Digital Music Usage and DRM

Results from an European Consumer Survey

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INDICARE The Informed Dialogue about Consumer Acceptability of DRM Solutions in Europe

http://www.indicare.org

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INDICARE Project

INDICARE – The Informed Dialogue about Consumer Acceptability of Digital Rights Management Solutions – addresses problems pointed out in the eContent work programme 2003-2004: "There has been little attention to the consumer side of managing rights. Questions remain open as to the level of consumer acceptability of rights management solutions. Interface and functionality of systems, as well as policy issues linked to privacy and access to information should be the investigated. The consumer question also involves the easiness of access, the legitimate use of content and business models and the easiness of access for disabled persons" (p. 19). In addition to consumer issues INDICARE addresses the user side, in particular concerns of creators and small and medium-size information providers.

INDICARE maintains an informed dialogue about consumer and user issues of DRM. Informed dialogue means that discussions are stimulated and informed by good quality input such as news information and profound analyses. Options for participation and more information are provided at the project website:

http://www.indicare.org

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The INDICARE project is conducted by the following partners:

- Forschungszentrum Karlsruhe, Institute for Technology Assessment and Systems Analysis (FZK-ITAS), Project Co-ordination
- Berlecon Research GmbH, Berlin
- Institute for Information Law (IViR), University of Amsterdam
- Budapest University of Economics and Technology, SEARCH Laboratory

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1 Introduction

1.1 Objective

This consumer survey is part of the INDICARE project – The INformed DIalogue about Consumer Acceptability of DRM Solutions in Europe. The overall goal of INDICARE is to raise the awareness about consumer and user issues of Digital Rights Management (DRM) solutions.

Information about the acceptance of DRM solutions by consumers is difficult to obtain, since the largest part of consumers has no, or at least no clear knowledge, of DRM. If we want to understand how consumers might benefit from or be restricted by DRM technologies, we need to learn more about the way they use digital goods and the channels through which they obtain them. The objective of this consumer survey, therefore, was to gather reliable data on the preferences and behaviour of European consumers with respect to digital goods and on their awareness and acceptance of DRM.

This survey is the first of two planned surveys of the INDICARE project and is focused on digital music. This focus allowed us to ask detailed questions about current behaviour and preferences, rather than giving just a broad overview over different usage forms. The focus on digital music also enabled us to ask questions about actual rather than potential usage of digital content, since a large share of Internet users already has experience with digital music. Questions about potential or planned usage (e.g. Could you imagine doing this or that…) often provide rather superficial results. In a second consumer survey, planned for winter 2005, we will cover other digital content formats as well.

1.2 Methodology

The survey was conducted among 4852 Internet users in seven European countries: Germany, UK, Spain, France, Hungary, The Netherlands, and Sweden. These seven countries account for about 70% of the GDP and for 64% of the total population in the 25 member states of the European Union.[1] The seven countries were chosen to cover various dimensions such as large and small countries, countries from east and west, as well as from north and south. The level of broadband penetration was taken as another decisive factor.

The survey was conducted on the Internet by the German consumer survey institute GfK (Gesellschaft für Konsumforschung) in February 2005. A representative sample was selected from an online panel of Internet users. In a first step of the survey, Internet users that already have used digital music were identified. Only these users were then asked detailed questions about the way they use digital music and how they evaluate their experience.

[1] Eurostat, http://epp.eurostat.cec.eu.int

The survey results are representative for all Internet users in the respective countries from age 10 with respect to age, gender, education and Internet usage frequency.

Due to the large number of respondents, the results of this survey are statistically very robust. However, some statistical uncertainty remains: With a probability of 95%, the true share of digital music users can deviate up to 2 percentage points from the displayed results. Results for online music store users can deviate up to 3 percentage points. Differences between countries below 5 percentage points for digital music users and below 7 percentage points for digital music store users have to be interpreted with care. When interpreting the survey results, these statistical uncertainties have to be kept in mind.

1.3 Questionnaire

The questionnaire of the survey covered five different areas:

- A set of demographic questions on age, gender, Internet usage, education and professional status.
- A set of questions on the experience with digital music and, in case of no experience, the reasons for not using digital music.
- A set of questions on the usage of digital music, the sources from which digital music was obtained, and the problems that occurred when digital music was used.
- A set of questions on how users evaluate their experience with digital music, their preferences, and their willingness to pay.
- A set of questions on the awareness of and opinion on DRM.

In order to avoid biased answers, respondents did not know that the survey aimed at analysing the acceptability of DRM, and DRM-related questions were put at the end of the questionnaire. The full questionnaire can be found in annex 1.

2 Experience with Digital Music

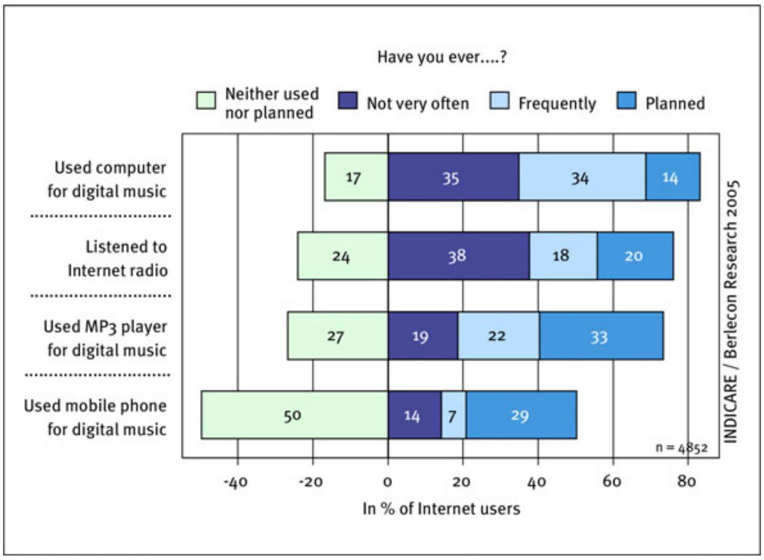
2.1 Users of digital music

69% of all Internet users have experience with music on the computer

The first important result of this consumer survey is that a large proportion of Internet users already have gained first experience with digital music. 69% of all European Internet users have used their computer to play digital music files or to rip CDs (transfer them into a file) in the past (see table 2.1). 34% of all Internet users frequently use their computer for digital music (see figure 2.1). Particularly among teenagers (Internet users aged 10-19) listening to digital music on the computer has become a very common activity: 77% have used their computer to play digital music or to rip CDs, almost half of the teens do so frequently. Among older Internet users (aged 40 years and above) only one quarter frequently listens to music on the computer.

It is fair to say that the computer today has become a rather common music device and that its popularity will further increase: Of the 31% of Internet users that have not used their computer to play digital music yet, 14% will possibly do so in the future. Particularly older Internet users will catch up: At 19% the share of users above 40 that plan to use their computer to listen to music in the future is clearly higher than the share of teens with such plans (11%)*.

Figure 2.1: Experience with Digital Music



A surprisingly high share of Internet users (56%) also use their computers to listen to Internet radio (i.e. radio stations broadcasting over the Internet) –

* Results marked with an asterisk are only reported in the text but not illustrated in graphs or tables.

18% do so frequently. Internet radio is most popular among Internet users aged 20-39. Survey results indicate that it can be expected to become more popular: 20% of the Internet users intend to listen to Internet radio in the future.

Portable music can be expected to gain further popularity

40% of all Internet users currently use MP3 players to store or play digital music. And the popularity of these portable audio players can be expected to increase further: 33% of all respondents plan to use such a device in the future. While at 55% the share of teens currently using MP3 players is highest, more than one third of the older Internet users plan to use such a portable audio device in the future.

The growing trend towards listening to music on the go is underlined by another survey finding: 21% of all respondents have indicated that they use their mobile phones to download, store or play music files other than ringtones, 7% do so frequently [2]. Not surprisingly, the share of teens that use their mobile phones to listen to music is more than twice as high (28%) as the share of older Internet users (11%). Mobile music can be expected to gain further popularity, since 29% of the Internet users plan to use their mobile phone as a music device in the future. Our survey results indicate that providers of mobile music services are indeed right in targeting primarily younger users: 38% of the teenage Internet users are interested in using mobile music in the future, in the 40+ group the same holds true for only 25%*.

[2] This percentage seems rather high, considering the relatively new offering of full track music downloads to the mobile phone. These results might be somewhat distorted by respondents that also included radio listening on the mobile phone and/or the download of ringtones - even though it has been clearly indicated in the survey that ringtones should not be considered.

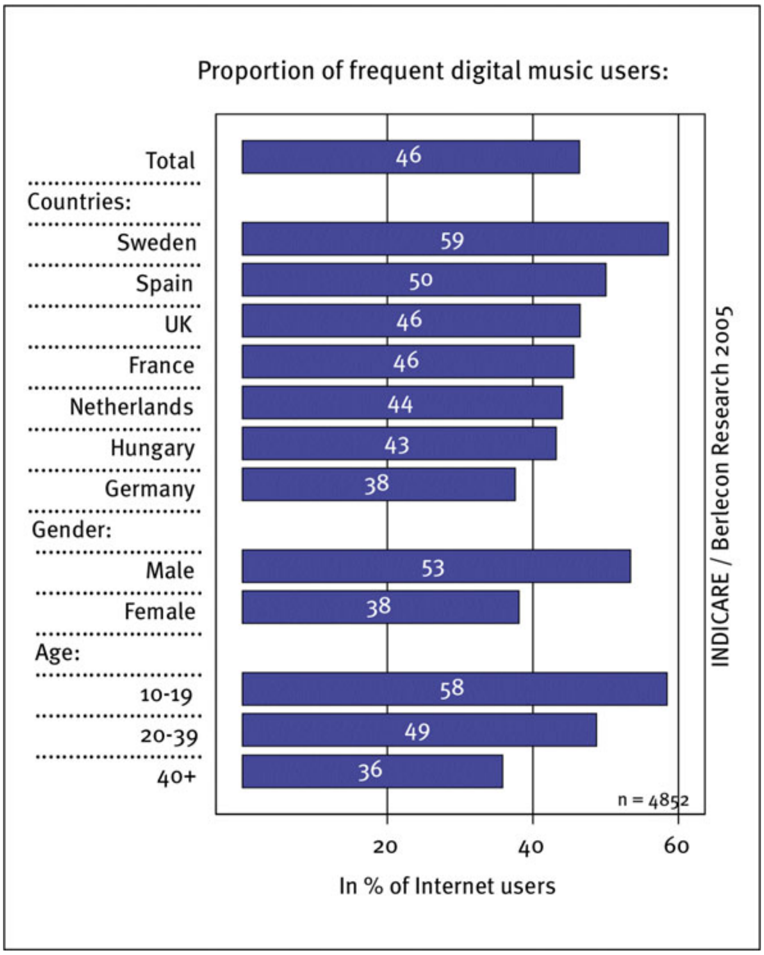
Table 2.1: Experience with digital music (in % of Internet users)

	Have you ever…			
	Used your computer for digital music	Listened to Internet radio	Used a MP3 player for digital music	Used your mobile phone for digital music
All	69	56	40	21
Germany	68	48	41	16
UK	64	56	35	20
Spain	75	59	52	25
France	63	60	35	20
Hungary	68	44	34	25
Netherlands	65	52	44	20
Sweden	80	72	42	19
Male	76	61	44	23
Female	60	49	36	18
10 – 19 years	77	46	55	28
20 – 39 years	72	60	40	24
≥ 40 years	59	54	32	11
No work / student	71	53	43	22
Low-skilled prof.*	69	60	41	20
High-skilled prof.*	65	55	37	20
Frequent users	93	76	63	31

Answers counted: “yes, I do that frequently” or “yes, but not very often”
in % of Internet users
* professionals
n = 4852

Source: INDICARE / Berlecon Research (2005)

Figure 2.2: Proportion of frequent digital music users



Intermediate conclusions

The above results illustrate that the usage of digital music is widespread among European Internet users. Large parts of the population already have gained first experience with digital music. Almost half of all Internet users frequently listen to digital music on their computers or portable devices, with the highest percentages in Sweden and Spain. Frequent digital music users are mostly young males between 10 and 19 years.

