants from the Swedish Ministry of Justice and the Industry Ministry. It turned out to be difficult to arrange a meeting with more persons from other ministries due to a lack of co-operation between ministries on the issue of P2P-technology and file sharing. The Ministry of Justice was responsible for this question. The lack of co-operation and coordination between the Ministries results in ministries lacking necessary prerequisites to get actively involved in the ongoing work within the EU to tackle possible conflicts in EU Directives.

In September 2006 we have also noted a lack of understanding of Collected Dominance in the entertainment industry – how it is organised and how it works. In the report from this third workshop we wrote the following note:

quote

In early September 2006 Ministry of Justice issued the directives for a Swedish investigation with the aim to:

- Analyse the development of legal alternatives for downloading music and film from Internet.
- Propose measures to encourage the creation of consumer-friendly legal alternatives to existing “illegal” file-sharing in P2P networks.
- If necessary identify and propose changes of the copyright law to make it possible to increase the availability of legal downloading alternatives
- Compare Sweden with other countries and study the development within the EU for co-ordination of copyright issues within the Union.

The investigator shall consult affected business sectors, interest-groups and experts and

- Take account of the obligations the international framework requires
- make a comparison with circumstances in other countries
- take account of the ongoing work within EU in the area of copyright

Notably the issue of fair use is not part of the investigation and the investigator is not given the directive to consult research in this area.

It is also interesting to notice that the person that wrote the directives is the same one that took part in our presentation. This person is also the one that was the head of a delegation to USA discussing copyright issues shortly before the Swedish website PirateBay was closed down.

end quote

We have experienced similar lack of co-operation and coordination between the Directorates within the EU Commission.
The fourth workshop took place 19 April 2006 and was arranged together with SKAP – The Swedish Society of Popular Music Composers. The discussion showed that there are lots of historical parallels in the present conflict between the copyright rules and new user patterns resulting from technical developments. A proposal to introduce a licensing fee to be divided among rights holders has both supporters and opponents. Among the opponents are the representatives from the larger record companies as well as from independents but with completely different motivations. The four global or “major” record companies say that licensing means an unacceptable loss of control of the works and the independents consider licensing unmotivated since file sharing of mp3-files is marketing and all hindlers for such distribution will result in a backlash for the rights holders. Many independents also believe that any such licence model would lead to a majority of incoming revenues going solely to the major companies and not to smaller players.

Representatives present from the legal committee of the Swedish parliament expressed a keen interest in a licensing system.

Taking our results on user categories (“free riders”, “samplers” and “squirrels”) and corresponding usage patterns in consideration together with historic parallels, an overall conclusion at a later stage was to consider a proposal for a licensing system for content in general although there was a negative attitude in this audience.

Workshop five was held in Brussels 4 September with participants from the Commission, consumer organisations and the broadcasting industry. As a result we got several recommendations for our last report D8b - Impact assessment on policies, directives and business models – Final thoughts.

- Clarify Collective Dominance in the entertainment industry. The subject is not very well understood within the Commission. Explain how distribution revenues have been redistributed in connection with the migration from CD sales to digital suppliers such as iTunes.

- Give examples and try to quantify the observed structural changes “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).”

- Develop a single approach to DRM.

- We should respond to the EU Commission Public Consultation on Content Online in the Single Market (http://ec.europa.eu/comm/avpolicy/other_actions/content_online/index_en.htm#consultation).
A final observation:

It was quite easy to arrange workshops together with persons which have personal or business interest in content on line be it music, film, video, books, games etc. It has been difficult to arrange workshops with participation from decision makers on the political and policy level.
Broadband technologies transforming business models and challenging regulatory frameworks – lessons from the music industry

MusicLessons - Milestone 1

Initial Workshop in Brussels 17 February 2005

Ulf Blomqvist
Lars-Erik Eriksson
Olle Findahl
Håkan Selg
Roger Wallis
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Workshop Invitation

Invitation to a workshop on
Broadband Technologies Transforming Business Models and Challenging Regulatory Frameworks – Lessons From the Music Industry

Background

Peer-to-Peer (P2P) technology has allowed millions to engage in interactivity (inclusion) and provided new methods for marketing intellectual property and knowledge related products. At the same time, it has created serious problems for traditional business models and modes of digital asset protection. New business models are appearing in the P2P environment, particularly in the music industry, a key area where early adoption of new technology has traditionally demonstrated important lessons for many other industrial sectors.

The project MusicLessons will combine technological and socio-economic research into these conflicting trends with pan-European studies of consumer behaviour. It will deliver examples of emerging business models, analyses of technological constraints and insight into related consumer behaviour and interests, thereby providing scientific support for policy-making aimed at balancing regulatory constraints with other goals such as inclusion.

Purpose of the workshop

An initial workshop together with persons representing relevant policy regimes and other important stakeholders

• to initiate a discussion on established policies, technologies, consumer behaviour, consumer offerings and future policy challenges and possible incompatibilities.

• to make a first presentation of the project MusicLessons, and get input from discussions

Content of the workshop

• Background
• Overview of relevant policy areas. Their goals, decisions made, open questions, and inherent conflicts (R. Wallis)
• Technical development. Web, search mechanisms, peer-to-peer, GRID,… (L-E Eriksson)
• Consumers. Trends, offerings and consumer behaviour relative to offerings (O. Findahl, H. Selg, U. Blomqvist)
• Overview of MusicLessons goals. Possible policy incompatibilities and challenges (L-E Eriksson)
• Discussion

1 IST-2-006486-SSA
Date and place

17 February 2005, 10:00 – 13:00
Avenue de Beaulieu 29, room 0/08.
Register to: Ms Nadia Guillaume email: nadia.guillaume@cec.eu.int

Participants

Ahlbom, Gunnar, TeliaSonera Brussels
De Jaegher, Jeanne, European Commission (Proj Off D2 – Networked AV-systems)
Eberl, Peter, European Commission (DG Competition)
Gauthier, Albert, European Commission (E2 – Content, KM, Knowl Sharing – Luxembourg)
Henricson, Niklas, TeliaSonera Brussels
Pereira, Jorge, European Commission (Project officer of MusicLessons – DG IST)
Schade, Roosmarijn, European Commission (DG Competition – Information, Communication & Media Industry Issues)
Rekas, Miroslaw, European Commission (DG IST – Photonics, Nanomaterial /-technology – Outposted from Motorola Research in Krakow)
Boulogne, Marcel, European Commission (DG IST – Audiovisual & Media Policies, Digital Rights, etc.)
Ulf Blomqvist, MusicLessons
Lars-Erik Eriksson, MusicLessons
Olle Findahl, MusicLessons
Håkan Selg, MusicLessons
Roger Wallis, MusicLessons
Summary of discussions

The following topics were covered during the workshop and in the discussion afterwords:

- The terms Vertical integration vs. Collective dominance
- Discussion on what happened in the wake of closing down Napster
- Darknets defined as:
  1. Any widely distributed object will be available to a fraction of users in a form that permits copying
  2. Users will copy objects if it is possible and interesting to do so
  3. Users are connected by high-bandwidth channels
- The three actors

operators

consumers

content owners

- How fast is new technology taken up
- Internet telephony (SKYPE) where the content does not represent any threat to any content industry and thus has another business model
- The broadband for all policy may be changed as a result of what is happening

Conclusions

As a result of the discussions the workshop has influenced MusicLessons Deliverable 1 in the sense that different phases the course of events shall be described. The definition of Darknets played an important role in the discussions – in particular the point “Users will copy objects if it is possible and interesting to do so”.

The discussions will also influence the interviews MusicLessons will make later this year in WP3.

Presentation material

Please see separate PowerPoint presentation.
Musiclessons Workshop
Brussels, 17 February 2005
Organisation of the day

10:00 - 11:45 Presentations

Introduction.............................All
Policy issues.............................Roger Wallis
Technical development..............Lars-Erik Eriksson
Consumers..................................Olle Findahl
                                      Håkan Selg
                                      Ulf Blomqvist
Musiclessons goals.....................Lars-Erik Eriksson

11:45-13:00 Workshop
Introduction

- Short presentation of the participants
- Background
Policy issues

Roger Wallis
Policy areas

**Information Society Goals and Means**
Efficient use of ICT encouraging:
E-inclusion, e-democracy, e-learning, new e-commerce models.
Via e.g. Broadband rollout

**Cultural diversity** - enhance, develop, exploit potential

**Legal** - respect for IPRs, but facilitate new business models

**Competition**: healthy market, facilitate for SMEs, hinder negative effects of market dominance
Broadband for all
P2P is main driver - over 50% of traffic
P2P good and bad (network management, malicious software risks, BUT, various areas of potential value.

e.g. decentralized knowledge management, e-learning, speedy spread of important software(e.g.anti-virus).
Confusion and Fear
- Confused “dot.com” predictions; all products and services which can be digitized go virtual.
- No CDs, bank branches, travel agencies etc.
- Music industry experiences will be repeated for audio-visual industries.

The pundits:
*Music on the Internet (MOTI, Nov 2004)* online sales 2010: 17% €7b
*Global Music Forecasts (GMF Jan 2005)* online sales 2010: 8% €4b
Confusion and Fear continued:

Content owners
- perfect copies of files, impossible to protect IPRs
- shift from producer- to consumer-led marketing (problem for major global players
- demands for total control over consumers’ use of digital products
- acceptance of lack of conduit responsibility for telecom operators.
- DRM seen as THE solution
Content owners’ strategies:
1) Sue P2P technology companies
2) Try to make the technology illegal
   (pending Supreme Court case, USA, Grokster, revisiting Sony-Betamax)
3) Sue individuals
4) support tough IPR regime via WIPO 96 and EU copyright directive.
5) Fill Internet with new form of spam (spoof and decoy files)
6) Buy sniffing data to steer own marketing campaigns
7) Rewrite artist contracts (get share of concert revenues)

Music Lessons significance:
Raises many vital policy issues
Spoofing example
New Entrants / New business models use P2P for marketing:

“Wherever we play people seem to know about us, incredibly well. The audience stands there singing our songs at places where we hadn’t the faintest idea they would know about us. It seems they had found our songs on the Internet and then spread them via local radio stations and fanzines.

It’s a sign of the Internet revolution. Downloading maybe hurts artists like Madonna and Metallica - at least that’s what they claim.

When we played in London last year, a guy from Italy had flown over just for our concert. and now he has organized two concerts in Bologna and Rome! And we get mail from China and Chile.”

The Radio Dept. - a group from Malmö in Sweden.
### Cultural Diversity goals

Diversity in mainstream media apparently decreasing:

Example from Swedish national public service radio P3:
Unique works played per annum (at least once):

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Works played</td>
<td>11643</td>
<td>8365</td>
<td>5897</td>
<td>4662</td>
</tr>
</tbody>
</table>

Note: no decrease in music released in the market

P2P usage, October 2004  5.2 million (Big Champagne)
(shifting to more anonymous networks / “darknets”, encryption)

P2P Initial data suggests: 75% mainstream. 25% wide diversity. Needs further analysis.
Efficient market, support for SMEs, hinder unreasonable market dominance.

A focus on collective dominance:

"The 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"

Example: a conglomerate controlling publishing rights, CD/DVD or film production, distribution channels such as TV/radio or Internet.
Not a new problem in the music industry:

(from EC Gema ruling 1981)
“sanctions imposed by the society to prevent tying arrangements (between GEMA members and users of music) was an appropriate means of eliminating the dangers of vertical integration, as for example in the case where a record company subjects the use of certain works to the condition that these works be published by the publishing house he controls”

Intermediaries a major EC focus. Copyright societies expecting regulation. But collective dominance can force societies to abuse dominant position.

Consider the case of monopoly music collecting societies:
BASIC MARKET MODEL

Publishers ➔ STIM ➔ Concert Promoters

33%

Composers ➔ STIM ➔ Hotels etc.

STIM ➔ Broad/ narrowcasters

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False publishers threat to STIM’s "neutral" market role

"Genuine" Publishers

Composers

"Fake" publishers

STIM

Concert Promoters

Hotels etc

Broadcasters Prod. Cos.

$ → $
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Vertical Integration → Instability

"Collective Dominance"

- Media Corporation
- 5 Major Publishers
- Independent Publishers
- Composers
- STIM
- NCB
- 4 Major Record Companies
- Independent Record Cos.
- Live, Broadcasters Hotels etc

"Pretend" Publishing $
A tough IPR regime (the EU Copyright Directive 2001):

“Fair use has been thought necessary to fulfill copyright’s very purpose of promoting artistic creation, as borrowing from and commenting on existing works is a fundamental part of the process of inventing new works” (Majumder 2003)

Pew Internet report 2004:
Over 50% of artists interviewed said they got ideas and inspiration from searching online. (www.pewinternet.org)

QUESTION
Are there inherent risks to creativity that is dependent on developing existing ideas. Risks with the limitation of “fair use”? 
Functioning copyright relies on a fair balance:

Between Rights holders and Users' interests
interests (publishers) (consumers, media companies)

creators seeking
creations seeking
revenues/protection inspiration
Academic comment: Robert Pickard writes

“Contemporary legal measures to provide increased protection for virtual products represents the use of the law to heighten excludability, but in doing so they run the risk of destroying the recognized social benefits of the development and spread of information, knowledge and cultural products previously recognized in all copyright law' (Pickard, R. 2004)
Technical development

Lars-Erik Eriksson
Traditional system

Peer-to-Peer (P2P) system
Class of applications that take advantage of resources - storage, CPU, content, human presence - available at the edges of the network.
A GRID system is a collection of distributed resources connected by a network.
General characteristics

• Decentralised networks
• Cost effective
  (fixed costs independent of size of user base)
• Technically efficient file transfer
• No server capacity requirements
• Facilitates new software based business models on top of traditional operator business models
Possible characteristics

• No infrastructure requirement
• Self organising
• No scaling problems
• No increase of cost when the network grows
  (example: SKYPE, 0.001 $ for adding a new user)
Two main features

• Data and/or metadata

• Query mechanism
  (Routing mechanism)
Unstructured:
The placement of data totally independent of topology

Structured:
The overlay topology is tightly controlled and data (or pointers to data) are placed at precisely specified locations

Loosely structured:
Data is dependent of routing but not completely specified
Centralised

Decentralised

Partially (de)centralised
Survey of technologies

- Files anywhere
- Centralised index (Napster)

- Files anywhere
- Users connect directly via random search (Gnutella)

- Files anywhere
- Supernodes service a part of the network (Kazaa) (Direct Connect)

- Files in specific locations
- Map data to location (CAN)

- Data are pushed for storage.
- Data: files, identifiers, addresses
- Search by chained requests (Freenet)

(Bit Torrent)
**Some characteristics**

- Files anywhere
- Centralised index (Napster)

- Vulnerable to sensorship, malicious attack and technical failure.
- Quick response

- Files anywhere
- Users connect directly via random search (Gnutella)

- Doesn’t scale.
- Doesn’t always give an answer

- Files anywhere
- Supernodes service a part of the network (Kazaa)

- Reduced response time
- No single point of failure.
- Vulnerable to sensorship and malicious attacks
Some characteristics

- Low latency
- Fault tolerant (CAN)

- Files in specific locations
- Map data to location (CAN)

- Security and privacy

- Data are pushed for storage.
- Data: files, identifiers, addresses
- Search by chained requests (Freenet)
TinyP2P

The World's Smallest P2P Application

Written by Ed Felten, with help from Alex Halderman.

TinyP2P is a functional peer-to-peer file sharing application, written in fifteen lines of code, in the Python programming language. I wrote TinyP2P to illustrate the difficulty of regulating peer-to-peer applications. Peer-to-peer apps can be very simple, and any moderately skilled programmer can write one, so attempts to ban their creation would be fruitless.

(Each line has 80 characters or fewer. The first line doesn't count -- it's a label for human readers and is ignored by the computer.)

My goal in creating this program is not to facilitate copyright infringement. I do not condone copyright infringement. Nothing about the program's design is optimized for the sharing of infringing files. The program is useful mainly as an object concept. A more practical program would be faster, more secure, and more resilient against failure. But that would require a few more lines of code!


How It Works

The program creates a small-world network, which may be used by a group of friends or business associates to share files. The program does not work well for very large networks; instead, many small networks can coexist. Each network is protected by a password; a network can be accessed only by people who know its password. (But networks are not secure against attackers who can eavesdrop on their traffic.)
Anonymous P2P

**Winny** is an example of a P2P code that claims to keep users anonymous.

**Darknets**

- Any widely distributed object will be available to a fraction of users in a form that permits copying
- Users will copy objects if it is possible and interesting to do so
- Users are connected by high-bandwidth channels

Consumers

Olle Findahl
Håkan Selg
Ulf Blomqvist
General Internet Use

Olle Findahl
Access to computer and Internet at home

% of population 18+


computer

internet

2 5 12 25 31 48 50 54 57 64 65

0 10 20 30 40 50 60 70 80 90 100

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Internet Institute

KTH
Internet use among those with high and low income

<table>
<thead>
<tr>
<th>Country</th>
<th>25% with the highest income</th>
<th>25% with the lowest income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>93</td>
<td>49</td>
</tr>
<tr>
<td>Korea</td>
<td>74</td>
<td>46</td>
</tr>
<tr>
<td>USA</td>
<td>90</td>
<td>43</td>
</tr>
<tr>
<td>Japan</td>
<td>66</td>
<td>33</td>
</tr>
<tr>
<td>Germany</td>
<td>63</td>
<td>28</td>
</tr>
<tr>
<td>UK</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>Singapore</td>
<td>81</td>
<td>68</td>
</tr>
<tr>
<td>Spain</td>
<td>68</td>
<td>43</td>
</tr>
<tr>
<td>Taiwan</td>
<td>63</td>
<td>18</td>
</tr>
<tr>
<td>Macao</td>
<td>63</td>
<td>12</td>
</tr>
<tr>
<td>Italy</td>
<td>60</td>
<td>11</td>
</tr>
<tr>
<td>Hungary</td>
<td>24</td>
<td>2</td>
</tr>
</tbody>
</table>
Access to computer and Internet 2003

- Internet and broadband: 23%
- No computer: 26%
- Computer but not internet: 10%
- Internet but no use: 8%
- Internet but not broadband: 33%

Musiclessons
Swedes access and use of Internet 2003

- No computer: 26%
- Computer but not Internet: 10%
- Internet but don't use: 8%
- Internet but little use: 10%
- Use Internet a few times a week: 22%
- Use Internet daily: 24%
% of the population

- not interested: 16
- too expensive: 3.4
- practical problems: 5.2
- other obstacles: 1.2

Other obstacles: not interested too expensive practical problems other obstacles
Internet but why not broadband?

% of population

- not interested: 1.6
- too expensive: 7.8
- practical problems: 1.9
- not possible: 0.7

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Frequency going online modem vs broadband

- **Broadband**
  - Never: 17
  - A few times a year: 6
  - A few times a month: 3
  - A few times a week: 43
  - Daily: 66

- **Telephone modem**
  - Never: 6
  - A few times a year: 6
  - A few times a month: 4
  - A few times a week: 21
  - Daily: 19

**Musiclessons**
Time use of Internet according to experience

Hours/week

<table>
<thead>
<tr>
<th>Internet experience</th>
<th>Hours/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1.5 years</td>
<td>2.5</td>
</tr>
<tr>
<td>1.5-4 years</td>
<td>3.15</td>
</tr>
<tr>
<td>&gt;4 years</td>
<td>8.5</td>
</tr>
<tr>
<td>Broadband</td>
<td>15.5</td>
</tr>
<tr>
<td>Telephone modem</td>
<td>5</td>
</tr>
</tbody>
</table>
Percentage of users informing themselves about:

- Politics
- Gov./Parliament
- Loc. Community
- Loc. Authorities
- Nat. Authorities

Modem
Broadband

- Politics: Modem 45, Broadband 0
- Gov./Parliament: Modem 14, Broadband 11
- Loc. Community: Modem 14, Broadband 26
- Loc. Authorities: Modem 20, Broadband 31
- Nat. Authorities: Modem 27, Broadband 30
Music and Internet users

- Listening to music (week)
- Able to download music
- Listen to music online
- Buy music online

Age groups:
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74

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File sharing and Music

- listen to music (week)
- listen music online
- music download
- video download
- bying music/film online weekly
- e-commerce
- never FS

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File sharing among students and staffs at Swedish universities

Håkan Selg
SUNET

- Swedish University Computer Network
- 32 universities and university colleges
- Backbone: 10 Gbits/sec
- Local terminal networks: 2,5 Gbits/sec
- GÉANT
- NORDUnet
SUNET User studies

Background:
- What do we get for our money?
- Educational/Professional vs private use
- File sharing
SUNET User studies

Population 270 000

Survey:
• Students
• Postgraduate students
• Teachers/Research scientists
• Technical and administrative staffs
## Use of file sharing services (Est. number)

<table>
<thead>
<tr>
<th>File Sharing Service</th>
<th>Every</th>
<th>Once or</th>
<th>Once or a</th>
<th>Less</th>
<th>Never</th>
<th>Do not</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KaZaA</strong></td>
<td>7,895</td>
<td>32,431</td>
<td>24,332</td>
<td>27,432</td>
<td>125,674</td>
<td>43,974</td>
<td>261,738</td>
</tr>
<tr>
<td></td>
<td>3%</td>
<td>12%</td>
<td>9%</td>
<td>10%</td>
<td>48%</td>
<td>17%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Other file</strong></td>
<td>11,786</td>
<td>20,358</td>
<td>18,886</td>
<td>24,715</td>
<td>107,901</td>
<td>77,296</td>
<td>260,942</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>8%</td>
<td>7%</td>
<td>9%</td>
<td>41%</td>
<td>30%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Regular use of KaZaA and other file sharing services (Est. number)

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>KaZaA</td>
<td>34 713</td>
<td>29 945</td>
</tr>
<tr>
<td>Other file sharing services</td>
<td>37 173</td>
<td>13 857</td>
</tr>
</tbody>
</table>
Regular use of KaZaA and other file sharing services. Men/women (Percent)
Regular use of KaZaA and other file sharing services. User ages (Percent)

- **KaZaA**: 70%
  - 25 years: 17%
  - 26 - 30 years: 13%
  - > 30 years: 0%

- **Other file sharing services**: 58%
  - 25 years: 14%
  - 26 - 30 years: 28%
  - > 30 years: 0%
Regular use of KaZaA and other file sharing services. User categories (Percent)

KaZaA
- Students: 29%
- Postgraduate students: 16%
- Teachers/Research scientists: 7%
- Technical and administrative staffs: 6%

Other file sharing services
- Students: 22%
- Postgraduate students: 16%
- Teachers/Research scientists: 5%
- Technical and administrative staffs: 6%
Use of file sharing services. (Percent)
A basis for comparative analysis

- Nonusers: 66%
- Moderate users: 28%
- Heavy users: 6%
Patterns of IT use

• Skills
  - Academic disciplines
  - Computer skills
• Internet use for educational purposes
• Internet use for other purposes
  - Private consumption
  - Recreation
  - Social matters, relations
• Patterns of mobile phone use
Future Business Areas

Ulf Blomqvist
Future Business Areas

• Print
  - (e)Books: Fact, Fiction, Educational
  - (e)Magazines: Scientific/Niche, Newsprint
• Radio and TV
  - Conditional access systems
• Video and PC Games
• Software
• Learning and Education
• Graphics and Images
• Telephony
**Cooperative Challenge**

**CHALLENGE:** How can the distance between the parties/players be decreased in order to reach sustainable agreements on P2P-network file sharing?
Musiclessons Objectives

Lars-Erik Eriksson
Research objectives

To deepen the understanding of how new technology will support new business models and disseminate this understanding to key players.

To evaluate and compare threats and opportunities with different sophisticated technologies for P2P.

To identify new emerging and potential active roles for consumers to be creative and function as aggregators and distributors.

Study and propose tools to support consumers in their creative process.
Research objectives cont.

To identify possible incompatibilities involving existing legal and technical constraints.

Combining the above results of the above objectives to provide a more comprehensive scientific base for Pan European policies aimed at balancing different, sometime incompatible goals, for example the management and protection of digital rights with the goal of inclusive access to the Information Society.
"If what is going on in IT over the past few years was the information age, going forward it’s going to be viewed more and more as the connection age."

Ray Ozzle, CEO Groove, Fortune, Winter 2002
Broadband technologies transforming business models and challenging regulatory frameworks – lessons from the music industry

MusicLessons – Deliverable 9

Report from workshop 8 September 2005

Lars-Erik Eriksson
Olle Findahl
Håkan Selg
Roger Wallis
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PURPOSE OF THE WORKSHOP
PARTICIPANTS
SUMMARY OF DISCUSSIONS
CONCLUSIONS
HANDBOUT (User categories (Version 2005-09-01))
PRESENTATION MATERIAL

The information in this document is provided as is and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability
Purpose of the workshop

The general purpose for this workshop was for Musiclessons to present the results regarding user categories and get feedback.

Date and place

8 September 2005 at Dept of Media Technology & Graphic Arts, Royal Institute of Technology, Stockholm, Sweden

Agenda for the meeting

1. Welcome and presentation of the participants.
2. Presentation from Musiclessons on the results of the investigations and user categories (see also the Handout “User categories (Version 2005-09-01)”).
3. Representatives from the different branches gives their views on user categories as seen from their own experiences.
4. Discussion.

Participants

From media:

TV: Patrick Anderberg, Voddler AB
Games: Thomas Avasol, Ztorm AB
Books: Py Sandell, Elib AB
Film: Börje Hansson, Filmlance International AB
Telephony: P.G. Holmlöv, Telia Sonera AB

From MusicLessons:

Ulf Blomqvist
Lars-Erik Eriksson
Olle Findahl
Håkan Selg
Roger Wallis

Summary of discussions

Considerable time was devoted to a discussion of what the participants called a licensing chaos. Media companies have created to a net of rights which are distributed geographically. This applies particularly to film. There is a myth that there is an open market. This leads to collisions between media distribution in digital form over Internet, which is global and distribution in physical form ruled by rights which are granted in limited geographical markets.
We can expect that such agreements will collapse over time as a result of this conflict, and new actors will step in. Defections will occur and new agreements will be concluded. There is a need for a paradigm shift.

Publishers over time have lost many “production” functions and are “parking places” for rights. This is particularly true in the music sector.

Storage of content means that a virtual value is established.

Most users are willing to pay for content in digital form. The problem is that rights holders do not make the content available.

The big record companies also control “legal” digital distribution – including sub-markets – and no one can survive on digital sales of music unless there are huge volumes. The retail margin is 2-3 cent per tune.

Also within the film industry the copyright issues is a hinder for more digital distribution. The process to find solutions is slow and there is fear of and resistance to change.

The will to own physical artefacts is the driving force behind sales of DVDs.

Film is a little special since film does not exist outside its distribution medium.

An interesting business model: Create a bridge between the physical and digital medium. When a CD is bought or delivered a digital copy is provided.

Another discussion issue concerned different formats (data and software).

Software can be protected for instance by having 80% in the computer and 20% in a server and fetched via a broadband network.