While currently particularly younger Internet users like digital music, the older age groups might catch up: between 20 and 30% of the Internet users above 40 that have no experience with digital music yet intend to try this new form of music in the future. One exception is music on the mobile phone: the interest for mobile music is mostly limited to young user groups.

2.2 Reasons for not using digital music

Most important reason for not using digital music is a lack of knowledge

Figure 2.3 depicts the reasons why some respondents have never used a computer or mobile device to listen to music. The most important reason is a lack of knowledge: 37% of the non-users simply do not know how to do so.

Particularly women are not well informed about how to use digital music (see table 2.2). One quarter of all non-users does not have the time and 22% do not have the technical equipment. Only 12% think that digital music is too expensive, 8% believe that it is illegal.

Figure 2.3: Reasons for not using digital music

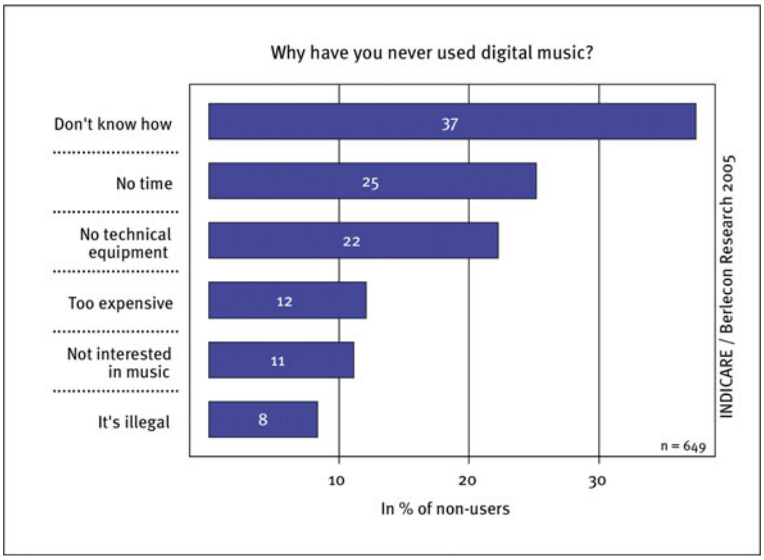


Table 2.2: Reasons for not using digital music (in % of non-users)

	Why have you never used your computer or mobile phone to listen to music?					
	Don't know how	It is illegal	No equipment	Too expensive	Not interested in music	No time
All	37	8	22	12	11	25
Germany	44	9	24	17	9	26
UK	39	7	18	13	11	38
Spain	28	7	34	9	17	20
France	45	9	25	11	12	18
Hungary	26	9	21	12	5	29
Netherlands	37	9	13	9	15	16
Sweden	41	5	28	11	13	29
Male	29	10	19	15	13	27
Female	43	7	25	10	10	24
10 – 19 years	42	11	22	24	10	18
20 – 39 years	37	9	27	9	7	26
≥ 40 years	37	7	18	11	16	26
No work / student	35	8	23	19	11	22
Low-skilled prof.	41	6	21	7	13	25
High-skilled prof.	36	11	23	10	10	29

% of Internet users that do not use and do not plan to use digital music
n = 649

Source: INDICARE / Berlecon Research (2005)

Intermediate conclusions

If the providers of digital music want to activate the potential of Internet users that currently do not use digital music, they have to make the usage of digital music quick and easy also for technically less knowledgeable users. They have to show that not necessarily specific technical hardware is needed to consume digital music. Considering that we have asked users of the Internet, it can be presumed that respondents have access to a computer and therefore have at least the basic equipment e.g. to access online music stores or Internet radio. However, also the necessary software for downloading music must be easily available and quick to install and use.

3 Usage of Digital Music

3.1 Sources for digital music

CDs are the most important source for digital music,

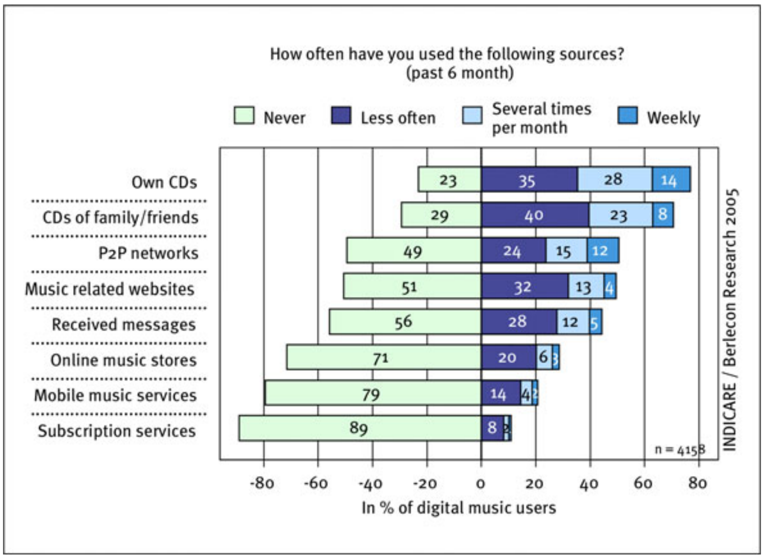
From those Internet users that have experience with digital music we wanted to know from which sources they obtain their music files.

Figure 3.1 shows that the legitimate copying and ripping[3] of CDs is the most important source for obtaining digital music. 77% of all digital music users have copied or ripped their own CDs in the past 6 months and 71% have used CDs of friends or family members to obtain digital music. This compares to 51% who have downloaded digital music from peer-to-peer (P2P) or file sharing networks (see figure 3.1 and table 3.1). However, 24% only use P2P networks every once in a while.

P2P usage differs notably between age groups and countries. 58% of the teens use P2P networks, 20% do so weekly or more often, 17% use P2P networks several times per month*. In the 40+ age group, the share of P2P users is at 45% (6% weekly or more often, 12% several times per month*). While around 70% of all Spanish and Dutch digital music users have downloaded music from P2P networks over the past 6 months, in Hungary "only" 30% have done so (a more detailed analysis of frequent P2P users can be found in chapter 6 of this report).

Music related websites and messages from families or friends are other important sources for digital music (see table 3.1)

Figure 3.1: Sources for digital music



3 Copying means burning music to another CD, ripping means transferring music from a CD into a digital music file.

Online music stores and subscription services play only a minor role

Online music stores and music subscription services[4] so far only play a minor role as a source for digital music. Even though one third of the respondents have used an online music store over the past 6 months, only 9% do this several times per month or more often. Online music stores are most popular in Germany and the UK (see table 3.1). In Germany, online music stores are used by as many users as P2P networks.

Table 3.1: Sources for digital music (in % of digital music users)

	Digital music files like MP3 files can be obtained from a variety of sources. Approximately, how often have you used the following sources over the past 6 months?							
	Own CDs	CDs of family/ friends	P2P net-works	Online music stores	Subscr. service	Music related websites	Received message	Mobile music service
All	77	71	51	29	11	49	44	21
Germany	83	72	38	38	12	51	35	19
UK	82	74	49	37	14	39	44	26
Spain	82	80	73	34	15	60	57	30
France	72	67	43	27	11	42	37	17
Hungary	79	73	30	18	6	63	48	21
Netherlands	71	63	67	20	10	38	44	14
Sweden	70	66	53	27	11	52	44	18
Male	81	73	53	30	12	50	43	21
Female	71	67	47	27	9	49	46	20
10 – 19 years	82	76	58	28	10	54	52	27
20 – 39 years	79	70	51	28	11	50	43	20
≥ 40 years	71	67	45	29	11	46	41	17
Frequent users	86	78	61	34	14	57	51	25

Answers counted: “Weekly or more often”, “several times per month”, or “less often”
in % of digital music users
n = 4158

Source: INDICARE / Berlecon Research (2005)

Music subscription services are even less important than online music stores as a source for digital music: Only 11% of digital music users have tried such a service over the past 6 months and 3% use music subscription services regularly. The survey results reveal that in contrast to all other digital music sources, online music stores and music subscription services are equally popular among younger and older age groups as a source for digital music.

Quite surprisingly, 21% of all digital music users claim that they have already used mobile music services. 6% use such services several times per

[4] Online music stores focus on a pay-per-download model, while subscription services offer access to a music portfolio for a certain subscription period at a given price.

month or more often.[5] At 27% the share of young users is apparently higher than the share of users above 40 years (17%). Mobile music usage is most widespread in Spain and the UK.

Intermediate conclusions

Digital music is not equal to “downloads from the Internet”. The main source for digital music are CDs, as the above results show. The results also confirm that usage of P2P networks is very widespread in Europe with clear differences between countries and age groups.

The importance of online music stores and subscription services is still significantly behind P2P networks – except in Germany. In contrast to all other sources of digital music, however, online music stores are equally popular among younger and older age groups.

3.2 Usage behaviour

Burning and sharing are important

To better understand the way consumers use digital music, we have asked them how often they have burned and shared digital music over the past 6 months and how much music they have stored on their computers.

The results depicted in figure 3.2 confirm that burning and sharing are very frequent usages of digital music. 80% of all digital music users have burned their own mixes to CD over the past 6 months, 39% have done so several times per month or more often. The share of teens that burn their own CDs several times per month or more often is at 46%, compared to 34% of the 40+ group*.

73% of the digital music users have shared music files with their family members and friends over the past 6 months, 60% have shared music files with other people. Again, teens are the most active music file sharers, about half of them share music files with friends and family several times per month or more often.

Sharing is most popular in Spain. This is in line with results from table 3.1, which shows that Spain also has the highest share of P2P users in Europe. The Netherlands and France report the lowest percentage of file sharers.

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5 Again these results have to be interpreted with care. A number of respondents might have included radio broadcasting on the mobile phone and ringtones here.

Figure 3.2: Usage of digital music

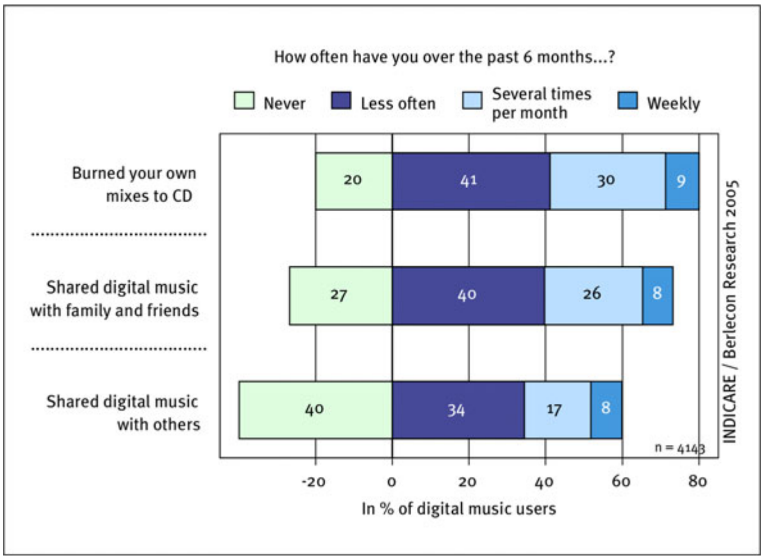
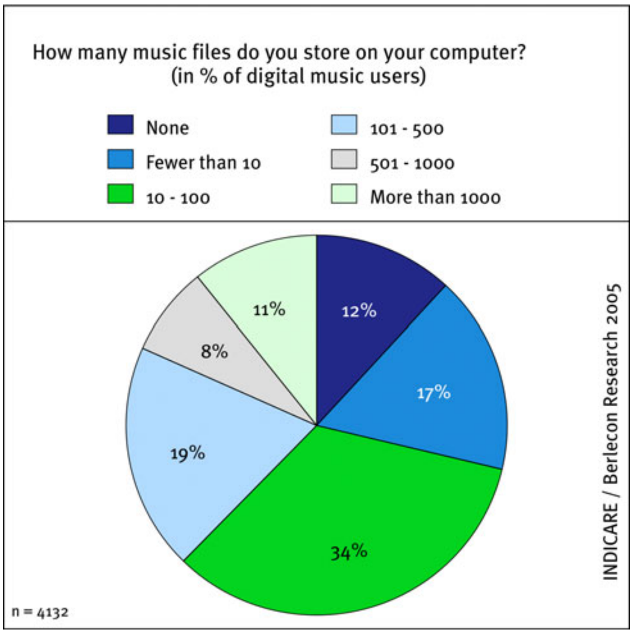


Figure 3.3: Number of music files stored



As figure 3.3 and 3.4 show, quite a significant share (18%[6]) of all digital music users have more than 500 digital music files stored on their computers. Particularly younger users load their computer with music files: 25% of the teens but only 11% of the digital music users above 40 have more than 500 music files stored on their computer (see figure 3.4).
Figure 3.4 also reveals that there is a considerable difference between men and women: The share of men that "hoard" music files on their computers is twice as high as the share of women. Significant differences also exist between music users from different countries. Particularly Swedish and

6 Deviations from shares depicted in the graph and cumulated results are due to rounding.

Hungarian users have stored a large amount of music files, while only a small percentage of French users possess more than 500 digital music files.