In summary:

<table>
<thead>
<tr>
<th>Branch</th>
<th>Format</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music</td>
<td>Data</td>
<td>Exists outside the format – concerts can not be copied</td>
</tr>
<tr>
<td>Games</td>
<td>Software</td>
<td>Immediate. Autonomous. Is executed. Can be protected</td>
</tr>
<tr>
<td>Books</td>
<td>Data</td>
<td>Does not exist outside the format</td>
</tr>
<tr>
<td>Film</td>
<td>Data</td>
<td>Does not exist outside the format but dependent on different distribution channels</td>
</tr>
<tr>
<td>Software</td>
<td>Software</td>
<td>Autonomous. Is executed. Can be protected</td>
</tr>
</tbody>
</table>
TV will experience a gigantic changeover. Surviving channels will more look like portals.

<table>
<thead>
<tr>
<th>Before</th>
<th>Now</th>
<th>Then</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own production of programs or purchase.</td>
<td>Purchasing programs but not pay in full. The producer has to find additional financing.</td>
<td>The producer pays the TV channel to show his program and receives revenue from other sources.</td>
</tr>
</tbody>
</table>

Finance of TV channels:

- Public service/licenses.
- Sales of advertising time.
- Pay-TV

Digitalisation has decreased the costs for production of music drastically.

Where is the economy for P2P? There is no content worth buying? In the hardware? At the ISPs?

**Conclusions**

We did not get any indication that our findings on user categories are wrong. On the contrary. We got some new insight in how TV may develop.

The discussion on different formats gave some input to how some practitioners reason as regards protection of content. DRM was not discussed as such but a protection model was presented for games and software (80% in computer, 20% in a server on the net). A similar model can be user for other media but that was not discussed.

**Handout**

**User categories (Version 2005-09-01)**

**A starting point for the discussion**

In-depth interviews with experienced file sharers from the user studies (Work package 3) will serve as starting point for the discussion of business models. From our expert interviews together with a number of reports on state of the art, we can identify different user groups, each one with a set of characteristics that we believe are important for the analysis. That means
that the reasoning at this stage of investigation should be considered as a hypothesis, with the main purpose to serve as a base for forthcoming workshops with experts from the field.

**Young people and adults**

First we can divide the users into two groups: young people and adults. Young people do not work, they have small incomes or are dependent as a rule on their parents economy. However, they are often advanced media consumers, and spend a high share of their economic resources on music, films, computer games etc. And they have quite a lot of free time to their disposal. Most of them prefer spending their leisure time with friends and class mates, where one of the main discussion topics has traditionally been popular music, the artists and everything else surrounding it.

For the adults the situation is the reverse: Working means less free time but more money for personal consumption. With no family there is still time for a social life, often with music as an important ingredient.

**Copying is complementary to original music**

Via their friends or elder brothers and sisters, young people get introduced to the world of music, where they try to orient themselves. They spend their money on buying CDs of their favourite artists, where the pictures, texts and biographies contained are sometimes as important for the fan as the songs. They go to concerts and buy T-shirts etc, expressing their identification with their idols or the music genre.

The rest of their abundant music listening they get for free. Then they use any technology available to copy the records of their friends or the top lists from the radio; burning a CD or copying to the hard drive. One generation ago cassette tapes were used a copy medium.

**No moral doubts**

Young people do not perceive any moral doubts about copying. There are at least three explanations: 1) All their friends are doing the same, 2) their parents do not mind as they did the same thing when they were in that age, and 3) a copy is not considered the same thing as the original record.

**Forms of payment**

Other matters of importance are forms of payment that are available. Young people have no credit cards or Internet bank accounts. On the other hand they are often very skilled in managing the cash cards of their mobile phones and they know how to pay a subscription to a magazine.
Pay for convenience

The music consumption of adults differs from that of young people in many respects. In general there is less time to spend searching and downloading songs on the PC. This is particularly the case with families with children. Secondly, tolerance of any lack of quality associated with copied music tend to be less. Although a song may be available on the Internet for free, for quality reasons the adult consumers often prefer to get the original CD, at least if there is a convenient way to purchase and that the price is considered fair.

Respectability

The decision to choose original CDs is further strengthened by the fact that dealing with copies offers very little of prestige. Many people would feel a bit ashamed to tell colleagues and neighbours about their piracy activities. The negative social aspect is likely to be reinforced when entering a stage of family responsibilities requiring people to identify themselves with socially responsible citizens.

Communities

There are cases when file sharing activities are likely to be continued even among people with good financial and social resources. Sometimes music preferences develop into very personal directions. This is taking place regardless of age; young people as well as grown ups may express deviations from mainstream taste. Then they often find that the market do not offer a satisfactory supply. Instead the music consumers organise themselves in Internet communities, often with a high degree of personal involvement, where one important purpose is to share their records within the group.

From a social point of view such community members do not consider themselves as law-breakers or anything related to immorality, rather they look upon their activities as a hobby with a certain degree of exclusiveness. There are examples of similar activities from other cultural areas: Hobby planters organising meetings for the exchange of plants, and reading circles where the participants circulate fiction. These enthusiasts would not for a moment imagine that their activities would harm the interests of the seed company or the publisher.

Presentation material
Filesharing and downloading

Workshop September 8 2005
Olle Findahl
General Internet use
Internet statistics in different ways

- Access to computer somewhere (age 18-65): 90%
- Access to internet somewhere (age 18-65): 83%
- Access to computer somewhere (age 18+): 79%
- Access to internet somewhere (age 18+): 71%
- Access to internet at home (age 18+): 65%
- Use internet somewhere (age 18-65): 73%
- Use internet somewhere (age 18+): 61%
- Use internet at home (age 18+): 52%
Percent of Users

<table>
<thead>
<tr>
<th>Country</th>
<th>% of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>71.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>66.1</td>
</tr>
<tr>
<td>Korea</td>
<td>60.9</td>
</tr>
<tr>
<td>UK</td>
<td>59.2</td>
</tr>
<tr>
<td>Japan</td>
<td>50.4</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>49.0</td>
</tr>
<tr>
<td>Germany</td>
<td>45.9</td>
</tr>
<tr>
<td>Singapore</td>
<td>40.8</td>
</tr>
<tr>
<td>Spain</td>
<td>36.4</td>
</tr>
<tr>
<td>Macao</td>
<td>32.9</td>
</tr>
<tr>
<td>Italy</td>
<td>31.2</td>
</tr>
<tr>
<td>Taiwan</td>
<td>24.2</td>
</tr>
<tr>
<td>Hungary</td>
<td>17.5</td>
</tr>
<tr>
<td>China</td>
<td>5.3</td>
</tr>
</tbody>
</table>

World Internet Institute dec 2003
Internet use among those with high and low income

- 25% with the highest income
- 25% with the lowest income

<table>
<thead>
<tr>
<th>Country</th>
<th>High Income</th>
<th>Low Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>93</td>
<td>49</td>
</tr>
<tr>
<td>Korea</td>
<td>74</td>
<td>46</td>
</tr>
<tr>
<td>USA</td>
<td>66</td>
<td>43</td>
</tr>
<tr>
<td>Japan</td>
<td>63</td>
<td>33</td>
</tr>
<tr>
<td>Germany</td>
<td>81</td>
<td>28</td>
</tr>
<tr>
<td>UK</td>
<td>55</td>
<td>22</td>
</tr>
<tr>
<td>Singapore</td>
<td>68</td>
<td>18</td>
</tr>
<tr>
<td>Spain</td>
<td>63</td>
<td>18</td>
</tr>
<tr>
<td>Taiwan</td>
<td>60</td>
<td>12</td>
</tr>
<tr>
<td>Macao</td>
<td>24</td>
<td>11</td>
</tr>
<tr>
<td>Italy</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>Hungary</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Access to computer and Internet at home

% of population 18+

0 10 20 30 40 50 60 70 80 90 100


Musiclessons

Internet Institute
Access to computer and internet 2003

- Internet and broadband: 23%
- No computer: 26%
- Computer but not internet: 10%
- Internet but no use: 8%
- Internet but not broadband: 33%
Downloading and filesharing
Members on P2P networks

- Monitoring 1
- Monitoring 2

- PEW-survey (USA)

- 22%
- 30%
- 27%

- 9 millions

- 1. BigChampagne
- 2. www.slyck.com
Growth in Global FastTrack and other P2P networks (simultaneous audience)

Source: OECD based on BigChampagne data

All Networks

FastTrack (KaZaa)
Internet och musik

- 18-24: 902 000
- 25-34: 745 000
- 35-44: 968 000
- 45-54: 989 000
- 55-64: 848 000
- 65+: 739 000

- Internet och musik
  - lyssnar till musik totalt: 5 198 000
  - kan ladda ner musik via Internet: 7 420 000
  - lyssnar på musik via internet: 1 283 000
  - köper musik via nätet: 604 000

Musiclessons
Svenska fildelare

- Fildelare: 8%
- Ej fildelare: 63%
- Ej internetanvändare: 29%

600 000

World Internet Institute 2004
File sharing frequency among downloaders

- Daily: 20%
- Weekly: 31%
- Monthly: 17%
- Seldom: 32%
The diagram shows the distribution of downloaders for different frequency levels (seldom, monthly, weekly, daily) across different age groups (18-25, 26-35, 36-45, 46-55, 56-65, 65+). The bar heights indicate the percentage of each age group within each frequency category.
File sharing and activities online

- Listen to music (week) 88%
- Listen music online 84%
- Music download 84%
- Video download 71%
- Buying music/film online 53%
- E-commerce weekly 38%
- FS daily/weekly 62%
- FS sometimes 39%
- Never FS 18%
P2P networks, Digital Sales and music subscribers

- **P2P networks**
- **US digital weekly sales**
- **US subscribers to music services**

Simultaneous audience in all P2P networks

Digital weekly sales

Subscribers to music services
P2P users and CD sale development

Source: OECD based on IFPI and BigChampagne data
CD sales in units and values (USA, RIAA 2005)

CD Values

CD Units

Percent downloaders among Internet users

Napster closed down

22%
32%
27%

March 2005
Percent of broadband and modem users who are doing different activities online?

- e-mail
- hobbies
- banking
- surfing
- travel
- national news
- newspaper
- local news
- entertainment
- international news
- national authorities
- culture
- community
- e-commerce
- health/medical info
- music
- trading stock
- gov/parliament
- gaming
- auctions
- seeking contacts
- politics
- work at home
- radio
- relations
- religion
- porn
- tv

World Internet Institute survey 2003

Music lessons
File sharing and Music

listen to music (week)
listen music online
music download
video download
buying music/film online
e-commerce weekly
never FS
FS sometimes
FS daily/weekly

Musiclessons
Music and Internet users

- Listen to music (week)
- Able to download music
- Listen to music online
- Buy music online
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
File sharing among students and staffs at Swedish universities

Håkan Selg
User categories of file sharing services at Swedish universities 2003

- Nonusers: 66%
- Moderate users: 28%
- Heavy users: 6%
File sharing among men and women

<table>
<thead>
<tr>
<th></th>
<th>Heavy users</th>
<th>Moderate users</th>
<th>Nonusers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>10%</td>
<td>36%</td>
<td>54%</td>
</tr>
<tr>
<td>Women</td>
<td>3%</td>
<td>18%</td>
<td>79%</td>
</tr>
</tbody>
</table>
Gender distribution among file sharing categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Heavy users</th>
<th>Moderate users</th>
<th>Nonusers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>70%</td>
<td>41%</td>
<td>33%</td>
</tr>
<tr>
<td>Women</td>
<td>30%</td>
<td>59%</td>
<td>67%</td>
</tr>
</tbody>
</table>
File sharing activities in different age groups

- **Up to 25 years**
  - Heavy users: 11%
  - Moderate users: 37%
  - Nonusers: 53%

- **25 - 30 years**
  - Heavy users: 25%
  - Moderate users: 69%
  - Nonusers: 0%

- **> 30 years**
  - Heavy users: 14%
  - Moderate users: 86%
  - Nonusers: 0%
Internet use at home among P2P users. Hours per week

Heavy users: 81% (>5 hrs/w), 17% (1-5 hrs/w), 1% (Rarely or never)
Moderate users: 53% (>5 hrs/w), 35% (1-5 hrs/w), 13% (Rarely or never)
Nonusers: 49% (>5 hrs/w), 21% (1-5 hrs/w), 30% (Rarely or never)
“I always keep my mobile on”
Media consumption on a regular basis

- Getting news: 100% (Heavy users), 65% (Moderate users), 3% (Nonusers)
- Reading newspapers and magazines: 94% (Heavy users), 78% (Moderate users), 18% (Nonusers)
- Listening to webradio: 84% (Heavy users), 61% (Moderate users), 18% (Nonusers)
- Watching films: 65% (Heavy users), 39% (Moderate users), 3% (Nonusers)
Buying on-line on a regular basis

<table>
<thead>
<tr>
<th></th>
<th>Heavy users</th>
<th>Moderate users</th>
<th>Nonusers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travels, hostelling</td>
<td>34%</td>
<td>24%</td>
<td>18%</td>
</tr>
<tr>
<td>Events, entertainment</td>
<td>57%</td>
<td>27%</td>
<td>21%</td>
</tr>
<tr>
<td>Books, records etc</td>
<td>35%</td>
<td>28%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Musiclessons
Conclusion

Strong relations between the downloading in P2P networks and
• the use of Internet in general
• computer skills
• buying books, records etc on-line
File sharing in theory
File sharing in reality

- Virus
- Spoofs
- Adware
- Spam
Strategies for quality

Restrictions of entry (Direct Connect)
- Connection
- Slots
- Hard drive
- Content
Strategies for quality

First publish, than download (BitTorrent)
- Attractive content
Conclusion

Indirect effect of the strive for quality:

Accumulation of content, not necessarily reflecting the level of consumption of the owner, nor the personal taste.
Broadband technologies transforming business models and challenging regulatory frameworks – lessons from the music industry

MusicLessons – Deliverable 9

Report from workshop 21 February 2006

Lars-Erik Eriksson
Olle Findahl
Håkan Selg
Roger Wallis
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BACKGROUND AND PURPOSE OF THE WORKSHOP

PARTICIPANTS

CONCLUSIONS FROM THE DISCUSSION

PRESENTATION MATERIAL

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Background and purpose of the workshop

When planning the project it was decided to create discussions with well placed civil servants. Milestone 4 in July 2005 set a target on civil servants from Ministry of Justice, Ministry of Industry, Ministry of Culture and Education, Foreign Office in Sweden.

The purpose was to disseminate knowledge and get feedback before the finalising stages in the project.

Twice a year the II-Foundation\(^1\) organises a seminar on Infrastructure and society. At the seminar representatives from industry, government, research, municipalities and other important stakeholders are invited. Representatives from Musiclessons are normally invited. Contact was made between the representative from Ministry of Industry, Mr J. Samuelsson and Musiclessons. Mr Samuelsson was highly interested in the Musiclessons approach and undertook to organise a meeting with other civil servants. This proved to be “easier conceived than done” since it was generally regarded within the government that the Ministry of Justice “owned the question”. However it was possible to organise a small meeting with representatives from the Ministry of Justice and the Ministry of Industry.

Date and place


Participants

Christoffer Demery, Ministry of Justice
Jörgen Samuelsson, Ministry of Industry
Lars-Erik Eriksson, Musiclessons
Håkan Selg, Musiclessons
Olle Findahl, Musiclessons

\(^1\)II-Stiftelsen (Foundation for Internet Infrastructure) is responsible for running the .SE domain
Conclusions from the discussions

The presentations led to many clarifying questions mainly from the representative from the Ministry of Justice. The Ministry of Industry representative was very inactive. However it was extremely clear from questions and statements that decisions were already taken and in principle not possible to change or even influence from our side. Both representatives paid very little attention to our arguments. Utterances like “it is the young file sharers (read “free riders”) we have problems with” can serve as an example.

Our conclusion from the meeting was that our presentation did not have any impact at all, but the representative from the Ministry of Justice was very interested to receive our reports. The discussions did unfortunately not give us any input to our future work. We also noted that there seem to be very little co-operation and coordination between the Ministries with the result that ministries lack the necessary prerequisites to get actively involved in the ongoing work within the EU to tackle possible conflicts in EU Directives.

Note September 2006:

In early September 2006 Ministry of Justice issued the directives for a Swedish investigation with the aim to:

- Analyse the development of legal alternatives for downloading music and film from Internet.
- Propose measures to encourage the creation of consumer-friendly legal alternatives to existing “illegal” file-sharing in P2P networks.
- If necessary identify and propose changes of the copyright law to make it possible to increase the availability of legal downloading alternatives
- Compare Sweden with other countries and study the development within the EU for co-ordination of copyright issues within the Union.

The investigator shall consult affected business sectors, interest-groups and experts and

- Take account of the obligations the international framework requires
- make a comparison with circumstances in other countries
- take account of the ongoing work within EU in the area of copyright

Notably the issue of fair use is not part of the investigation and the investigator is not given the directive to consult research in this area.

It is also interesting to notice that the person that wrote the directives is the same one that took part in our presentation. This person is also the one that was the head of a delegation to USA discussing copyright issues shortly before the Swedish website PirateBay was closed down.
Presentation material
Filesharing and downloading on the Internet

Feb 22 2006
Olle Findahl
Global diffusion of Internet

non-English-speaking online population

English-speaking online population

Source: Global Reach 2004

Musiclessons
Internet use among those with high and low income

- 25% with the highest income
- 25% with the lowest income

<table>
<thead>
<tr>
<th>Country</th>
<th>High Income (%)</th>
<th>Low Income (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>93</td>
<td>49</td>
</tr>
<tr>
<td>Korea</td>
<td>74</td>
<td>46</td>
</tr>
<tr>
<td>USA</td>
<td>90</td>
<td>43</td>
</tr>
<tr>
<td>Japan</td>
<td>66</td>
<td>33</td>
</tr>
<tr>
<td>Germany</td>
<td>63</td>
<td>28</td>
</tr>
<tr>
<td>UK</td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>Singapore</td>
<td>55</td>
<td>18</td>
</tr>
<tr>
<td>Spain</td>
<td>68</td>
<td>18</td>
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<tr>
<td>Taiwan</td>
<td>63</td>
<td>43</td>
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<tr>
<td>Macao</td>
<td>60</td>
<td>12</td>
</tr>
<tr>
<td>Italy</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Hungary</td>
<td>24</td>
<td>2</td>
</tr>
</tbody>
</table>

Sweden, Korea, USA, Japan, Germany, UK, Singapore, Spain, Taiwan, Macao, Italy, Hungary.
Internet statistics in different ways

- Access to computer somewhere (age 18-65): 90%
- Access to internet somewhere (age 18-65): 83%
- Access to computer somewhere (age 18+): 79%
- Access to internet somewhere (age 18+): 71%
- Access to internet at home (age 18+): 65%
- Use internet somewhere (age 18-65): 73%
- Use internet somewhere (age 18+): 61%
- Use internet at home (age 18+): 52%
Access to computer and Internet at home

% of population 18+


Computer:
- 1994: 2
- 1995: 5
- 1996: 12
- 1997: 25
- 1998: 31
- 1999: 48
- 2000: 50
- 2001: 54
- 2002: 57
- 2003: 64
- 2004: 65

Internet:
- 1994: 2
- 1995: 5
- 1996: 12
- 1997: 25
- 1998: 31
- 1999: 48
- 2000: 50
- 2001: 54
- 2002: 57
- 2003: 64
- 2004: 65

Musiclessons
Access to computer and internet 2003

- No computer: 26%
- Computer but not internet: 10%
- Internet but no use: 8%
- Internet but not broadband: 33%
- Internet and broadband: 23%
Svenska fildelare

- Fildelare: 8%
- Ej fildelare: 63%
- Ej internetanvändare: 29%

600 000

World Internet Institute 2004
File sharing frequency among downloaders

- Seldom: 32%
- Monthly: 17%
- Weekly: 31%
- Daily: 20%
What are the very important reasons for file sharing?

- Easy and practical: 63 (ordinary), 77 (heavy down loaders)
- No charge: 44 (ordinary), 65 (heavy down loaders)
- Test before buying: 44 (ordinary), 61 (heavy down loaders)
- Can't find it in ordinary shops: 49 (ordinary), 55 (heavy down loaders)
- Belongingness to the community: 7 (ordinary), 10 (heavy down loaders)

World Internet Institute 2005
What kind of music are the fileshares often downloading?

- Old favorites: ordinary 32, heavy downloaders 39
- Recently released music: ordinary 12, heavy downloaders 38
- Music of special interest: ordinary 15, heavy downloaders 36
- Other music: heavy downloaders 19
Do you buy music that you already have downloaded and watched?

- No, never: 47 ordinary, 39 heavy downloaders
- Yes, sometimes: 45 ordinary, 36 heavy downloaders
- Yes, often: 5 ordinary, 26 heavy downloaders
Do you buy films that you already have downloaded and watched?

- **no, never**: 44 ordinary, 32 heavy downloaders
- **Yes, sometimes**: 50 ordinary, 52 heavy downloaders
- **Yes, often**: 16 heavy downloaders
Has the opportunity to download music from Internet effected your purchases?

- Much more: 3%
- Somewhat more: 7%
- No effect: 55%
- Somewhat less: 25%
- Much less: 10%

World Internet Institute 2005
Has the opportunity to download video from the Internet affected your purchases?

- No effect: 73%
- Somewhat less: 13%
- Much less: 6%
- Somewhat more: 4%
- Much more: 4%
- No effect: 4%
Downloading stimulates the interest for new music

- 85% download known music from known artists
- 44% download unknown music from known artists
- 30% download unknown music from unknown artist
Discovery of a new artist on the Internet

- 2 of 3 download more (especially among teens)
- 2 of 3 bought CD
- 1 of 2 followed the artist in media
- 1 of 3 visited a concert

Indicare 2005
Om fildelning: aktörer, drivkrafter och effekter

Håkan Selg
Rapporter om Internetanvändning

IT-kommissionen
- IT och äldre (2002)
- Om kvinnors användning av Internet (2002)

Användarstudier inom SUNET (2003)
- Internet i den svenska högskolan våren 2003
- Användning av fildelningstjänster

Svenska språknämnden/IVA

MusicLessons (www.musiclessons.se)
Arbetsgång

• Syfte och metod
• Användarundersökningar – Fildelarna, vilka är de och hur använder de nätet?
• Fokussamtal, litteraturstudier – Vilka är drivkrafterna?
• Slutsatser
Fildelning vid svenska högskolor 2003

- Tunga fildelare: 6%
- Måttliga fildelare: 28%
- Ej fildelare: 66%

Om fildelning: aktörer, drivkrafter och effekter - Diskussion på Näringsdepartementet 21 februari 2006 - Håkan Selg
Fildelningen fördelad på män och kvinnor

<table>
<thead>
<tr>
<th>Män</th>
<th>Kvinnor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tunga fildelare</td>
<td>10%</td>
</tr>
<tr>
<td>Måttliga fildelare</td>
<td>36%</td>
</tr>
<tr>
<td>Ej fildelare</td>
<td>54%</td>
</tr>
</tbody>
</table>
Fildelning inom olika åldersgrupper

- Upp till 25 år: 11% Tunga fildelare, 53% Måttliga fildelare, 37% Ej fildelare
- 25-30 år: 5% Tunga fildelare, 69% Måttliga fildelare, 25% Ej fildelare
- > 30 år: 0% Tunga fildelare, 14% Måttliga fildelare, 86% Ej fildelare
Om fildelning: aktörer, drivkrafter och effekter – Diskussion på Näringsdepartementet 21 februari 2006 - Håkan Selg
Om fildelning: aktörer, drivkrafter och effekter - Diskussion på Näringsdepartementet 21 februari 2006 - Håkan Selg

Internetanvändning på högskolan (Veckotimmar)

- Tunga fildelare: 21% 58% 21%
- Måttliga fildelare: 30% 46% 23%
- Ej fildelare: 39% 44% 17%

Siffrorna anger procenten av studenter som använder Internet för olika tidsintensiva aktiviteter.
Internetanvändning hemma (Veckotimmar)

- Tunga fildelare: 81%
- Måttliga fildelare: 53%
- Ej fildelare: 21%

Internetanvändning hemma:
- 81% använder Internet hemma 8-17 tim/månad
- 17% använder Internet hemma 1-5 tim/månad
- 1% använder Internet hemma Sällan/aldrig

Om fildelning: aktörer, drivkrafter och effekter - Diskussion på Näringsdepartementet 21 februari 2006 - Håkan Selg
Om fildelning: aktörer, drivkrafter och effekter – Diskussion på Näringsdepartementet 21 februari 2006 - Håkan Selg

Media på nätet

- Ta del av nyheter: 100%
- Läsa tidningar och tidskrifter: 83%
- Lysna på webbradio: 65%
- Se på film: 39%

Tunga fildelare
Måttliga fildelare
Ej fildelare
Kontakter på nätet

- **Epost**: 87% Tungafildelare, 86% Måttliga fildelare, 96% Ej fildelare
- **Chatta - diskussioner, få svar på frågor**: 67% Tungafildelare, 50% Måttliga fildelare, 15% Ej fildelare
- **Chatta - få nya vänner**: 27% Tungafildelare, 8% Måttliga fildelare, 8% Ej fildelare
- **ICQ**: 41% Tungafildelare, 34% Måttliga fildelare, 12% Ej fildelare

Om fildelning: aktörer, drivkrafter och effekter - Diskussion på Näringsdepartementet 21 februari 2006 - Håkan Selg
Om fildelning: aktörer, drivkrafter och effekter – Diskussion på Näringsdepartementet 21 februari 2006 - Håkan Selg

Köp och beställningar

Resor, hotell
- Tunga fildelare: 34%
- Måttliga fildelare: 24%
- Ej fildelare: 18%

Nöjen, underhållning
- Tunga fildelare: 57%
- Måttliga fildelare: 27%
- Ej fildelare: 21%

Böcker och skivor
- Tunga fildelare: 35%
- Måttliga fildelare: 28%
- Ej fildelare: 15%
Sammanfattning

• En ny generation
• Internet en kontaktpunkt
• Cyber masters
• Paradoxen
Fildelarkategorier

Musiken som hobby
- Provlyssnare
- Gratisåkare

Datorn som hobby
- Samlare
## Nya format: för- och nackdelar

**Format**

<table>
<thead>
<tr>
<th>Egenskaper</th>
<th>Fysiska</th>
<th>Virtuella</th>
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<td>Urval</td>
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<tr>
<td>Bearbetning</td>
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<td>+</td>
</tr>
<tr>
<td>Tillgänglighet</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Ljudkvalitet</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Multimedia</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Symboliska värden</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Leveranssäkerhet</td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>
Slutsatser

Populärkulturen driver Internetutvecklingen

Virtuella formaten komplement till de fysiska

Flertalet beredda att betala för kvalitet
  • Brett utbud
  • Enkel åtkomst och nedladdning
  • Praktiska betalningsformer

Nödvändigt med legala alternativ
“If what is going on in IT over the past few years was the information age, going forward it’s going to be viewed more and more as the connection age.”