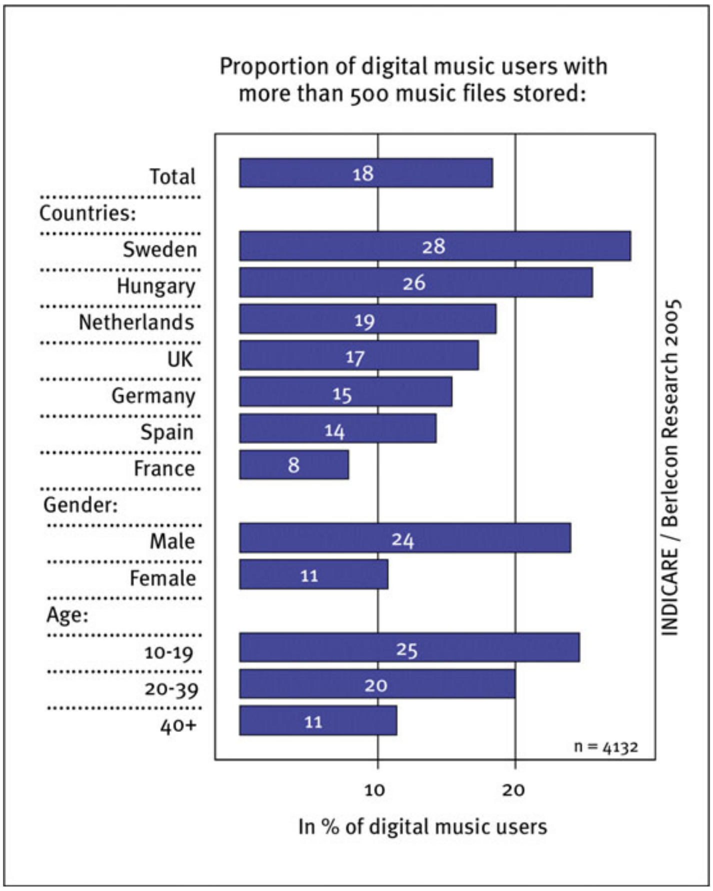
Table 3.2: Usage of digital music (in % of digital music users)

	And how often have you over the past 6 months…		
	Burned your own mixes to CDs	Shared music files with family or friends	Shared music files with other people
All	80	73	60
Germany	87	73	53
UK	75	72	55
Spain	78	80	70
France	80	69	50
Hungary	78	77	71
Netherlands	80	67	60
Sweden	81	74	60
Male	83	74	61
Female	77	73	59
10 – 19 years	85	80	70
20 – 39 years	81	74	62
≥ 40 years	75	68	51
No work / student	80	75	63
Low-skilled prof.	82	73	60
High-skilled prof.	78	71	56
Frequent users	88	81	70

Answers counted: “weekly or more often”, several times per month” or “less often”
in % of digital music users
n = 4143

Source: INDICARE / Berlecon Research (2005)

Figure 3.4: Users with more than 500 music files stored



Intermediate conclusions

Burning, sharing and storing of music files are rather frequent activities of digital music users. We can conclude from this that DRM systems that heavily restrict these usages could limit the acceptance of consumers. Consumers are very used to burn, share, and store and will opt for digital music offerings that support this behaviour.

3.3 Type of music downloaded

The Internet is an excellent tool to promote new music

Our survey results indicate that digital music on the Internet is well suited for marketing purposes. From those users that downloaded music from the Internet over the past 6 months, we wanted to know what type of music they downloaded. Not surprisingly, figure 3.5 shows that known music by popular artists is the most common type of music that was downloaded from the Internet.

Figure 3.5: Type of music downloaded

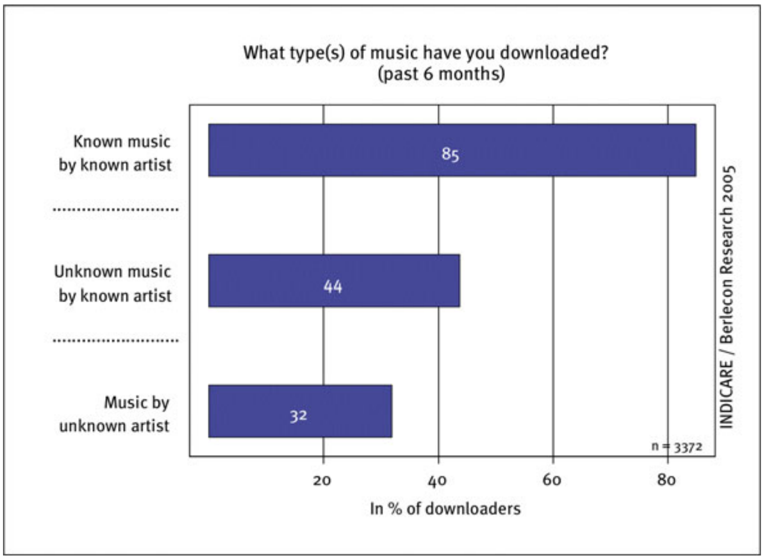


Table 3.3: Type of music downloaded (in % of downloaders)

	What type of music have you downloaded from the Internet over the past 6 months?		
	Known music by known artist	Unknown music by known artist	Music by unknown artist
All	85	44	32
Germany	80	45	31
UK	90	52	38
Spain	88	46	30
France	79	35	37
Hungary	82	39	24
Netherlands	85	38	23
Sweden	89	52	41
Male	83	47	36
Female	87	39	26
10 – 19 years years	87	52	35
20 – 39 years	84	46	34
≥ 40 years	86	34	25
No work / student	86	47	34
Low-skilled prof.	85	43	30
High-skilled prof.	84	40	32
Frequent users	85	52	38
in % of downloaders n = 3372			

Source: INDICARE / Berlecon Research (2005)

However, a considerable share of music downloaders – in particularly younger ones – also download music they did not know before from the Internet (see table 3.3). 44% downloaded unknown music by known artists, 32% downloaded music by unknown artists. This shows that the Internet is a good source for consumers to discover new music and new artists. Particularly frequent users of digital music (those that frequently use either the computer or a portable device to listen to digital music) download unknown music.

In Sweden and the UK the largest percentage of users has downloaded unknown music from the Internet, whereas the share of Hungarian and Dutch users that have done this is comparatively low.

Internet downloading supports marketing activities by music labels

Even more interesting is that almost two thirds (64%) of the digital music users that have discovered a new artist on the Internet have subsequently bought a CD by this artist, 16% have bought more digital music.
Particularly older users have spent money on digital music and CDs subsequent to the discovery of a new artist: In the above-40 age group 66% bought a CD, and 18% bought more digital music. We can conclude from this that even though older Internet users are less actively using the Internet for digital music purposes than younger ones, they are more often induced to spend money on music. The results depicted in table 3.3 indicate that this holds true especially for high-skilled professionals.

Particularly German and British digital music downloaders have purchased digital music or CDs after having discovering new artists on the Internet.

In the younger age groups, downloading more music from a newly discovered artist is the most frequent activity. However, even 57% of the teens report that they have bought CDs after they found a new artist on the Internet. In addition, many of them visited a concert or followed the artist's activity in the media.

Figure 3.6: Activity after discovering a new artist on the Internet

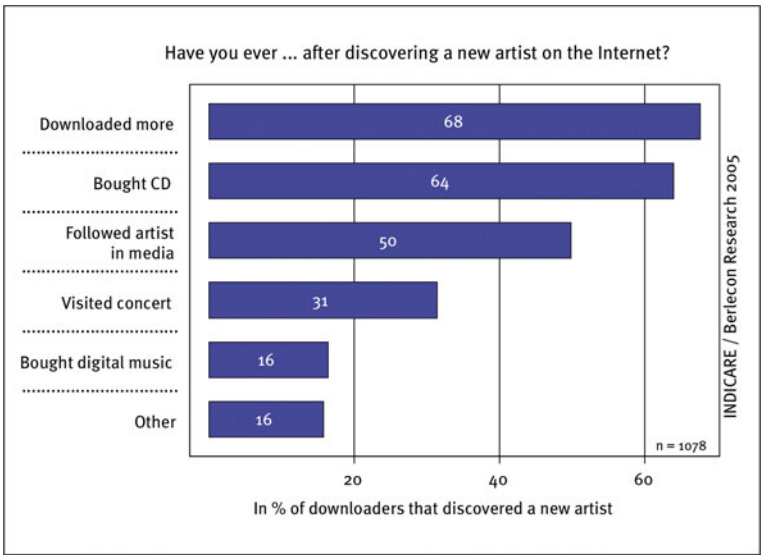


Table 3.4: Activity after discovering a new artist on the Internet (in % of downloaders that discovered a new artist)

	Have you ever done the following after discovering a new artist on the Internet?				
	Downloaded more	Bought digital music	Bought CD	Visited concert	Followed media
All	68	16	64	31	50
Germany	54	26	78	35	58
UK	71	21	76	35	48
Spain	87	18	52	39	47
France	32	18	66	33	42
Hungary	71	11	41	23	30
Netherlands	81	11	55	20	43
Sweden	78	10	70	31	68
Male	68	19	65	31	51
Female	66	12	62	32	48
10 – 19 years	74	15	57	30	53
20 – 39 years	69	16	66	37	52
≥ 40 years	56	18	66	19	40
No work / student	72	14	63	32	54
Low-skilled prof.	70	18	61	27	49
High-skilled prof.	59	18	68	35	45
Frequent users	72	18	66	35	53

in % of downloaders that discovered a new artist
n = 1078

Source: INDICARE / Berlecon Research (2005)

Intermediate conclusions

We can conclude that the Internet is an excellent tool for musicians and their labels to promote new works. This is particularly true for less known musicians. This finding calls into question frequent claims by the music industry that the large availability of music on the Internet does depress music sales. Music on the Internet rather seems to support the marketing activities of music labels. The music industry should, therefore, aim at making it easy for consumers to discover new music on the Internet. Rather than discouraging file sharing with DRM technology, they should support sharing and recommendation features. Their efforts should not focus only on young users but particularly target older, high-skilled professionals that have less time to discover but more money to spend on new music.

4 Evaluation and Preferences

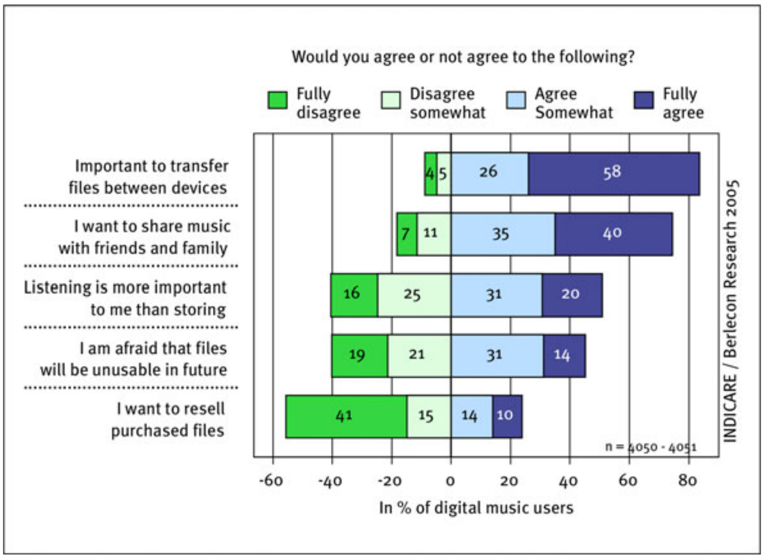
4.1 Preferences of digital music users

Device interoperability and sharing are key demands of consumers

To become accepted, DRM systems have to respect the demands and preferences of consumers. We therefore asked consumers how important certain features or abilities are to them. As we can see from figure 4.1, the ability to transfer music between different devices such as the PC, MP3 player and the mobile phone is of utmost importance to digital music users. 84% of the digital music users state that device transferability is important to them.

In addition, as we have already seen in section 3.2, consumers want to share music, i.e. pass music files on to friends or family members: three quarters of all users say that they want to share music with friends and family. It comes as no surprise that particularly teens and young adults want to share music with friends and family (see table 4.1).

Figure 4.1: Preferences of digital music users (in % of digital music users)



To find out more about the chances for streaming services we asked consumers if listening to music (e.g. via streaming) is more important to them than storing files on any of their devices. Respondents were, however, divided in their opinion on the importance of storing music versus streaming: 51% think that listening to music is more important than storing (see figure 4.1).

The potential target groups for streaming services seem to be females and users over 40 years (see table 4.1). In Hungary and the Netherlands an above average share of the digital music users think that listening to music is more important than storing.

Durability of digital content is a concern of consumers

It is often discussed whether the limited durability of digital content goods due to insecure compatibility with future technologies makes digital goods less valuable than physical goods. Our survey results show that indeed durable use is a concern of consumers, though not the most important one: 45% of the digital music users worry that their digital music files might not be usable on devices they buy in the future. However, only 14% fully agree to this statement.

The problems that occur when consumers want to resell their purchased digital content are often discussed in the context of DRM. However, reselling “used” music files seems not to be on the minds of many consumers. 56% of the digital music users do not want to resell purchased music files that they do not like anymore, 21% have no opinion on this matter. However, in the teenager group the share of digital music users that would like to resell music files is at 31% (see table 4.1).

Table 4.1: Preferences of digital music users (in % of digital music users)

	If you consider how you want to use MP3s and other digital music files, how much do you agree or disagree to the following statements?				
	Want to transfer between devices	Want to share with friends or family	Listening more important than storing	Afraid that files will be unusable in future	Want to resell purchased files
All	84	75	51	45	24
Germany	79	71	35	39	33
UK	86	68	46	47	20
Spain	89	81	43	53	20
France	87	83	56	53	38
Hungary	85	72	68	45	13
Netherlands	77	70	60	38	33
Sweden	82	75	47	42	12
Male	86	75	48	46	27
Female	80	75	54	44	19
10 – 19 years	89	82	50	48	31
20 – 39 years	85	76	49	45	25
≥ 40 years	78	67	55	44	18
No work / student	85	77	52	44	25
Low-skilled prof.	83	74	48	46	19
High-skilled prof.	82	72	53	45	28
Frequent users	90	81	51	47	26

Answers counted: “Fully agree” or “Agree somewhat”
in % of digital music users
n = 4051

Source: INDICARE / Berlecon Research (2005)

Intermediate conclusions

The above results clearly show that device interoperability is a key demand of digital music users. The results also support the above finding (compare section 3.2) that sharing music with friends and family are important - particularly to younger users. Commercial digital music offerings have to make sure that their applied DRM systems support these demands of consumers, e.g. with sharing features. Otherwise they might lose consumers to services that allow the easy transfer of files between devices and the sharing with others. Interoperability is also important to ensure that digital music files will be compatible with devices that consumers might buy in the future. The preference for streaming services is a less clear-cut result than the one for device interoperability and sharing.

4.2 Willingness to pay for alternative offerings

Consumers are willing to pay for more usage rights and device interoperability

It is often claimed by content providers that consumers want all kind of features and very flexible usage rights, as long as they don't have to pay for them. Consumer organisations, however, claim that "We don't want all for free, but we want value for money"[7]. To make statements about consumers' actual willingness to pay for certain features and distinguish them from simple nice-to-have features, we asked consumers to decide between alternative market offerings.

Our survey results support the statement that consumers are indeed willing to pay for music files that offer them flexible usage rights. When asked to decide between alternative A: "A song that you can only copy once and burn three times for 50 cents" and alternative B: "A song you can do whatever you want with for 1€", almost two thirds of the respondents decided for the more expensive alternative B with more usage rights (see figure 4.2). To put it differently: users are not willing to give up their flexibility in the use of digital music, even if restricted content would be offered at half the price. And this result is largely independent of age, gender or professional level. There was also no major difference between frequent users or regular P2P users.

As we have seen above, the ability to use digital music on different devices is very important to digital music users. Figure 4.3 shows that they are not willing to give up this ability: 86% of all respondents prefer paying 1€ for a song that runs on any device over paying only 50 cents for a song that runs on only one device.

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[7] Cornelia Cutterer, BEUC, DRM-Conference Berlin, January 13-14, 2005

Figure 4.2: Preference for alternative market offerings (restrictions)

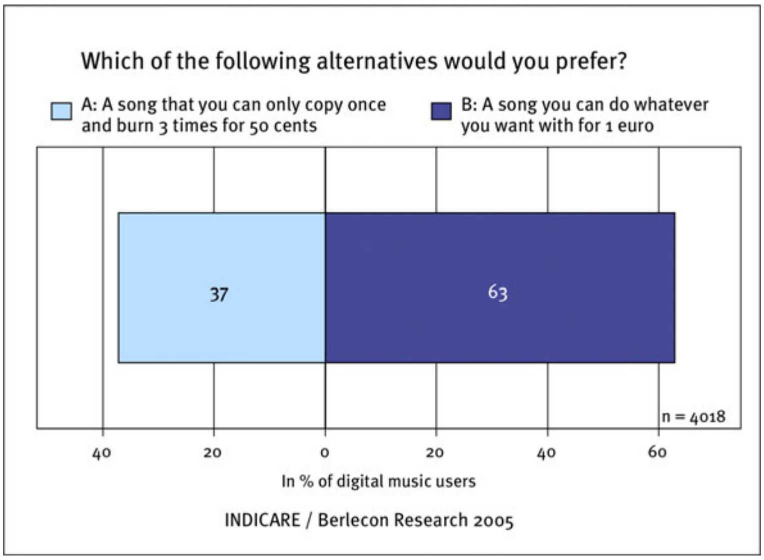
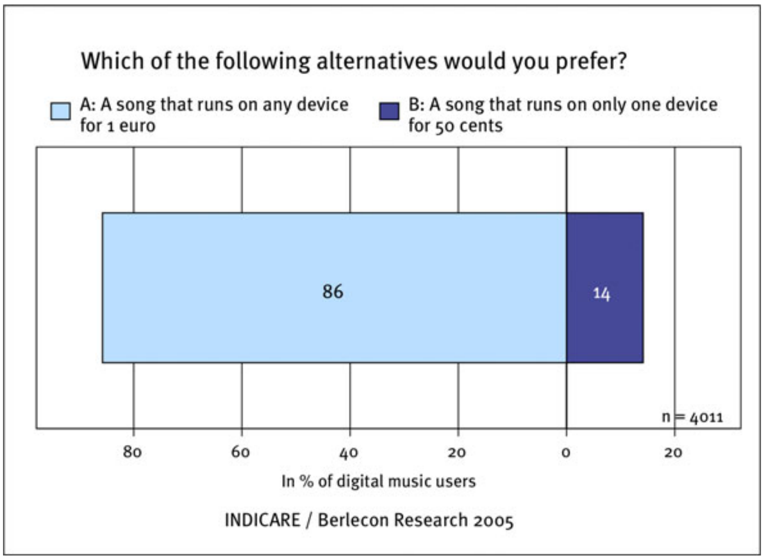
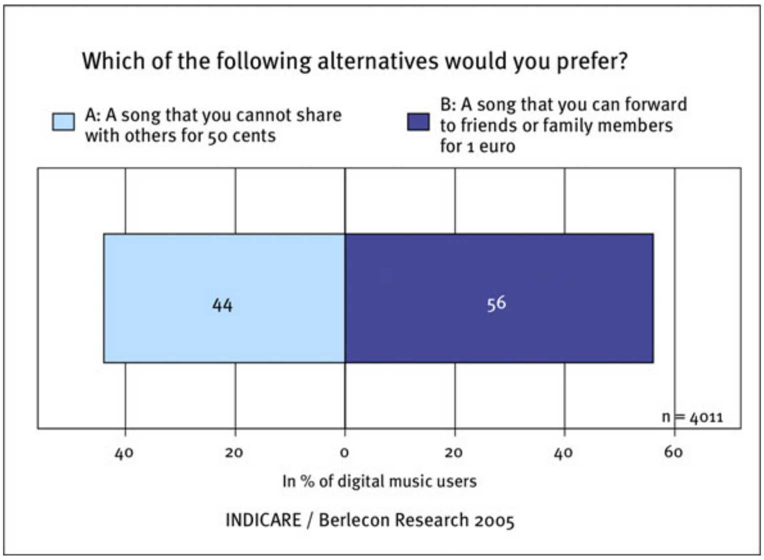


Figure 4.3: Preference for alternative market offerings (interoperability)



Most users are also willing to pay for sharing features and reject the cheaper option of a file that cannot be shared. However, this outcome is less strong than the previous two: 56% of all digital music users would rather pay 1€ for a song that can be forwarded to friends and family members than paying just 50 cents for a song that cannot be shared (see figure 4.4). This result holds equally true for various age groups. Digital music services that aim at integrating sharing features into their DRM systems, e.g. by supporting superdistribution, therefore, point into the right direction.

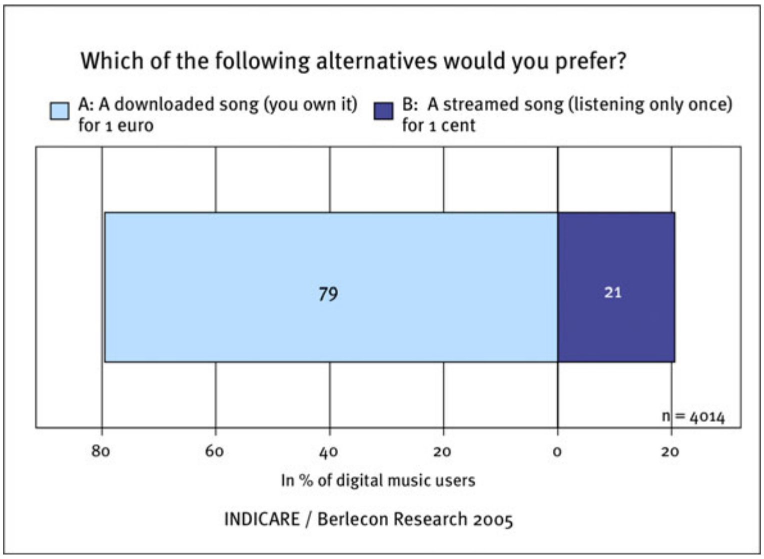
Figure 4.4: Preference for alternative market offerings (sharing)



Streaming and renting seem less attractive

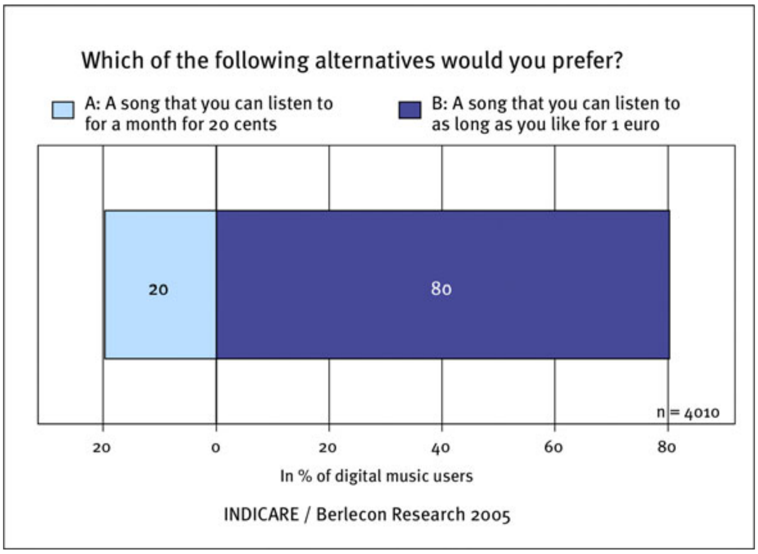
On the contrary, streaming and renting music seem to be only attractive to a limited share of users. Only 21% would prefer paying just one cent for a streamed song over paying 1€ for a downloaded song (see figure 4.5). While this might be somewhat due to the yet limited experience with streaming services in Europe, the clear vote against streamed songs can be observed in all countries and age groups. In the UK, even 89% of the digital music users decided against the cheaper streaming option.