Ray Ozzle, CEO Groove, Fortune, Winter 2002
Innehåll

• Teknologiskiften följer logiska mönster
• Är fildelning en viktig teknik
• Användarkategorier och affärsmodeller
• Digital Rights Management
MP3 och billiga minnen kompletterar (ersätter?) CD.
Viktiga nya tekniker

• Signalbehandling. Nya kodningsmetoder – t.ex. MP3, MPEG4 (inte nödvändigtvis "bättre" än tidigare)

• Minnestekniken

• Bredband (symmetrisk)

• Kataloger (P2P), skapade av användarns själva, med massor av material. (kulturell mångfald)
Teknikskiften följer logiska mönster*

- Destruktiva inslag för existerande företag
  - Gjorda investeringar blir obsoleta
  - Existerande betalningsströmmar hotas
  - Kannibalisering och priserosion - förhalningstaktik
  - Äldre teknik utvecklas till sin fulländning
  - Fusioner och förvärv sker i preventivt syfte
- Nya branscher utkrystalliseras
  - Många nya aktörer - flertalet slås ut eller köps upp
  - Framgångsrika företag sätter nya branschstandards
  - Många stabila företag slås ut - andra överlever
  - Nya tillväxträmjande branschstrukturer skapas
  - Successiv konsolidering till globala oligopolmarknader i varje ny branschstruktur

* Prof. Erik Giertz. KTH
En klass tillämpningar, som utnyttjar resurser såsom minnen, processorkraft mänsklig aktivitet/närvaro mm i anslutning till nätet.
GRID computing
General characteristics of P2P networks

• Decentraliserade

• Kostnadseffektiva
  (~ 0 kr för att lägga till en ny användare)

• Effektiv filöverföring

• Inget behov av central server
  kapacitet/nätaccess/skötsel och underhåll

• Ett verktyg för användarna att bygga gemensamma
  kataloger och databaser

• Nya mjukvarubaserade tillämpningar “ovanpå”
  de traditionella operatörernas affärsmodeller
Nya mjukvarubaserade tillämpningar “ovanpå” de traditionella operatörernas affärsmodeller*

Operatörerna adderar ingen värde och kan således inte ta betalt

* Användarna lägger till värde
  - Kataloger över innehåll
  - Möjlighet för användarna att lägga till innehåll

* Internet multicast fungerar inte som affärsmodell
Näringsdepartementet den 21 februari 2006.
Diskussion. Lars-Erik Eriksson
Näringsdepartementet den 21 februari 2006.
Diskussion. Lars-Erik Eriksson

En affärsmöjlighet??
Vad är acceptabelt inom ramarna för "moral rights"?
Inget krav på central server.

<10% av befolkningen

50% av befolkningen

*<15% av Internetanvändarna

Näringsdepartementet den 21 februari 2006.
Diskussion. Lars-Erik Eriksson
Näringsdepartementet den 21 februari 2006.
Diskussion. Lars-Erik Eriksson

Kriminalisera P2P?

Anonyma P2P
TinyP2P

The World's Smallest P2P Application

Written by Ed Felten, with help from Alex Halderman.

TinyP2P is a functional peer-to-peer file sharing application, written in fifteen lines of code, in the Python programming language. I wrote TinyP2P to illustrate the difficulty of regulating peer-to-peer applications. Peer-to-peer apps can be very simple, and any moderately skilled programmer can write one, so attempts to ban their creation would be fruitless.

(Each line has 80 characters or fewer. The first line doesn’t count; it’s a label for human readers and is ignored by the computer.)

My goal in creating this program is not to facilitate copyright infringement or to condone copyright infringement. Nothing about the program’s design is optimized for the sharing of infringing files. The program is useful mainly as a proof of concept. A more practical program would be faster, more secure, and more resilient against failure. But that would require a few more lines of code.


How It Works

The program creates a small-world network, which might be used by a group of friends or business associates to share files. The program does not work well for very large networks; instead, many small networks can coexist. Each network is protected by a password; a network can be accessed only by people who know its password. (But networks are not secure against attackers who can eavesdrop on their traffic.)
TinyP2P

The World's Smallest P2P Application

Written by Ed Felten, with help from Alex Haldeman.

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Näringsdepartementet den 21 februari 2006.
Diskussion. Lars-Erik Eriksson

Small worlds networking
inget problem enligt
Oskar Sandberg
Darknets*

- Any widely distributed object will be available to a fraction of users in a form that permits copying.
- Users will copy objects if it is possible and interesting to do so.
- Users are connected by high-bandwidth channels.

Kategorier av fildelare

Fildelare

De med musik som hobby

De med datorer som hobby

Gratisåkarna
Som inte har en tanke på att köpa

Provlyssnarna
Lyssnar på MP3 på nätet för att avgöra om de skall köpa

• på nätet
• i affären

Samlarna
Laddar ner mer än de kan konsumera
Näringsdepartementet den 21 februari 2006.

Diskussion. Lars-Erik Eriksson

Lyssnar på radio (köpa CD i butiken)

Substituteras med

Lyssna på MP3 på nätet. Ladda ner.

Lyssna på MP3 på nätet.

Ladda ner.

Lyssnar och köper CD i butiken

Complemented by

Lyssnar till MP3 på nätet. Köper CD på nätet

Teknikutvecklare

Gratisåkarna

Provlyssnarna

Samlarna

Skvalmusik

Licensmodell

Provlyssning

"Community"/Reklam
Prenumeration/
Direktförsäljning

Mätningar på nätet
Mätning via DRM
Bättre sökmekanismer

Mätningar på nätet

"övervakande" DRM
Bättre sökmekanismer

web promotion

"övervakande" DRM
Bättre sökmekanismer

Teknik-brytarna

Enklare betalning

Sixth Framework Programme

Näringsdepartementet den 21 februari 2006.

Diskussion. Lars-Erik Eriksson
Näringsdepartementet den 21 februari 2006.
Diskussion. Lars-Erik Eriksson

DRM system. Egenskaper.

Synnerligen påträngande

Kopierings-skydd på CD

Sony
Rootkits

Press Play

Press Play

RIAA
IFPI

Icke påträngande

Allmän trafikanalys

Sony

Rootkits

I-tunes

STIM

I-tunes

Press Play
## Final thought

### Format

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<td>Customizing</td>
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<td>Multiple points</td>
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<td>Quality of sound/image</td>
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<td>Symbolic values</td>
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<td>Convenient delivery</td>
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</table>
Broadband technologies transforming business models and challenging regulatory frameworks – lessons from the music industry

MusicLessons – Deliverable 9

Report from workshop 19 April 2006

Lars-Erik Eriksson
Olle Findahl
Håkan Selg
Roger Wallis
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PURPOSE OF THE WORKSHOP

DATE AND PLACE

PREAMBLE

PARTICIPANTS

SUMMARY OF DISCUSSION AND CONCLUSIONS

PRESENTATION MATERIAL

The information in this document is provided as is and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability.
Purpose of the workshop
Together with small record companies and artists disseminate knowledge and get feedback before the finalising stages in the project.

To create interest for the workshop and reach a large amount of the artists and record companies it was decided to make it together with SKAP – The Swedish Society of Popular Music Composers¹.

Date and place
19 April 2006 at Filmhuset, Stockholm, Sweden.

Preamble
The workshop attracted about 90 participants. Most of them composers but also small record companies, producers, “pirates” and “anti-pirates”.

The workshop started with two presentation from Musiclessons. Anders Edström, doctoral student at KTH and part of the Musiclessons project but financed by KTH gave a talk on how file sharing has developed and how the reactions by record companies and their strategies. Anders Edström talked also about spoofing on file sharing networks and made an overview of what type of music file sharers download. Professor Olle Findahl from World Internet Institute and part of Musiclessons gave a talk on file sharers activities supported by a lot of statistics.

During the workshop Per Sinding-Larsen, journalist, acted as moderator. A panel consisting of four persons had been invited to present different experiences and views as another input to the discussion.

¹ http://www.skap.se/
## Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Company/Role</th>
<th>Name</th>
<th>Company/Role</th>
</tr>
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<tbody>
<tr>
<td>Mårten Karlsson</td>
<td>Johan Hammarbäck</td>
<td>Roger Wallis, KTH/SKAP</td>
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<tr>
<td>Per Sinding-Larsen</td>
<td>Lars Ilshammar</td>
<td>Mattias Lökvist</td>
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<td>Jan Granvik</td>
<td>Ludvig Werner</td>
<td>Daniel Westman</td>
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<td>Hillevi Larsson</td>
<td>Tassos Stafileidis</td>
<td>Anders Edström</td>
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<td>Pierre Ström</td>
<td>Merit Hemingsson</td>
<td>Billey Shamrock-Gleissner</td>
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<td>Anders F. Rönnblom</td>
<td>James Hollingworth</td>
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<td>Per Hägglund</td>
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<td>Stina Nordenstam</td>
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<td>Bengt Nyquist</td>
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<td>Jan-Olof Andersson</td>
<td>Stefan Ringbom</td>
<td>Cornelia Dahlgren</td>
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<td>Johan Asperyd</td>
<td>Mattias Ekstig (Warner Ch.)</td>
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<td>Elisabeth Lord</td>
<td>Tommy Gunnarsson</td>
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<td>Bertil Holmgren (Lights Out)</td>
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<td>Jones Fagerlund</td>
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<td>Ragnar Grippe</td>
<td>Josefina Sanner</td>
<td>Sara Berg</td>
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<td>Kristina Tunkrans</td>
<td>Peter R. Ericson</td>
<td>Åsa Sohlgren (STIM)</td>
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<td>Thomas Lindström Flores</td>
<td>Alexandra Öfverman</td>
<td>Jörgen Adolfsson</td>
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<td>Lisen Elwin</td>
<td>Jimmy Halvarsson</td>
<td>Etienne Thessman</td>
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<td>Rikard (Svenska Musikklubben)</td>
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<td>Hanna Hallin</td>
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<td>Johanna Franzén</td>
<td>Tanja Malmquist</td>
<td>Anders Hjelmtorp</td>
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Summary of discussion and conclusions

After the introductory presentations the moderator started with a question to the audience How shall we proceed? And gave three alternatives:

1. We continue as before. File sharing of copyrighted material shall continue to be a criminal act and fought by IFPI.

2. We accept file sharing and try to find solutions such that creators/artists/producers get economic compensation. Some kind of license similar to the TV-license could be one possibility

3. Similar to 2 but no license and file sharing is free – but we try to find commercial alternatives that file sharers voluntarily find and accept.

The moderator asked the audience on their views on the alternatives by showing hands. From the answers it was clear that most of the persons were uncertain.

The moderator then turned to the panel:

Ludwig Werner, IFPI
Mattias Lökvist, founder and owner of the record company Hybris
Jan Granvik, Svenska Musikerförbundet
Lars Ilshammar, historian, member of the board Swedish Radio

LW defended IFPI anti-pirate activities and meant that it should be self evident for all active in the branch that the common enemies are the pirates.

ML on the contrary said that it was IFPI’s police charges that was the greatest threat. File shares are music enthusiasts and one should take the opportunity to encourage the interest of music and develop commercial services. He gave examples from Hybris.

JG was anxious about musicians right to salaries and the right to decide in what context musical works are distributed.

LI admitted that he favoured question 2 above and proposed that a licensing system is the “least bad” solution.
LW was doubtful about the licensing system due to loss of control but the audience said that artists lose control anyway when they transfer rights to producers and record companies.

To get more input to the discussion a telephone conference was set up live with Mr Terry McBride from Canada. Mr Terry McBride is Managing Director for Nettwerk – a record and management company. Terry McBride regards file shares as music fans, which uses whatever best technology to get new music. By hunting file results only in that file sharers disappear into more and more anonymous networks. Terry McBride was certain that a licensing system will be in place within 10 years from now.

LW insisted that IFPI will continue to fight illegal file sharing.

ML hoped that in 10 years file sharing would be free. A licensing system must be avoided. Such systems only supports main-stream artists.

JG hoped that record companies in their present form will disappear and artists and creators will distribute works by their own. Artists control will increase in this case.

Representatives from the Swedish law committee expressed their interest for a file sharing license.

**Conclusions:**

A licensing system is worth looking at in our future work.

Artists begin to see a possibility to use Internet as a new marketing medium and also possibilities to gain more control over their works.

**Presentation material**
Fildelning av musik på Internet

Anordnat av SKAP
19 april 2006, Filmhuset
Olle Findahl
Vad laddar man ner?

- Gamla favoriter: 35 ofta, 50 ibland
- Nyutgiven musik: 24 ofta, 46 ibland
- Specialintresse: 24 ofta, 42 ibland
- Annan musik: 8 ofta, 42 ibland
Hur aktiva är fildelarna?

- Daily: 20%
- Weekly: 31%
- Monthly: 17%
- Seldom: 32%

World Internet Institute 2004
Fildelning och köp av musik

- mycket mindre: 10%
- något mindre: 25%
- något mer: 7%
- mycket mer: 3%
- som tidigare: 55%
Köper du musik som du redan laddat ner och lyssnat på?

![Pie charts showing the percentage of people who file share](image)
Var kommer den digitala musiken ifrån?

7 Europeiska länder

egen CD 77
CD familj/vänner 71
P2P nätverk 51
musik webbsidor 49
messages/e-post 44
musikaffär online 29
prenumeration 11

Indicare 2005
Changes in music format 1973 - 2005 measured in purchases per capita in US
Fildelning och ny musik

**Vad laddar man ner?**

85%- känd musik av känd artist
44%- okänd musik av känd artist
30%- okänd musik av okänd artist

2 av 3 laddar ner mer
2 av 3 köper CD
1 av 3 besöker en konsert

Indicare 2005
Vilka är de viktigaste skälen för fildelning?