Figure 4.5: Preference for alternative market offerings (streaming)



Also, the majority of digital music users objects to purchase songs with a limited usage time. 80% would rather pay 1€ for a song that they can listen to for as long as they like than paying only 20 cents for a song that they can rent for a month. We can conclude from this that services where DRM technology makes songs expire after a certain subscription period are only attractive to a limited share of users – at least at the price difference to downloaded songs we chose in the questionnaire.

Figure 4.6: Preference for alternative market offerings (renting)



Consumers are sceptical about watermarks

Watermarks that can trace back the illegal use of purchased content files but do not technically restrict the usage of content are often regarded as a good alternative for consumers to DRM technologies. Our survey results, however, do not support this idea. Most probably, consumers do not know what watermarks are and are therefore sceptical about their application.

When we asked survey participants to decide between two pairs of alternative market offerings with the explanation that watermarks can trace back if the consumer uses the song illegally, the alternatives with a watermark were rejected in both cases. In a first set of alternatives, 57% of the users decided to rather pay €1 for a song without a watermark than paying only 50 cents for a song with a watermark (see figure 4.7).

In another set of alternatives, 58% opted for a song without a watermark even though the usage of this song was limited to one copy and three burns. Only 42% decided for the alternative without restrictions but with a watermark.

Figure 4.7: Preference for alternative market offerings (watermark 1)

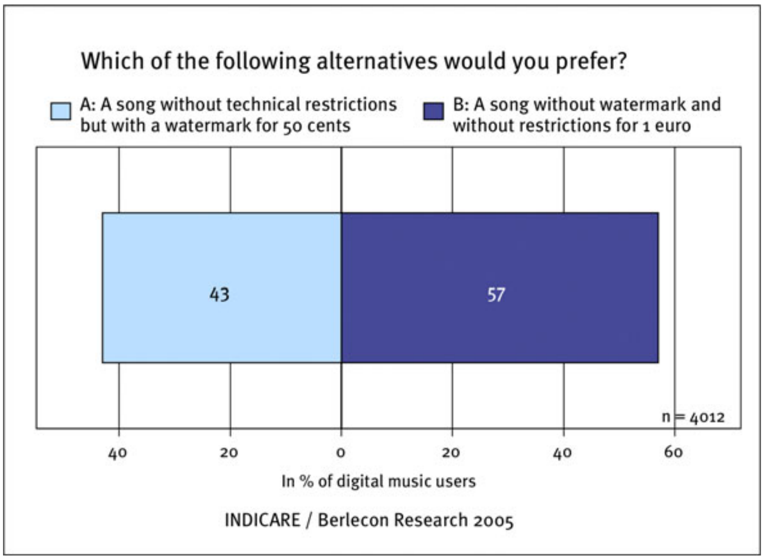
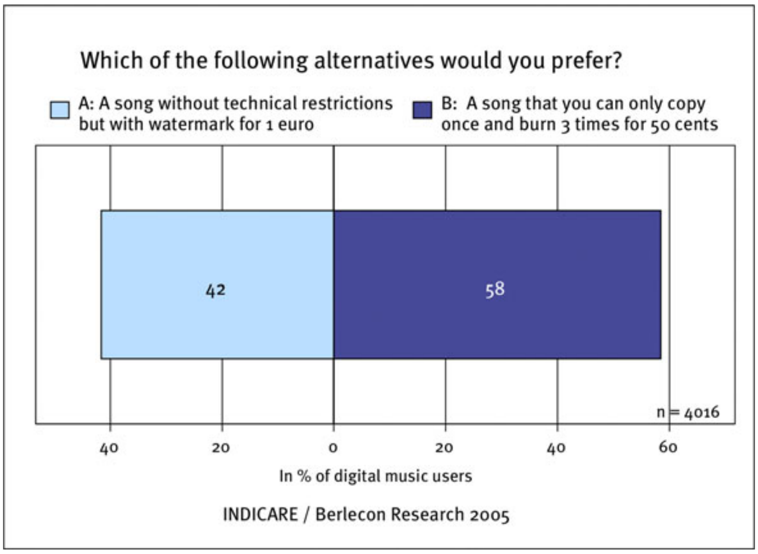


Figure 4.8: Preference for alternative market offerings (watermark 2)



Intermediate conclusions

The above results largely confirm that consumers are not willing to accept music services that limit their flexibility – even if these are offered at a lower price. Flexible usage rights, device transferability and – to a lower degree – the ability to share are important prerequisites of attractive digital music offerings to consumers. We can conclude from this that it certainly pays for digital music providers to offer flexible usage rights, sharing features, and to enable the usage of digital music on various devices. Music providers should therefore support industry efforts that facilitate interoperability of music files, e.g. the activities of standardisation bodies.

What we find, however, is that the willingness to pay for streaming and temporary renting is rather limited. Also digital music services that apply watermarks rather than DRM technologies might be difficult to sell. Even though watermarks do not restrict the legitimate usage of content, many users are sceptical about watermarks – probably because they are not well informed about the details of this technology.

4.3 Problems with digital music

Digital music stores offer superior service over P2P networks

We asked those users that have used digital music stores (online music stores, subscription services or mobile music stores) and/or P2P networks over the past 6 months, what problems they encountered with both sources. A comparison of the results depicted in figures 4.9 and 4.10 show that digital music stores obviously offer a superior service over P2P networks: In all categories, more users reported problems with P2P networks than with digital music stores. This is a positive result for commercial offerings, considering that they are often in direct competition with P2P networks.

The most important problem of P2P networks is the quality of tracks: 84% of P2P users report that tracks they downloaded were at least sometimes not full length, were of bad sound quality, or otherwise inferior (digital music stores: 55%). 82% of the P2P users report that songs they were looking for were unavailable (online music stores: 70%). With regard to usage rights, 59% did not know what they were allowed to do or not with the music they downloaded (online music stores: 55%). Even though P2P networks do not apply DRM systems or usage restrictions on the songs offered, the percentage of users having problems with playing, forwarding or burning songs was higher on P2P networks than in online stores.

Figure 4.9: Problems with P2P networks (in % of P2P users)

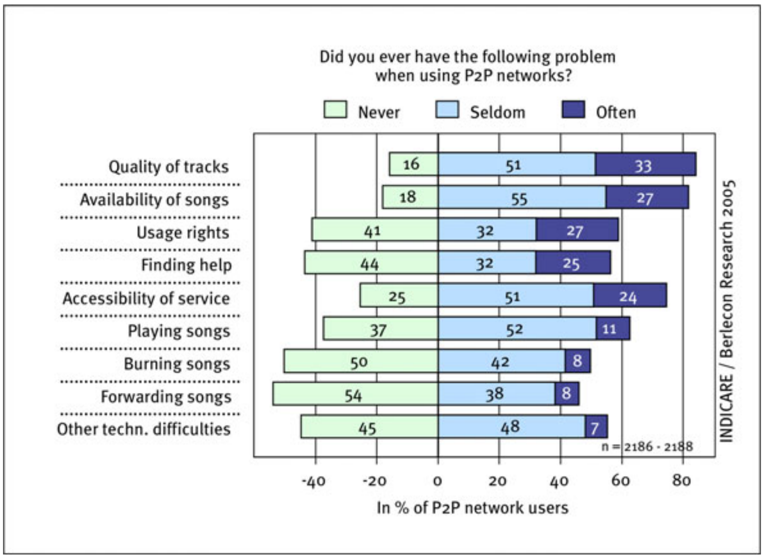
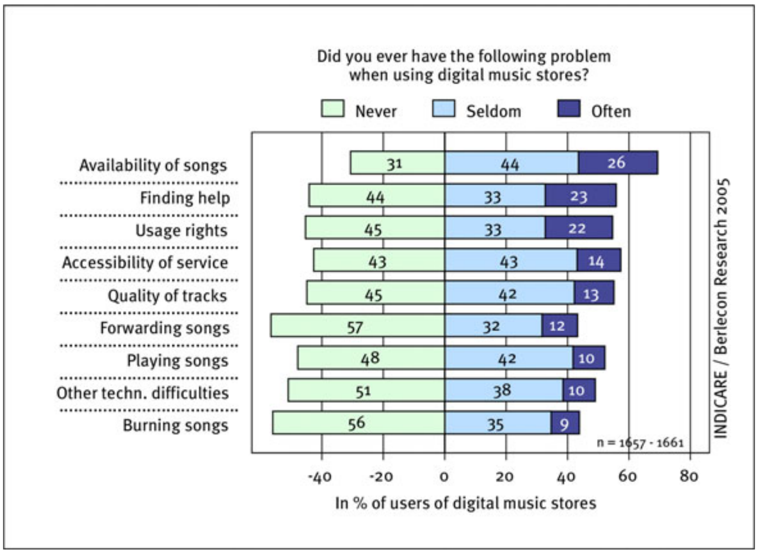


Figure 4.10: Problems with digital music stores (in % of music store users)



Digital music stores have to work on their customer care

According to the survey results, the most important problem of digital music stores is the unavailability of songs. A total of 70% of the users report that songs they were looking for were unavailable in a digital music store, 26% often had this problem (see table 4.2). In Germany, even 42% of the respondents stated that songs they were looking for were often unavailable.
The second most important problem of music stores is that users are not sure what they were allowed to do or not with the music they acquired. More than half of the users reported this problem. Considering that one supposedly major advantage of commercial digital music services is that they offer users a secure and legal environment to download digital music this percentage appears very high.

In addition, 55% of the users report that they did not know where to turn to when they needed help, 23% often had this problem.

More than half of the users responded that at least sometimes the digital music service was not accessible or files could not be downloaded and/or that tracks were of bad quality. This is again a very high share, considering that users are paying to purchase a service that is supposed to be of superior quality to free offerings from P2P networks.

Table 4.2: Problems with P2P networks and digital music stores (in % of users)

	Did you ever have any of the following problems when downloading or buying music from the Internet?					
	Availability of songs		Usage rights		Finding help	
	Digital store	P2P network	Digital store	P2P network	Digital store	P2P network
All	26	27	22	27	23	25
Germany	42	31	29	36	24	31
UK	22	33	24	26	18	21
Spain	23	30	19	28	25	34
France	24	26	23	41	26	26
Hungary	28	22	18	14	27	11
Netherlands	11	22	18	21	18	19
Sweden	24	25	20	21	24	23
Male	26	26	22	26	22	23
Female	25	28	22	27	25	27
10 – 19 years	26	24	22	30	23	23
20 – 39 years	28	29	21	26	23	25
≥ 40 years	21	26	23	26	22	24
No work / student	25	27	22	29	25	22
Low-skilled prof.	26	26	23	25	23	29
High-skilled prof.	25	29	21	25	21	22
Frequent users	27	26	22	26	20	23

Answers counted: “often”
In % of digital music store / P2P network users
n = 1657-1661 (digital music store) / n= 2186-2188 (P2P networks)

Source: INDICARE / Berlecon Research (2005)

Intermediate conclusions

We can conclude from the above results that commercial digital music stores have to work on their quality of service and their customer care, specifically help desks. It does not shed a very positive light on digital music stores that the majority of their customers have problems with accessing the service, with the quality of music files they acquire, and with finding help. A better information policy on DRM-enforced usage restrictions would surely help to avoid confusion about technical difficulties and usage restrictions.