- Lätt och praktiskt: 69
- Ingen avgift: 53
- Hittar inte i vanliga affärer: 51
- Provlyssna: 51
- Höra till community: 13
Anders Edström Frejman
Doktorand
Medieteknik och grafisk produktion
Kungliga Tekniska Högskolan (KTH)
Stockholm

frejman@kth.se
tel 0705 - 89 83 80
Fildelningsnätverk

Första generationen

- En central server höll reda på vad varje användare delade ut på sin dator
- **Napster 1.0** 1999-2001
Fildelningsnätverk

Senare generationer

- Ingen central server
- Supernoder (= användare med mycket stora mängder filer och snabb internetuppkoppling)
- T ex Gnutella, FastTrack (KaZaA)
Antalet fildelare - utveckling

Slyck.com: “Ca 10 miljoner”

Big Champagne: “Ca 8 miljoner”

Källa: www.slyck.com, 2006
Antalet fildelare - utveckling

Fem stora nätverk, men Bit Torrent är ej medräknat!

Källa: www.slyck.com, 2006
Antalet fildelare

Exakta antalet är svårt att mäta:

1. Nätverkens natur (dag/natt, på/avloggning)

2. Dark-nets (kryptering, annan arkitektur t ex Bit Torrent)
   - Vissa enskilda nät krymper
   - Totala antalet användare ökar
Hur har skivbolagen reagerat på fildelning?
Strategier från skivbolag

Exempel:

• Rättsprocesser mot företag som gör fildelningsklienter
• Rättsprocesser mot enskilda fildelare dvs. privatpersoner
• Lobbying för striktaare lagstiftning
Strategier från skivbolag

• PR (pressreleaser, egna användarundersökningar)
• Erbjuda legala alternativ: DRM (Digital Rights Management)
• Sabotera fildelningsnätverk:
  1. Spoofing = falska filer
  2. Decoys = falska länkar
Undersökning spoofing/decoys

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<td>Artist</td>
<td>Tot. #hits</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>------------------------</td>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>1999</td>
<td>Pop</td>
<td>Sometimes</td>
<td>Britney Spears</td>
<td>226</td>
</tr>
<tr>
<td>2005</td>
<td>Hip Hop/Rap</td>
<td>Like toy soliders</td>
<td>Eminem</td>
<td>145</td>
</tr>
<tr>
<td>2000</td>
<td>Pop</td>
<td>(Love) Supreme</td>
<td>Robbie Williams</td>
<td>241</td>
</tr>
<tr>
<td>2004</td>
<td>Rock</td>
<td>Vertigo</td>
<td>U2</td>
<td>221</td>
</tr>
<tr>
<td>2004</td>
<td>Pop</td>
<td>Toxic</td>
<td>Britney Spears</td>
<td>173</td>
</tr>
<tr>
<td>1972</td>
<td>Rock</td>
<td>Smoke on the water</td>
<td>Deep Purple</td>
<td>68</td>
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<tr>
<td>1976</td>
<td>Pop</td>
<td>Dancing Queen</td>
<td>ABBA</td>
<td>80</td>
</tr>
</tbody>
</table>

### 1975  Mamma Mia – ABBA  40%

<table>
<thead>
<tr>
<th>Release</th>
<th>Genre</th>
<th>Title</th>
<th>Artist</th>
<th>Tot. #hits</th>
<th>#Tot dow</th>
<th>#OK</th>
<th>#spoof</th>
<th>% spoof (#)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>Rock</td>
<td>(Can’t get no) satisfaction</td>
<td>Rolling Stones</td>
<td>44</td>
<td>11</td>
<td>7</td>
<td>4</td>
<td>36%</td>
</tr>
<tr>
<td>1970</td>
<td>Pop</td>
<td>Let it be</td>
<td>Beatles</td>
<td>18</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>29%</td>
</tr>
<tr>
<td>1975</td>
<td>Rock</td>
<td>Born to run</td>
<td>Bruce Springsteen</td>
<td>62</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>29%</td>
</tr>
<tr>
<td>1983</td>
<td>Rock</td>
<td>Bloody Sunday</td>
<td>U2</td>
<td>49</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>25%</td>
</tr>
<tr>
<td>1968</td>
<td>Jazz</td>
<td>What a wonderful world</td>
<td>Louis Armstrong</td>
<td>106</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td>2002</td>
<td>Hip Hop/Rap</td>
<td>8 Mile</td>
<td>Eminem</td>
<td>26</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>17%</td>
</tr>
<tr>
<td>1971</td>
<td>Pop</td>
<td>Imagine</td>
<td>John Lennon</td>
<td>144</td>
<td>19</td>
<td>17</td>
<td>2</td>
<td>11%</td>
</tr>
<tr>
<td>1984</td>
<td>Rock</td>
<td>Born in the USA</td>
<td>Bruce Springsteen</td>
<td>81</td>
<td>10</td>
<td>9</td>
<td>1</td>
<td>10%</td>
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<tr>
<td>2002</td>
<td>Vocal</td>
<td>A new day has come</td>
<td>Celine Dion</td>
<td>33</td>
<td>14</td>
<td>13</td>
<td>1</td>
<td>7%</td>
</tr>
<tr>
<td>2002</td>
<td>Hip Hop/Rap</td>
<td>Hot in herre</td>
<td>Nelly</td>
<td>136</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>1991</td>
<td>Rock</td>
<td>The show must go on</td>
<td>Queen</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>1984</td>
<td>Classic</td>
<td>Spring</td>
<td>Vivaldi</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

<p>| Tot. | 1895 | 252  | 120  | 132  | 52%   |</p>
<table>
<thead>
<tr>
<th>Release</th>
<th>Genre</th>
<th>Title</th>
<th>Artist</th>
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<td>Britney Spears</td>
<td>226</td>
<td>14</td>
<td>0</td>
<td>14</td>
<td>100%</td>
</tr>
<tr>
<td>2005</td>
<td>Hip Hop/Rap</td>
<td>Like toy soliders</td>
<td>Eminem</td>
<td>145</td>
<td>18</td>
<td>0</td>
<td>18</td>
<td>100%</td>
</tr>
<tr>
<td>2000</td>
<td>Pop</td>
<td>(Love) Supreme</td>
<td>Robbie Williams</td>
<td>241</td>
<td>24</td>
<td>0</td>
<td>24</td>
<td>100%</td>
</tr>
<tr>
<td>2004</td>
<td>Rock</td>
<td>Vertigo</td>
<td>U2</td>
<td>221</td>
<td>28</td>
<td>2</td>
<td>26</td>
<td>93%</td>
</tr>
<tr>
<td>2004</td>
<td>Pop</td>
<td>Toxic</td>
<td>Britney Spears</td>
<td>173</td>
<td>26</td>
<td>8</td>
<td>18</td>
<td>69%</td>
</tr>
<tr>
<td>1972</td>
<td>Rock</td>
<td>Smoke on the water</td>
<td>Deep Purple</td>
<td>68</td>
<td>11</td>
<td>6</td>
<td>5</td>
<td>45%</td>
</tr>
<tr>
<td>1976</td>
<td>Pop</td>
<td>Dancing Queen</td>
<td>ABBA</td>
<td>60</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>40%</td>
</tr>
<tr>
<td>1975</td>
<td>Pop</td>
<td>Mamma Mia</td>
<td>ABBA</td>
<td>43</td>
<td>20</td>
<td>12</td>
<td>8</td>
<td>40%</td>
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<td>Vivaldi</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

* 52% falska filer av ca 600 nedladdade
* Mycket stor andel misslyckade/avbrutna nedladdningar
* KaZaA mycket långsamt
Men vad exakt laddar fildelarna ned?
Undersökning – nedladdning

Nätverk: Gnutella och Direct Connect

Resultat:

- Genomsnittsåldern på efterfrågade inspelningar är 7 år
- Mycket stor bredd genre, ålder på inspelningar
- ”Udda” inspelningar
Nationalteatern
Kåldolmar och Kalsipper

1976, MNW 64P (MNW)
1994, MNWCD 64

Huvudmusiker:
Anki Rahlskog
Hans Mosesson
Håkan Wennberg
Maria Grahn
Med Reventberg
Paul Olofsson
Peter Wahlgvist
Ulf Dageby

Yleat
Kung
Agamannon, Kungarna
Berättaren
Sjörövar Jenny
Spöket
Gubben
Folke

Finns på kasset: MNW 64 K

Barnskiva om en person vid namne ylle som ger sig ut i stiora vida världen. Skivan har lite smätt kommunistiska budskap i slutet men den är rätt rolig att lyssna på, speciellt om man är typ 8 års. =)

Denna skiva värderas som: Mindre vanlig.

Värdering avser orginalutgåva på vinyl i mycket bra skick (EX/EX). (ca 61-140 SEK)
Broadband technologies transforming business models and challenging regulatory frameworks – lessons from the music industry

MusicLessons – Deliverable 9

Report from workshop 4 September 2006

Lars-Erik Eriksson
Olle Findahl
Håkan Selg
Roger Wallis
Table of contents

Purpose, invitation and agenda of the workshop
Date and place
Participants
Conclusions from the discussions
Presentation material
Purpose, invitation and agenda of the workshop

The goal of the workshop is to present MusicLessons research results and have them discussed and scrutinised in a broad context with participants from the EU Commission, industry, media and research.

The aim of the project MusicLessons is to study and analyse how broadband technologies like Peer-to-Peer (P2P) are challenging the regulatory frameworks and transforming traditional business models particularly in the music industry. What lessons can be learned from what is happening and what conclusions can be drawn and applied in a broader context beyond the music arena?

In the late 1990s, MP3 became one of the most important Internet search objects, indicating that music played a dominant role in network content. File-sharing or P2P activities, in the beginning mainly involving audio/audio-visual products, became the main driver of broadband traffic, accounting for the majority of capacity. P2P technology allowed millions to engage in interactivity (inclusion) and provided new market conditions. At the same time, it has created serious problems for traditional business models and modes of digital asset protection and, as a consequence, major media actors directed information and lobbying campaigns that were heavily biased.

It all follows the logical pattern of technological shifts. Early adoption of new technology has historically taken place in the music industry and we can now present some important lessons with relevance also for other industrial sectors.

P2P systems are new collaborative environments that will be necessary in the future in an “on demand” society with “no lock-ins”. Technology paradigms such as today’s client-server solutions will never meet the challenges on a global basis for interactive media and distribution. The same goes for ADSL as transmission technology.

Understanding the user is key. The user is in the driver’s seat creating new applications and willing to pay for content if the conditions are fair – much in contradiction to today’s rhetoric.

MusicLessons results raises also serious questions about EU policy incompatibilities and discusses a new IPR regime that focus on the needs of emerging firms and industries rather than on the demands of established businesses.

Agenda:
09:30-10:00 registration and coffee
10:00-10:45 new patterns in user activities
10:45-11:30 new user oriented business models
12:00-13:00 Lunch
13:00-13:30 a new IPR regime
13:30-14:00 EU policy incompatibilities
14:00-14:30 coffee break
14:30- discussion

**Date and place**


**Participants**

Jesus Villasante, Commission
Jorge Pereira, Commission
Demostenes Ikonomou, Commission
Renata Hruzova, Commission
Reka Bernat, Commission
Michel Lacroix, Commission
Robert G. Picard, Jönköping International Business School
Heijo Ruisenaars, EBU
Cornelia Kutterer, BEUC
Lars-Gröndal, BEUC, The Consumer Council of Norway
Jo Singstad, The Consumer Council of Norway
Lars-Erik Eriksson, Musiclessons
Håkan Selg, Musiclessons
Olle Findahl, Musiclessons
Roger Wallis, Musiclessons
Conclusions from the discussions

What we sometimes call vertical integration shall be called Collective Dominance. We need to clarify this and be concrete. Collective Dominance in the entertainment area is not very well understood in the Commission. As a result it is not known what directives are in conflict with each other.

We can clarify this by showing how revenues are distributed in CD sales and for instance iTunes.

We should not refer to “illegal content” since it gives people the idea of pornography etc. We use it to denote illegal up-/downloading of content.

We have observed the following structural changes in our report D8a:

“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).”

We need to quantify these structural changes in economical terms and describe consequences (e.g. A(symmetric)DSL)

A question that came up is if open source is a tool in the two-way and participatory server-to-server environment.

Many struggle with Digital Rights Management (DRM). We are requested to give a single approach to DRM.

The Commission has set up a goal to pave the way for a unified EU market for the supply of online content, which could play an important role in the growth of the European IT industry. EU Commission has a public hearing on this and we are requested to send in an answer (http://www.heise.de/english/newsticker/news/76172).

Presentation material
MusicLessons

Workshop
Brussels 4 September 2006
The era of digitalization

- Access technology (Internet, broadband, mobile)
- Software development (Compression, libraries, formats)
- Hardware development (Flash memory, MP3 players)
- Who has the control?
- Online business models?
- Substitution effect?
US Music Sales

Number of sold units
millions

RIAA end-year statistics

0 200 400 600 800 1000 1200

4 September 2006. Olle Findahl
Files shares according to surveys and monitoring

Members on P2P networks

- BigChampagne
- www.slyck.com

PEW-survey (USA)
- 22%
- 30%
- 27%

Monitoring 1
- 9 millions

Monitoring 2

1. BigChampagne
2. www.slyck.com
Music format changes

Units per capita

Source: RIAA

CD
Cassette
LP
MP3

4 September 2006. Olle Findahl
Play/download games/music (2005)

- Finland: 33%
- Iceland: 33%
- Luxembourg: 28%
- UK: 22%
- Sweden: 21%
- Estonia: 21%
- Denmark: 18%
- Slovenia: 17%
- Latvia: 17%
- Lithuania: 16%
- Hungary: 15%
- Cyprus: 14%
- Poland: 14%
- Germany: 13%
- Portugal: 13%
- Greece: 10%
- Austria: 9%

% of population 16-74 years

Eurostat 2006
What are the sources of digital music?
(Percentage of digital music users. Source: Indicare 2005)

7 European countries

- **own CD**: 77%
- **CD family/friends**: 71%
- **P2P networks**: 51%
- **music websites**: 49%
- **received message**: 44%
- **online musicstore**: 29%
- **subscription**: 11%
Listening to music an average day (2005)

CD
MP3
Cassette

Mediebarometer 2005
The frequency of downloaders' activities

- Daily: 20%
- Weekly: 31%
- Seldom: 32%
- Monthly: 17%
Buying music online. A comparison between Internet users and file shares

<table>
<thead>
<tr>
<th></th>
<th>Internet users</th>
<th>Not so frequent file shares</th>
<th>Frequent file shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy music online? (CD, cassette not MP3 or digital form) yes</td>
<td>36%</td>
<td>50%</td>
<td>73%</td>
</tr>
<tr>
<td>Use special music services online? several times</td>
<td></td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Pay per tune like iTune or CD-on?</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>a few times</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>some time</td>
<td>6%</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>never</td>
<td>90%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Source: World Internet Institute 2005
What are the important reasons for file sharing?

- Easy and practical: 69 (very important), 21 (rather important)
- No charge: 53 (very important), 36 (rather important)
- Can't find it in ordinary shops: 51 (very important), 32 (rather important)
- Test before buying: 51 (very important), 32 (rather important)
- Belongingness to the community: 13 (very important), 8 (rather important)
How often are file shares downloading music and film?

- Old favorites:
  - Often: 35
  - Sometimes: 50

- Recently released music:
  - Often: 24
  - Sometimes: 46

- Of special interest:
  - Often: 24
  - Sometimes: 42

- Other music:
  - Often: 8
  - Sometimes: 42

- New film:
  - Often: 14
  - Sometimes: 36

- Old film:
  - Often: 10
  - Sometimes: 43

- Special film:
  - Often: 8
  - Sometimes: 19

- TV:
  - Often: 7
  - Sometimes: 31
The effects of P2P file sharing on buying music and video.

**Video**
- no effect: 73%
- somewhat more: 6%
- much less: 13%
- somewhat more: 4%
- much more: 4%
- much more: 4%

**Music**
- no effect: 55%
- somewhat less: 25%
- somewhat more: 7%
- much less: 10%
- much more: 3%
Do you buy music or film that you already have downloaded and listened to?

**Music**

- 47% no, never
- 39% yes, sometimes
- 26% yes, often

**Video**

- 44% no, never
- 32% yes, sometimes
- 16% yes, often
US Music Sales (Number of sold units of recorded music)

4 September 2006. Olle Findahl
Music Format Changes

Units per capita

Source: RIAA

4 September 2006. Olle Findahl
Files shares according to surveys and monitoring

Members on P2P networks

2000 2001 2002 2003 2004 2005

PEW-survey (USA)

22%

Monitoring 1

Monitoring 2

9 millions

27%

1. BigChampagne
2. www.slyck.com
Conclusions

- Do not always trust statistics, especially not in times of rapid changes
- Do not believe in simple causal relations
- The established music industry tried to suppress the technological change
- File sharing of music in the P2P networks stimulates the interest for music
- File shares are big spenders on legal music downloads
- Well-constructed dedicated download sites can very well compete with the file sharing networks
- The substitution effect is hard to find
User communication and user interaction

Håkan Selg
Royal Institute of Technology
Outline of the presentation

• Results from survey - The file sharers, who are they and how do they use the net
• Results from interviews - Which are the drivers and motives?
• Popular culture and user created content
• Conclusions
User categories of file sharing services at Swedish universities 2003

- Nonusers: 66%
- Heavy users: 6%
- Moderate users: 28%
Personal e-contacts on a regular basis

- **Email**: 87% (Heavy users), 86% (Moderate users), 96% (Nonusers)
- **Chat - discussion, questions**: 67% (Heavy users), 50% (Moderate users), 15% (Nonusers)
- **Chat - making new friends**: 27% (Heavy users), 8% (Moderate users), 4% (Nonusers)
- **ICQ**: 41% (Heavy users), 34% (Moderate users), 12% (Nonusers)

4 September 2006. Håkan Selg
File sharing categories

Music lovers
- Samplers
- Free-riders

Computer lovers
- Squirrels
Computer lovers

- Computer software  
- Computer games  
- Photos  
- Newspapers  
- Music  
- Films  
- Audio books  
- eBooks  
- Broadcasting (x)
Content lovers: Samplers or Free riders

- Computer software  x
- Computer games  x
- Photos
- Newspapers
- Music  x
- Films  x
- Audio books  (x)
- eBooks  x
- Broadcasting
File sharing in theory
File sharing in reality

Virus
Spoofs
Adware
Spam
Strategies for quality

Restrictions of entry (Direct Connect)

- Connection
- Slots
- Hard drive
- Content
Strategies for quality

First publish, than download (BitTorrent)
- Attractive content
Accumulation of content an indirect effect, not necessarily reflecting the owners’
- extent of consumption
- personal taste
Personal e-contacts on a regular basis

- Email: 87% (Heavy users), 96% (Moderate users), 8% (Nonusers)
- Chat - discussion, questions: 67% (Heavy users), 50% (Moderate users), 15% (Nonusers)
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- ICQ: 41% (Heavy users), 34% (Moderate users), 12% (Nonusers)
Bulletin Board Systems (BBS)

Activities:
- Messages exchange
- Discussion boards
- Exchange of software and data (uploading/downloading)
- Playing games
File sharing of popular culture

- Audio books
- Video (film, TV)
- Music (mp3)
- High resolution images
- Games
User created content

Value-adding cont.
Community web sites
Blogs
Photos/Video clips

Music (mp3)
copies/own
Pers. web sites

Open Source
Software
Ripped games

Games and
software code,
cracked/own

4 September 2006. Håkan Selg
“Empowerment of the users” or “Digital piracy”?

- Users are entering as co-producers and distributors
- A shift in control from suppliers to users
- Threats and opportunities for business
Information and Communication Technology: Areas of application

- 1970-80  Industrial processes
- 1980-90  Office work
- 1990-00  Intermediaries
- 2000-    Content creation
New technology and structural change - Policy alternatives:

- Protect established industries, or
- Promote emerging business?
New user oriented business models
(and expected effects)

Lars-Erik Eriksson

leeri@kth.se
eriksson.lars.erik@telia.com
www.musiclessons.se
Synopsis

1 New

2 business models

3 user oriented
4 September 2006. Lars-Erik Eriksson

Class of applications that take advantage of resources - storage, CPU, content, human presence - available at the edges of the network.
New

- Decentralised
- Anyone can participate
- Realised on many devices
- Permanent files
- Share with friends
- Users add value
- Sharing of long-tail content
- Sampling/Tastemaking
<table>
<thead>
<tr>
<th>Properties</th>
<th>Physical</th>
<th>Virtual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transporting</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Storing</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Selecting</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Customizing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple points</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Quality of sound/image</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Multimedia</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Symbolic values</td>
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<td>Physical</td>
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<td>Transporting</td>
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<td>Customizing</td>
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<td>Multiple points</td>
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<tr>
<td>Quality of sound/image</td>
<td>+</td>
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<td>Multimedia</td>
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<td>Delivery</td>
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</table>
What do you consider in a business model?

- Politics and society at large
- Legislation
- Competitors
- Distribution
- Customers
- Market
- Product
- Earning money
If you are BIG, government may have opinions already from the start
- open up competition

If you are small, you can fly under the radar, but if/when the business grows you may be hurt
- P2P technology based business
• 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).
4 September 2006. Lars-Erik Eriksson

- Customers that buy content
- Advertisers
- Voluntary contributions
- Customers that buy hardware
- Customers that buy experiences
- Create value and then sell the operations
  -
  -

money
Own content or not

Most business models so far do not have content of their own!

Business model in the two cases are very different
P2P business models are complex interactions between

- copyright law
- contract law
- digital rights managements (DRM) schemes
- business practices
Contract ↔ Copyright

Contract/license terms refer to
- copyright law
- geographical circumstances
- service provider’s liability
4 September 2006. Lars-Erik Eriksson

DRM ↔ Copyright

• First generation DRM: protect content
• Second generation DRM: metadata in content link to server

• Watermarking

• Supervision of the user.
License “forces” user to
- download SW (firewalls, statistics SW, content)
- agree new terms beforehand
DRM \leftrightarrow \text{Business practises}

- Highly intrusive
  - Controlling
    - control + very clear roles
  - Monitoring
    - monitor for fair distribution of revenues
  - customer fulfillment
  - customer acceptance of DRM

- Non intrusive
Monitoring/Controlling

Highly intrusive

Sony Rootkits
PressPlay

RIAA IFPI

Controlling

Non intrusive

CD copy protection

I-tunes

General traffic analysis
Collecting societies

Monitoring

legislation

4 September 2006. Lars-Erik Eriksson
Categories of file sharers

File sharers

Music "lovers"

Computer "lovers"

Free riders
with no intention to buy

Samplers
MP3 listeners to select what to buy
• on the Net
• in shops

"Squirrels"
Downloads more than he/she can consume
4 September 2006. Lars-Erik Eriksson
Licensing model
Pay license
- CS web
- ISP
- P2P license
DRM necessary
- monitor
- policing
Contract with users

Possible subscriber model
Free zone
- public domain
- advertising
Incentive zone
- subscriptions
- pay for ownership
- bonus
Subscription zone
- DRM necessary
- control
DRM optional
- monitor
Contract with users

Promotion
Publish content free to download
- advertising
- events
DRM optional
- monitor
Contract optional

4 September 2006. Lars-Erik Eriksson
## Conclusions

### Effects on users

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural diversity</td>
<td>Lock-ins</td>
</tr>
<tr>
<td>Easy to use</td>
<td>Digital divide</td>
</tr>
<tr>
<td>Lower price</td>
<td>New skills</td>
</tr>
<tr>
<td>Tastemaking</td>
<td>More advertising</td>
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</tbody>
</table>

### Effects on retailers

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>New possibilities to bundle SW/HW</td>
<td>Loss of traditional business</td>
</tr>
<tr>
<td>More physical good (web promotion)</td>
<td></td>
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</tbody>
</table>
## Conclusions

### Effects on distributors

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
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<tbody>
<tr>
<td>New distributors</td>
<td>Less traditional business</td>
</tr>
<tr>
<td>New routes</td>
<td>Less value in contracts signed</td>
</tr>
<tr>
<td>New roles storing HW related to content</td>
<td></td>
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</tbody>
</table>

### Effects on creators

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>New and larger audiences</td>
<td>Less clear audience</td>
</tr>
<tr>
<td>Subscription and license gives stable income</td>
<td>Difficult to keep IPR</td>
</tr>
<tr>
<td>New ways to reach users</td>
<td>Others can improve</td>
</tr>
<tr>
<td>Communities with users</td>
<td></td>
</tr>
</tbody>
</table>
Conclusions

Effects on publishers

<table>
<thead>
<tr>
<th>positive</th>
<th>negative</th>
</tr>
</thead>
</table>
| • Less HW related to SW  
  • No return rights  
  • Advertising a new income  
  • Subscription and license a stable income  
  • DRM to control/monitor  
  • New markets for long tail and old | • New IPR situation  
  • A new marketing situation (on the web)  
  • Unstable business situation at least in the beginning  
  • Balance DRM to keep users happy |
Conclusions
Effects on society

<table>
<thead>
<tr>
<th>positive</th>
<th>negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cultural diversity</td>
<td>• A turbulent time</td>
</tr>
<tr>
<td>• Users becomes creators</td>
<td>• Individuals may suffer</td>
</tr>
<tr>
<td>• A two-way, participatory and collaborative</td>
<td>• Directives and regulations do not align</td>
</tr>
<tr>
<td>world</td>
<td>with what people thinks</td>
</tr>
<tr>
<td>• Economic growth as result of structural</td>
<td>• Directives and regulations</td>
</tr>
<tr>
<td>change</td>
<td>contradictory</td>
</tr>
</tbody>
</table>

Positive effect for everybody
New applications and corresponding opportunities that have not been possible before.
Policy incompatibilities
Legal regimes (IPR, Competition), today’s realities, lobbyists and dynamic visions and goals

MusicLessons team
www.musiclessons.se
Opposing forces can lead to policy incompatibilities

Legal regimes
International obligations

CURRENT GOALS & MEANS
Lisbon, i2010

Lobbying vested interests

Realities of today (progress, delays, mistakes)
The changing IPR balancing act

mid-late 1990s.
IPRs must be protected but not so stringently that impede the development of new business models

mid 2000
The rights of content owners must balance reasonable interests of consumers (protection versus “fair use”).
Where are we now?

The legal regime is supporting large content owners. Technology is allowing many consumers to circumnavigate the regime. New business models reflecting new technology at odds with the legal regime. Innovation could be a victim - improving existing ideas the basis of creativity!
A rigid IPR regime based on technology know-how from the mid 1990s and heavy lobbying.

WIPO Copyright treaty - EU Copyright Directive 2001- what is legal, illegal or reasonable?

“what happened to consumer protection, with all the limitations when you buy on-line music? Who would say it was reasonable to buy bottled water in a shop, and then only be allowed to drink it yourself, within 10 meters of the shop, otherwise you had to store it in a proprietary fridge, according to where you bought the bottle?”(letter to Swedish national newspaper)

Digital IPR legislation, with DRM systems allows owners to dictate when, where, how, how often and for how long a digital sold product (e.g. a song) may be consumed. This can clash with the general public’s view of what is reasonable, and lead to a lack of trust in copyright legislation.
i2010 **Bold goals of citizens’ access to content, and ability to create and distribute own content**

i2010: **fight online distribution of illegal content**

Strictly, **everything** is illegal if all copyright owners have not given expressive permission.