Considering that digital music stores are equally popular among younger and older users, providers have to work in particular on the user experience for the latter and for technically less knowledgeable users. This is especially important if one considers that older users most often spend money on digital music after discovering new music on the Internet (compare section 3.3).

4.4 Advantages of digital music stores

Pre-listening and recommendation features are seen as major advantages

Consumers that have purchased music from digital music stores – either on the Internet or on their mobile phone – were asked about their opinion on the advantages of such services. 77% stated that pre-listening is more convenient in digital music stores than in CD stores. Another major advantage of digital music stores are recommendation features: almost three quarters of the users agreed to the statement that recommendations help them find the music they like. This result is equally true for younger and older digital music store customers (see table 4.2).

Despite the reported limited availability of songs (see section 4.3 above) 60% of the users think that online music stores have a better selection than CD stores. Particularly in Hungary and Spain users of online stores find a better selection of music than in CD stores. The evaluation of the advantages of online music stores does not differ significantly between age groups.

Figure 4.11: Advantages of digital music stores (in % of music store users)

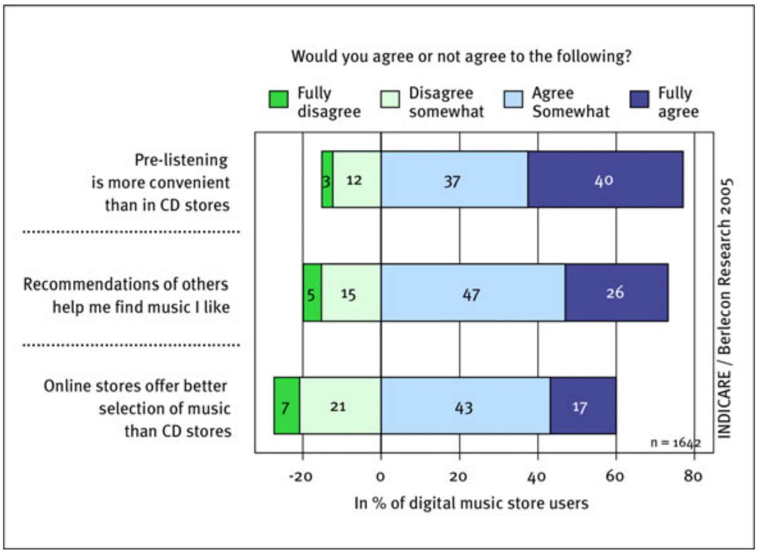


Table 4.3: Advantages of digital music stores (in % of music store users)

	You said that you have bought digital music in an online or mobile music store. Would you agree or not agree to the following statements?		
	Online stores have better selection than CD stores	Pre-listening is more convenient than in CD stores	Recommendations help me find the music I like
All	60	77	73
Germany	63	70	59
UK	61	89	78
Spain	66	83	85
France	54	83	76
Hungary	73	66	72
Netherlands	53	73	75
Sweden	49	70	68
Male	59	77	72
Female	62	78	75
10 – 19 years	59	74	73
20 – 39 years	59	77	75
≥ 40 years	63	80	71
No work / student	58	74	74
Low-skilled prof.	60	79	78
High-skilled prof.	62	79	66
Frequent users	61	78	74

Answers counted: “fully agree” or “agree somewhat”
in % of music store users
n = 1642

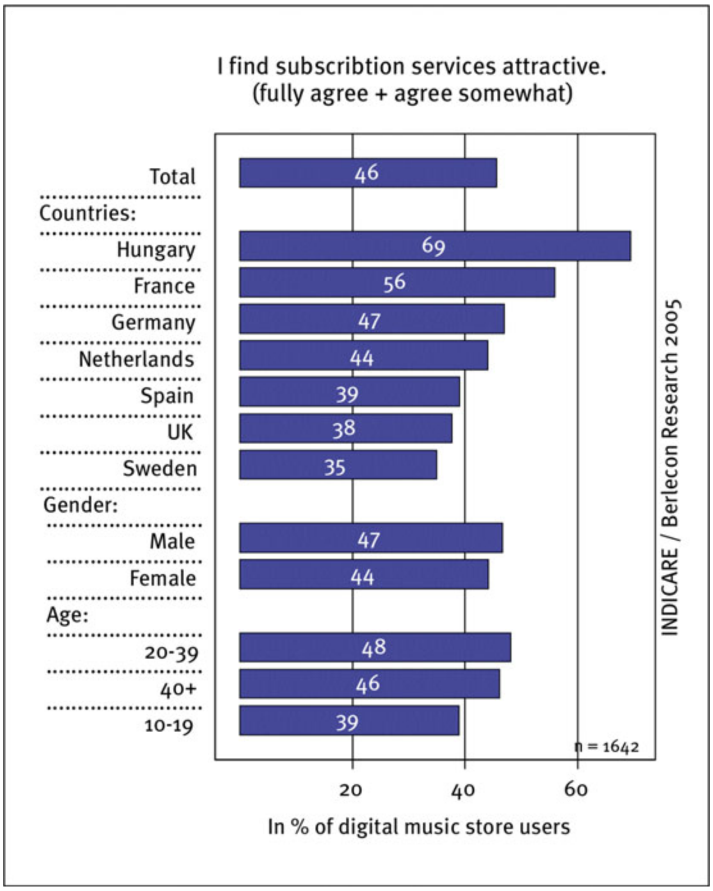
Source: INDICARE / Berlecon Research (2005)

Subscription services

46% of the digital music store users consider subscription services as attractive, where users pay e.g. a monthly fee to listen to as much music as they like (see figure 4.12). The opinion on subscription services, however, differs between countries: while in Hungary 69% find subscriptions attractive, the same is true for less than 40% in Spain, the UK, and Sweden.

Quite surprisingly, the share of frequent digital music users that consider subscription services as attractive (44%) is not higher than the average of all users*. Figure 4.12 shows that subscription services are least attractive to teenagers, a quarter of them fully disagreed to the statement “I find subscription services attractive”.

Figure 4.12: Attractiveness of subscriptions



Intermediate conclusions

Even though many users of digital music stores reported that they had problems finding songs they were looking for (compare section 4.3), a majority of users finds the selection superior to that of CD stores. A majority also positively recognises recommendation features and the convenience of pre-listening to music.

Subscription services are attractive to less than half of digital music store users, with remarkable differences between countries. As we have seen from figure 4.6 above, however, the willingness to pay for music files that expire after a subscription period is limited. Providers of subscription services, therefore, carefully have to identify their specific target groups and pricing policies.

5 DRM and Copyright

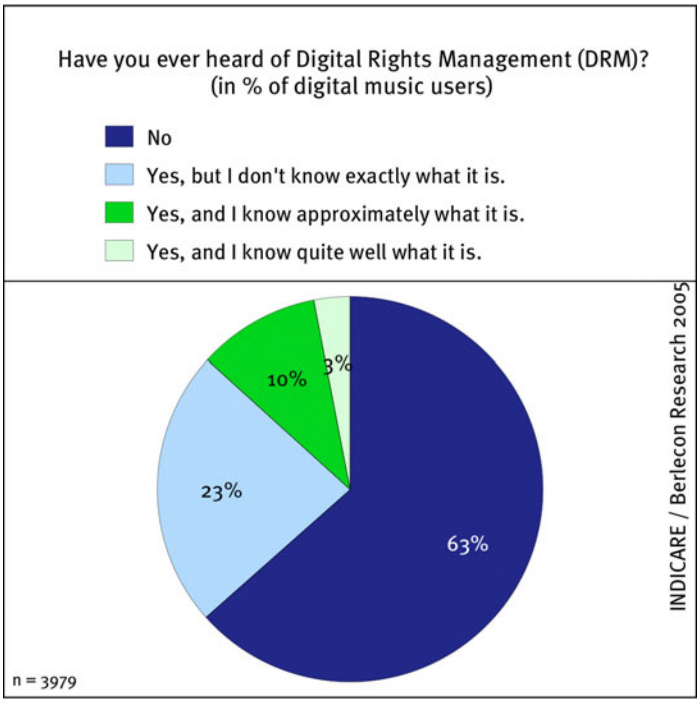
5.1 Knowledge and awareness of DRM

A significant knowledge gap about DRM exists in Europe

One major goal of the INDICARE survey was to find out what the users of digital content know about copyright issues and DRM, how well they are informed about the application of DRM technology and specific usage rules, and what they think of DRM.

One of the most important findings of this survey is that a very significant knowledge gap about DRM exists in Europe: 63% of all digital music users have never heard of Digital Rights Management/DRM, and an additional 23% does not know exactly what DRM is. This adds up to 86% of the Internet users that have experience with digital music but have almost no knowledge about DRM.

Figure 5.1: Knowledge of DRM (in % of digital music users)



As table 5.1 illustrates, there are considerable differences in the knowledge of DRM between users of different gender, age and work status. The information and knowledge level about DRM is rising with age and education. In addition, males claim to be better informed about DRM than females. Even users that frequently consume digital music are not better informed about DRM than the average.

Users are best informed about DRM in Hungary

Results at the country level indicate that Hungarian digital music users are best informed about DRM. "Only" 46% of the Hungarian respondents have never heard of DRM, 18% know approximately or quite well what it is. In comparison, 74% of the Swedish digital music users have no idea of DRM, only one tenth know at least approximately what it is. This lack of information is surprising, since Sweden has the highest share of frequent users of digital music in Europe (compare figure 2.2 above). With digital music being so popular, one would expect users to have at least a basic knowledge of DRM.

Table 5.1: Knowledge of DRM (in % of digital music users)

	Have you ever heard of Digital Rights Management (DRM)?			
	No	Yes, but I don't know exactly what it is	Yes, and I know approximately what it is	Yes, and I know quite well what it is
All	63	23	10	3
Germany	66	16	11	6
UK	62	24	11	4
Spain	62	26	10	2
France	65	25	8	2
Hungary	46	37	14	4
Netherlands	69	20	9	1
Sweden	74	16	9	2
Male	60	23	13	4
Female	68	24	6	1
10 – 19 years	68	21	8	4
20 – 39 years	62	24	10	3
≥ 40 years	63	24	11	2
No work / student	64	22	10	3
Low-skilled prof.	65	23	9	2
High-skilled prof.	61	24	11	4
Frequent users	61	22	13	4
in % of digital music users n = 3979				

Source: INDICARE / Berlecon Research (2005)

European online music stores have to enhance their information policy

Figure 5.2 also illustrates very clearly that the majority of users (79%) that bought digital music in a digital music store over the past 6 months did not know whether the music they purchased was DRM-protected or not. In addition, 71% of users did not know whether any usage restrictions applied (see figure 5.3). An additional 16% did know that usage was restricted, but was not well informed about the details of the restrictions.