- How does a consumer that the “own content” from an active creative consumer is legal?

- Many SMEs (e.g. Small record companies) rely on making material available for free over the Net, using this to market music groups. Consumer fear could hinder development of these new business models.

- Major content owners fear loss of marketing control. Their message is that all downloading of copyrighted materials is illegal (a false statement enamoured by many policy-makers)
If a strict interpretation is applied……..

One would need to:

a) Close down Google (immense amounts of copyrighted materials available, including music and videos)
b) Close all P2P networks (driving broadband roll-out)
c) Close e-mail and messaging services

In other words, force the Net to grind to a halt!
i2010: EU challenges: provide digitally protected copyrighted materials, deploy DRM solutions.

1) Protection devices prohibiting manipulation, but also possible creative improvements! (*All circumnavigation is illegal*). This could stifle innovation - compare the open-source movement!

2) DRM systems seen as the panacea for the loss of control problem by major content owners. But, DRM can mean two things: a) a monitoring system to facilitate revenue distribution and marketing efforts, or b) a system for controlling what consumers do or do not do.

Consumers will find it easy to accept DRM for monitoring. They will not accept overuse of DRM for control (e.g. The SONY-BMG root kit debacle from 2005 in the USA)
Lobbying - whose voices are heard?

It seems clear that many Commission arguments have been heavily affected by the voices of major content owners and network suppliers.

Observation 1
The needs of creators are NOT necessarily the same as the needs and demands of major content owners.

Observation 2
Suppliers of connectivity (ISPs etc.) have used to “lack of conduit responsibility” argument to stop all discussions of economic duties towards content owners whose materials are used indirectly to sell broadband services.

A win-win solution where content is used to speed up broadband deployment is thus off the agenda.
Lobbying again - the voices of major content owners

The message: online copying of protected materials is responsible for falling sales, loss of jobs, lack of will to invest in European cultural products. Stop file-sharing!!!

The facts: Many file-sharers buy more “legal cultural products” than those who do not share files in P2P networks. Avid film downloaders buy more cinema tickets etc.

Observation from this project:

The Commission should avoid drawing hasty policy conclusions based on statistically demonstrated simplistic causal relationships between uses of new technology and effects on existing business models.

P2P networks with unregulated file sharing and legal downloading are NOT mutually incompatible
Recommendation - a new look at the IPR regime

The notion of balance must once again be revisited in the Commission’s analysis. Policy-makers should study the need for balance between:

- Protection of content and emergence of new business models
- Protection of existing content and the ability for innovators to be creative, improving ideas (no creativity occurs in a vacuum)
- SME’s & individual’s interests in the digital environment versus major global owners of copyrights’ interests.
- DRM control and DRM monitoring (citizens understanding of and support for copyright will evaporate if the regime is seen to be unreasonable).
First a reflection on music creators and their contribution to a developing Europe.

Lisbon Goals - i2010.
The most competitive knowledge-based society, using Information and Communication Technology to achieve these overall goals. Cultural diversity has huge potential.
Quote i2010 report: “.. A greater need than ever to get Europe’s ICT policies right to catch up with major global competitors”

Facts: Of all global authors’ collecting society revenues 60% come from Europe. (3.9 billion €). 23% the USA (1.5B€)
But Europe pays out 22% and receives 12%, USA
Pays out 7% and receives 23%. A severe trade imbalance

Composers are a vital creative basin, offering talent, multiple genres, cultural diversity with economic potential. i2010 should focus on the SME sector in a creative environment, rather than listening to the demands of incumbents
From Copyright Legislation and i2010 to competition law and the Information Society goals.

Collective Rights Management societies (CRMs) are assuming a greater role as intermediaries, as more revenues come from intangible sources.

Many CRMs are national monopolies, under close supervision of national competition authorities. Is this a good example of subsidiarity? Or is it hindering the growth of pan-European digital services?

For: good for national support for copyright, for cultural support, local knowledge (all business is local)
Against: hinders simple pan-European licensing of content by large content owners and suppliers.
“The recommendation on EU-wide management of copyright for on-line music is a first step to demonstrate the Commission’s commitment to develop a Single Information Space, by progressively removing obstacles to pan-European services that rely on copyright in the on-line environment” (i2010 First Annual report Brussels COM (2006) 215.

The recommendation referred to was published by the Internal Market directorate in September 2005.

An analysis shows a) that it is incompatible with a ruling in a similar area by DG Competition in January 2006, b) encourages international and pan-European oligopolies rather than national institutions (subsidiarity), c) can hinder SMEs developing new market models, and d) will probably give US content owners a competitive advantage of European SMEs
But the signals (and thereby policies) are not coherent

**September 2005 Internal Market directorate** (on-line)
1) A one-stop shop solution to pan-European licensing could lead to a collapse of tariffs and hurt creativity.
2) Prefers a few large collecting societies with most attractive repertoire as a counter force to vertical integration in media conglomerates. OK if smaller national actors die. Assumes that major content owners’ interests are same as those of smaller players (SMEs, creators & innovators)

**January 2006 DG Competition** (satellite/cable/on-line)
Reciprocal territorial agreements between monopoly CRMIs illegal. 1-stop shop should function over Europe.

**Conclusion**
Coherence is lacking here - only beneficiaries the BIG! Probably non-European content owners.
Summarising the DG Comp/Market arguments and goals

**DG Internal Market** - i2010 and Lisbon require a speedy growth of on-line markets. If this involves supporting existing oligopolies (e.g. The 5 major Music Publishers), or creating new oligopolies (a group of three or four large European CRMs) rather than a solution based on subsidiarity principles then it is OK. Solutions based on strict Competition Law considerations rejected since they could lead to a tariff collapse and harm creativity.

**DG Competition** - Competition Law does not allow for territorial monopolies with reciprocal agreements. Anyone should be able to buy a pan-European licence anywhere.
Significance for CRMs

Organisations dealing with the collective administration of rights must fairly balance the needs of both users and rights holders. A monopoly simplifies life for users (an extensive repertoire can be offered). The Commission and the Parliament have a long history of Studying CRMs including considering a directive. Most analyses have been flawed by a simplistic view that ignores the effects of vertical integration and various forms of collective dominance in the market.
The simple collecting society model
“A monopoly that unilaterally decides tariffs”

- Publishers
- Composers
- Collecting Society
- Broadcasters
- Record Cos
- Concerts etc
The reality of life! Vertical integration weakens the collecting society.

- Media conglomerates
  - 5 Major publishers
  - Independent Publishers
  - Composers
  - Collecting Society
  - Broadcasters
  - Independent Record cos
  - Concerts etc
  - 4 major Record cos
Even other parts of same Directorates can come to differing conclusions

DG Competition’s merger task force when analysing proposed mergers between large content owners (EMI-Time Warner, 2000, and Sony-BMG Records, 2004) accepted the need for a pan-European CRM system with reciprocal territorial agreements.
And the Commission started warning about vertical Integration over 35 years ago!
Sanctions imposed by a society to prevent tying arrangements (between GEMA members and users of music) was an appropriate means of eliminating the dangers of vertical integration, as for example when a record company subjects the use of certain works the condition that these works be published by the publishing house he controls. (Commission decision 2 June 1971 Ref OJ No L 134, 20, 6, 1971)
2000 - NO to Warner-EMI merger on basis of vertical integration

In the ruling it is clear that the merger task force (DG Competition) regards the monopoly Collection Society model as necessary and compatible with a properly functioning market.
The new entity will have the possibility to bypass Collecting Societies

“The potential for bypassing societies would also exist.... The result of such bypassing would be that income for the collecting societies would decrease and this would have to be reflected in the fees charged to competitors ... who could not afford to by-pass the collecting society. As a result, competitors’ costs would further increase”.

(COMP/M 1852 Time Warner/EMI Statement of Objections page 33)
2004 - Sony BMG. Concerns but YES

Once again, concerns that different divisions of large conglomerates can coordinate their activities and manipulate the market.
European Commission Sony/BMG
(quickly changing views)

Statement of Objections  COMP M3333 Sony-BMG 20040607:
“In view of the numerous interactions between the markets for music recording and for music publishing and the great importance on the joint venture as compared to its parents’ publishing activities, any (reinforced) co-ordination would be causally linked to the creation of the joint venture.”

Six weeks later …DG Competition finding 20040719
“There is no evidence that the joint venture would have as its objective the co-ordination of the parties’ competitive behaviour in music publishing. (because of the collecting societies’ roles in setting tariffs) … “there is little room for the parties to co-ordinate”

July 2006  Court of First Instance, Luxembourg reverses Commission’s decision mainly on pricing considerations (as well as the extraordinary turnaround), but leaves the issue of Collective Dominance untouched.
IN the SONY-BMG aftermath!

1) Ability of collecting societies to unilaterally set tariffs is considerably exaggerated. Little can be done without OK from major publishers. And SONY_BMG?

2) Sony Ericsson will be delivering recorded music with new mobile phones. Only music from Sony-BMG will be allowed in this new channel to consumers.

3) Sony Publishing has demanded the right to negotiate internally with Sony Ericsson where they have a publishing interest in these songs.

4) A successful Swedish composer signed exclusively to BMG publishing has signed a deal to only write songs for Sony_BMG artists.
Summarising the Competition Law-
i2010 policy dilemma

**DG Internal Market**
Overall goal expanding online market for cultural goods. Problems with oligopolies outweigh damage to SMEs, and disappearing national institutions. Subsidiarity not a priority

**DG Competition (Anti-trust)**
A pan-European market means one should be able to buy a pan-European license anywhere, from the cheapest source. Effects on tariffs/creativity irrelevant

**DG Competition (Merger task force)**
Network of collaborating national CRMs is a prerequisite for low entry barriers for SMEs (administrative charges would otherwise become prohibitively high)
Infrastructure goals and copyright laws

- Broadband roll out is seen as key to the shift to a highly competitive knowledge-based society. This is easy to accept.
- BUT, broadband traffic is being driven by new forms of collaborative software such as Peer-to-Peer applications, vital for the propensity to invest.

- Large content owners spread a message that all downloading and uploading of copyrighted materials in P2P networks is illegal (e.g. RIAA film produced for Universities in the USA). A FALSE claim related to own interests.

- Users of P2P networks are not decreasing - their networks are becoming more anonymous. One cannot criminalise millions of citizens who are not involved in commercial piracy - respect for the whole legal system suffers.
- P2P users are not a homogenous group. Many are the most active consumers of culture (cinema, legal downloading sites etc)
Infrastructure policy and copyright continued

- Cultural diversity has moved from traditional media and sources to the Net.
- One-to-one delivery services can never compete with the range of choice on the Net, or delivery efficiency.
- P2P delivery services despite a tarnished reputation will be a fact of life in many sectors.

OBSERVATION

One must question the assumption that uses of new collaborative software are automatically incompatible with the existing legal copyright regime. Where this is proven to exist, then the copyright regime should be reinterpreted or adapted to Knowledge Society goals.
A critical point in time:
Either we find ways of adapting IPR legislation to current technological realities, to the goals of encouraging interactivity, citizens’ creativity..
OR
The copyright regime could implode through lack of societal support.
A proposal for a likely development - essential for many i2010 goals

Use of collaborative software in a variety of P2P networks will become legalised, based on some simple form of licensing system, allowing citizens to consume, comment on, share and within reasonable limits, modify content. Revenues will be generated and distributed to right holders according to what is actually shared. Intrusive DRM control systems will be rejected by citizens.
A draconian copyright regime is rejected by citizens. The concept of IPRs is seen more and more as a way for powerful content owners to get paid more and more for the same products, or to hinder a diverse range of products from reaching the consumer. Copyright as an incentive to create, as opposed to a means of control, evaporates. Creators revert to relying on patronage or one-off payments.
Prerequisites for the vision

• Legal authorities realise that laws which cannot be implemented are unwise and look for means to make P2P activities legal (through revenue systems, or forms of compulsory licensing).

• Non-intrusive DRM systems for identifying and aggregate monitoring are developed and implemented.

• Refined query and search tools are developed to support cultural diversity goals (find the needle in the haystack)

• Growing pressure from SMEs surviving in the “free download” environment to develop and exploit new business models. Decision-makers listen as intently to their voices as to those of the major players.

• Accept thee need for creators to access and modify existing content as key for innovation in Europe.

• Suppliers of connectivity involved in billing and sharing of revenue with rights holders
Bold thinking, policy-making and action plans...

Do not:
- be held hostage by powerful lobbyists
- forget the notion of subsidiarity
- forget that aggregates of individual creative citizens, often via SMEs are the essence of innovation.

Do:
- remember that technology progresses faster than legal regimes. The latter need constantly to be reviewed and updated
- use policies and actions to unleash the potential of Europe’s Cultural Diversity.
Finally - a historical flashback

When radio was introduced in the USA in the early 1920s, the music industry most powerful players (the music publishers) did their utmost to forbid radio from playing music. “It would kill the industry since no-one would buy any more sheet music” (The solution - a revenue stream as created with a CRM to Distribute the income)

Consider the film industry and TV, the video cassette etc, etc,’ and now P2P networks… or the next technology
i2010 conclusions

“Policy-makers need not just to be aware of the need to accelerate ICT developments; they should also enhance the positive trends... particular priorities are broadband Strategies, **coherent** approaches to content and spectrum, integrated research and innovation strategies. ..”


Coherent approaches require a) that policy clashes are identified and analysed, and b) that dynamic responses follow.