Figure 5.2: Awareness of DRM (in % of digital music store users)

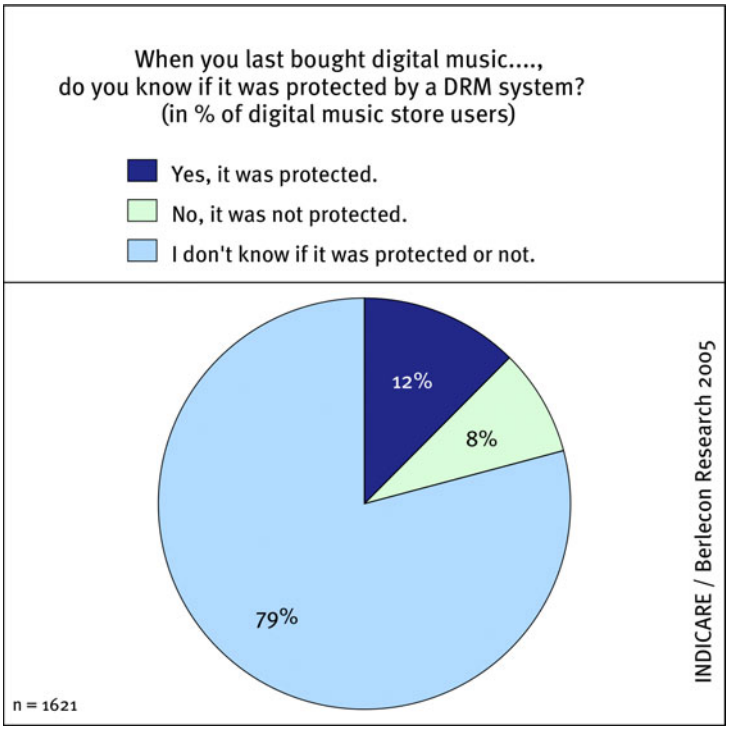
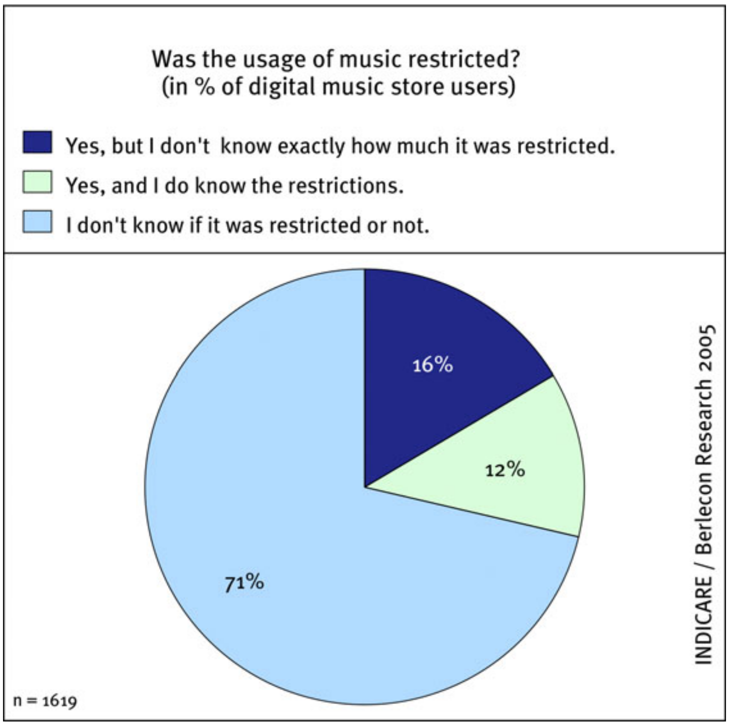


Figure 5.3: Awareness of usage restrictions
(in % of digital music store users)



Level of information differs between countries

Again, the level of information about the application of a DRM system and the knowledge of usage restriction increases with age and education (see table 5.2). We also find that men are much better informed about DRM and usage restrictions than women.

Results from single countries again indicate that Hungarian users are best informed about DRM-protection. At 70% Hungary has the lowest share of users that do not know if the music they purchased was DRM protected, 20% claim that their purchased music was not protected. Sweden has once again the highest share of users not knowing DRM, followed by the UK and the Netherlands.

While in Germany, users haven an average knowledge of DRM, they are better informed about usage restrictions than their European peers: overall 40% know about usage restrictions, 20% know the details. In comparison, only 7% of the Spanish and Dutch users knew the details of usage rights.

Table 5.2: Awareness of DRM and of usage restrictions (in % of digital music store users)

	When you last bought music on the Internet or on your mobile phone, …					
	Do you know if it was protected by a DRM system?			Was the usage of the music restricted?		
	Yes, it was protected	No, it was not protected	I don't know	Yes, but I don't know the details	Yes, and I know the details	I don't know
All	12	8	79	16	12	71
Germany	13	9	78	20	20	60
UK	12	6	83	10	12	77
Spain	13	7	80	23	7	70
France	24	4	72	23	12	65
Hungary	9	20	70	10	15	75
Netherlands	10	7	82	15	7	78
Sweden	6	8	86	11	12	77
Male	15	10	75	17	14	69
Female	9	6	85	16	9	75
10 – 19 years	10	9	82	13	14	74
20 – 39 years	12	8	79	16	12	72
≥ 40 years	14	9	77	19	12	69
No work / student	10	10	81	14	13	73
Low-skilled prof.	11	6	83	18	10	72
High-skilled prof.	19	9	72	18	14	68
Frequent users	13	9	78	17	14	69

in % of digital music store users
n = 1619

Source: INDICARE / Berlecon Research (2005)

Intermediate conclusions

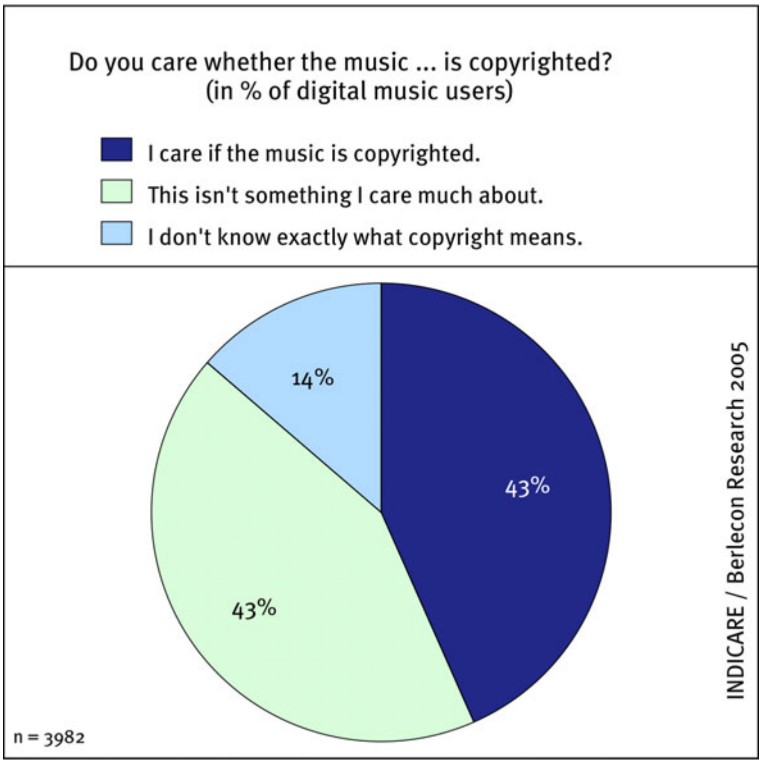
We can conclude from the above results that the information policy of online music stores about the application of DRM systems and/or the application of usage restriction needs to be significantly enhanced. This is not only necessary for the sake of informed consumers. It is also necessary for the sake of satisfied customers, since a lack of knowledge about usage restrictions often results in problems when consumers want to use their purchased music files. From the experience of a large online music store we know, that customer support enquiries strongly declined after usage rules had been relaxed.[8] This is confirmed by results from section 4.3, showing that a significant share of online store users have problems with the usage rules in music stores and technical difficulties when using purchased content.

5.2 Knowledge and awareness of copyright law

Many teenagers do not know or do not care about copyright

We also wanted to know whether digital music users care about copyright law or not. Figure 5.4 demonstrates that over half of the digital music users either do not care whether the music they download onto their computers is copyrighted or do not exactly know what copyright means.

Figure 5.4: Awareness of copyright (in % of digital music users)



8 Presentation by Susanne Peter at: T-Online Tech Talk: "Die Zukunft des Digital Rights Management – Kopieren ohne Grenzen oder Grenzen furs Kopieren?", Hamburg February 22, 2005

It can be seen from table 5.3 that there are significant differences in the appreciation of copyright issues between age groups. Not surprisingly, the share of teens that do not exactly know what copyright means, is noticeably higher (24%) than the share of Internet users above 40+ (9%). Also the share of teens that do not care about copyright (47%) is well above the share of users aged 40 and above (37%). This leaves only 29% of teenage downloaders that care whether music is copyrighted, compared to 54% of the 40+ group.

Again we find large differences between countries: In Germany almost two thirds of the digital music users care about copyright, in France about half of the users do, and in Sweden, Hungary, and the UK only about 35% care whether their downloaded music is copyrighted.

Table 5.3: Awareness of copyright (in % of digital music users)

	Do you care whether the music you download onto your computer is copyrighted or is this something you don't care much about?		
	I care if the music is copyrighted	This isn't something I care much about	I don't know exactly what copyright means
All	43	43	14
Germany	64	28	8
UK	35	51	14
Spain	42	38	20
France	53	35	12
Hungary	34	54	12
Netherlands	41	50	10
Sweden	35	46	19
Male	44	44	11
Female	42	41	17
10 – 19 years years	29	47	24
20 – 39 years	43	45	12
≥ 40 years	54	37	9
No work / student	37	44	19
Low-skilled prof.	47	42	11
High-skilled prof.	48	43	10
Frequent users	40	47	13
in % of digital music users n = 3982			

Source: INDICARE / Berlecon Research (2005)

High degree of insecurity about lawful use of digital music

There is quite a high degree of insecurity among digital music users about which usages of digital music are legal and which are not. For example, 20% of the users are not sure or think that it is illegal to make a private copy of a purchased CD or music file for themselves (see table 5.4). 59% are not sure or think that it is illegal to copy a purchased CD or music file for friends or family members.

The unclear treatment of private copying in most European copyright legislations might be reflected in these results. But also the undifferentiated criminalisation of Internet downloaders and copiers by anti-piracy campaigns might contribute to the significant uncertainty about legal issues. The highest level of legal uncertainty exists regarding the usage of P2P networks: Almost one third of the digital music users is not sure whether downloading or uploading of music via P2P networks is legal or not. Particularly older users are not informed about the lawfulness (or not) of P2P networks.

Table 5.4: Legal knowledge (in % of digital music users)

Do you think that it is legal to…				
	Legal	Illegal	Depends on the case	Not sure
Make a copy of a CD / file, which you bought, for yourself	73	11	7	9
Make a copy of a CD / file, which you bought, for your friends or family members	27	41	15	18
Play a file, which you bought, on different devices	81	3	6	10
Download music from P2P networks	22	30	17	31
Offer music, which you bought, on P2P networks	12	48	9	30
To remove electronic copy-protection from files / CDs, which you bought	7	72	6	15
in % if digital music users n = 3965				

Source: INDICARE / Berlecon Research (2005)

Few users are aware of or care about privacy issues of DRM

Privacy issues are often discussed in the context of DRM and consumer interests. We wanted to know whether digital music users are aware of potential privacy issues of DRM technology. The results depicted in figure 5.5 illustrate that of those respondents who have at least a basic knowledge of DRM, half do not know that DRM technology has the potential to monitor uses of digital content and to profile consumption behaviour. Another third either simply accepts or does not mind this privacy issue. Only 17% oppose DRM for this reason. Men are significantly better informed about the potential threat of DRM to privacy.

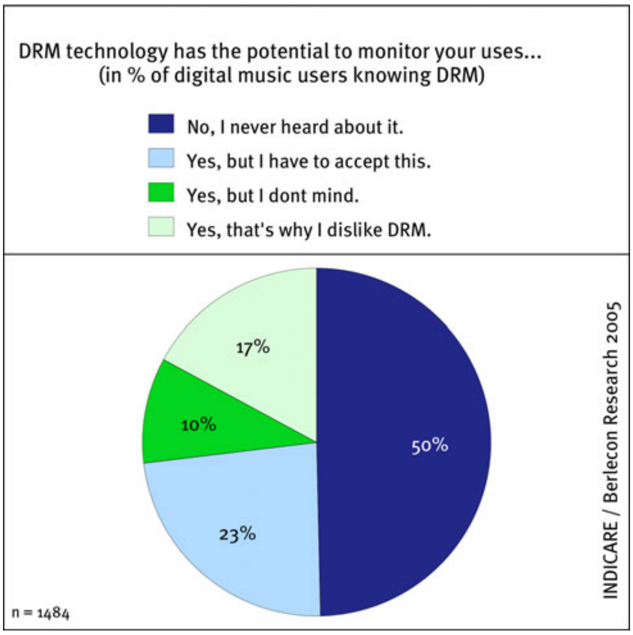
In Sweden and France, even three thirds were not aware of the ability of DRM technology to monitor and profile the consumption of digital content. The same applies to only 37% of the British and Spanish users.

Table 5.5: Awareness of privacy issues
(in % of digital music users knowing DRM)

	DRM technology has the potential to monitor your uses of digital content and to profile your consumption behaviour. When buying and consuming digital music are you aware of this privacy issue?			
	Never heard about it	Yes, but I have to accept this	Yes, but I don't mind	Yes, that's why I dislike DRM
All	50	23	10	17
Germany	48	21	6	25
UK	37	35	8	20
Spain	37	39	14	10
France	71	13	7	9
Hungary	40	24	14	22
Netherlands	49	18	12	21
Sweden	75	10	4	11
Male	45	23	10	22
Female	58	24	9	9
10 – 19 years	55	12	13	20
20 – 39 years	47	25	10	19
≥ 40 years	52	28	8	13
No work / student	53	17	11	19
Low-skilled prof.	49	29	10	12
High-skilled prof.	46	25	9	20
Frequent users	45	22	11	23
in % of digital music users knowing DRM, n = 1484				

Source: INDICARE / Berlecon Research (2005)

Figure 5.5: Awareness of privacy issues (in % of digital music users)



Intermediate conclusions

Despite the popularity of digital music in Europe, most digital music users do not know what DRM is, do not know or do not care about copyright and are not well informed about the legality of their actions with respect to digital music. Consumers are also not well informed about possible privacy issues of DRM. This holds especially true for young Internet users that are at the same time the most frequent users of digital music.

This lack of knowledge and awareness can have two consequences: First, it might result in illegal behaviour when using digital content. Second, when consumers do not have a basic understanding of the legitimate rights they have when using digital music, they will hardly be able to defend these rights against possible violations.

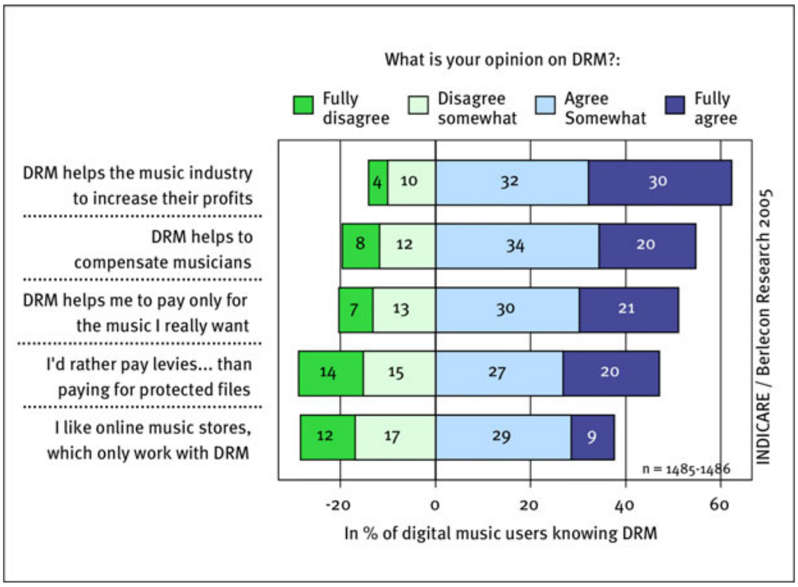
5.3 Opinion on DRM

Many users do not know what to think of DRM

What do consumers of digital music think of DRM – given they have at least heard about DRM before? Figure 5.6 gives an overview of this question.

Two thirds of the digital music users that know DRM agree to the statement that DRM helps the music industry to increase their profits. Compared to this, only half agree that DRM helps to compensate musicians for their creative work. Particularly in France the role of DRM to compensate musicians is recognised. 61% of the French users agree that DRM helps to pay musicians for their work, in Sweden only 45% do so.

Figure 5.6: Opinion on DRM (in % of digital music users knowing DRM)



The ongoing discussion on whether DRM should replace levies, was addressed by the statement "I'd rather pay levies for blank CDs and other storage media than paying for DRM-protected music files." Surprisingly, almost half of respondents would prefer to pay levies instead of paying for DRM-protected music files. As could be expected, this holds true particularly for frequent digital music users. At 53% the preference for levies is highest in France and Sweden.

One important argument in favour of DRM is that it enables consumers to pay only for the music they really want (e.g. only single tracks from an album). However, only a little more than half of the users agree to this argument. 61% of the users above 40 acknowledge this advantage of DRM, but only 47% of the teenagers. In France and Spain about 60% of users recognise this advantage of DRM, in Sweden only 36% do so (see table 5.6).

38% of the music users that have heard of DRM state that they like online music stores, which only work with DRM. Particularly older music users indicate that they like to purchase music from digital music stores and therefore accept DRM.

Table 5.6: Opinion on DRM (in % of digital music users knowing DRM)

	What is your opinion on Digital Rights Management (DRM)?				
	Helps to compensate musicians	Helps music industry to increase profits	Prefer pay levies for storage media	Helps me to pay only the music I really want	I like online music stores, which require DRM
All	55	62	47	51	38
Germany	58	65	50	57	37
UK	54	75	46	43	32
Spain	51	58	47	60	42
France	61	70	53	61	60
Hungary	58	61	39	50	33
Netherlands	55	57	46	46	34
Sweden	45	47	53	36	24
Male	56	69	50	54	39
Female	53	51	42	47	35
10 – 19 years	50	59	46	47	36
20 – 39 years	52	60	45	47	35
≥ 40 years	62	69	50	61	43
No work / student	53	61	50	48	33
Low-skilled prof.	53	62	48	56	41
High-skilled prof.	58	64	42	50	40
Frequent users	55	65	54	51	37

Answers counted: “fully agree” or “agree somewhat”, in % of digital music users knowing DRM
n = 1485 - 1486

Source: INDICARE / Berlecon Research (2005)

The recognition of DRM as a prerequisite for online music stores is by far highest in France, where 60% agree to the above statement. In Sweden, only 24% agree and 62% of the respondents did not have an opinion on this question.

Quite a significant share of digital music users – between one quarter and one third, depending on the statement – do not have an opinion on any of the quoted statements.

6 Frequent P2P users

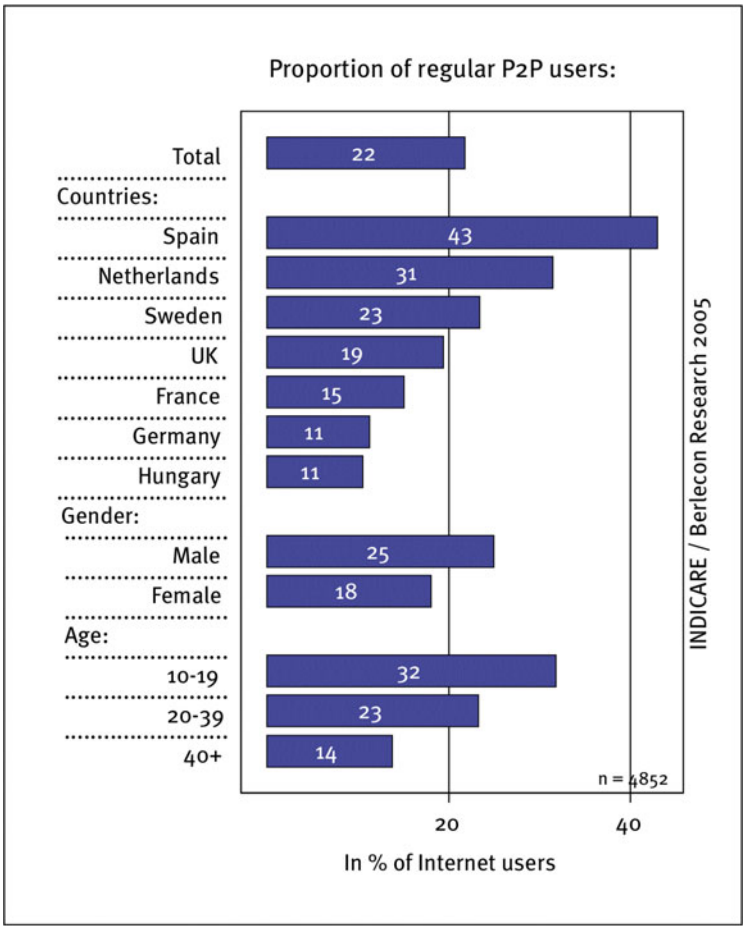
Frequent P2P users are typically teenage males

Frequent users of P2P networks are often in the focus of attention when the effects of digitisation on the music business are considered. P2P users are often stigmatised as “pirates” that break the law and hurt the interests of the music industry.

We wanted to know if this picture can be confirmed by our survey results and therefore analysed this user group in more detail. We define frequent P2P users as those that use P2P networks several times per month or more often.

Figure 6.1 confirms the common perception that frequent P2P users are predominantly teenagers. Spain and the Netherlands have the highest shares of frequent P2P users. Also, the share of males that use P2P networks frequently is clearly higher than the share of females. The share of frequent P2P users is highest in the group of Internet users that are still in education or have no work.*

Figure 6.1: Frequent P2P users



P2P users experiment with all different kinds of digital music

If we look at how frequent P2P users use digital music in general, we find that they do not only frequently use their computer and the Internet to download music files. They are also very active users of portable audio players. 68% use such a device, compared to 40% on average of all Internet users, and 26% consider using them. 33% of the frequent P2P users also use their mobile phones to listen to music, which again is clearly above average (21%), one third considers to do so in the future.

Quite unexpectedly, P2P users typically don't store massive amounts of music files on their computers. The majority of frequent P2P users (69%) have "only" between 10 and 500 files on their computers.

P2P users are also paying customers for the music industry

In addition, frequent P2P users actively use the Internet to discover new music. More than half of them download new music by known artists (56% compared to 44% on average) and music by unknown artists from the Internet (39% compared to 32% on average).

Our survey results show that P2P users are not just free riders. After discovering a new artist on the Internet, 60% subsequently bought a CD by this artist, 34% visited a concert, and 15% bought more digital music by this artist. These shares are only slightly below average and unveil that P2P users are also an interesting customer group for the music industry. Contrary to the common picture of "illegal file sharers" that do not want to pay for music, we find that an above average share of P2P users have purchased music from online music stores over the past 6 months (36% compared to 29% on average) and/or used subscription services (17% compared to 11%).

It is also interesting to see that their evaluation of online music stores and their willingness to pay a higher price for digital content with more flexible usage rights or the ability to transfer music to different devices does not differ significantly from the average user.

Most frequent P2P users do not care about copyright

A finding that fits the common picture of P2P file sharers is that an above average share of 57% does not care whether the music they download is copyrighted or not (compared to 43% on average).

Their level of knowledge about DRM and legal issues as well as their awareness of usage restrictions is not significantly different from that of the average user.

One result differs from the average, though: 31% of the frequent P2P users believe that downloading music files on P2P networks is legal (average: 22%), and 17% believe that offering own music files on P2P is legal (average: 12%). This result might be due to wishful thinking of P2P users.

In their opinion about DRM, P2P users do not differ much from the average. A somewhat higher percentage would prefer to pay levies for blank CDs and other storage media than paying for DRM-protected music files (56% compared to 47% on average).

7 Conclusions

A large share of Internet users has experience with digital music

The results of the INDICARE survey among 4852 European consumers show that large parts of the population have already gained first experience with digital music. 69% of all Internet users have experience with music on a computer and 40% use MP3 players. Particularly younger Internet users frequently use their computers or mobile devices to listen to music. But also the older age groups show strong interest in digital music and intend to try this new form of music in the future.

Survey results reveal, however, that digital music is not equal to downloads from the Internet. By far the most important source for digital music are CDs that consumers have either purchased themselves or CDs of family members and friends. Online music stores do not yet play a major role as a source for digital music: 29% of the European digital music users have obtained music from online music stores, but only 9% frequently use online music stores.

Information about DRM and copyright is urgently needed

With digital music being so popular, one would expect that consumers have at least a basic understanding of the legal and technical foundations of digital music.

Our survey results disclose, however, that the majority of digital music users do not have the basic knowledge that seems necessary to make informed decisions. The majority of users is not well informed about the legality of their actions with respect to digital music. More than half of the digital music users either do not care whether the music they download onto their computers is copyrighted or do not know exactly what copyright means. This holds true especially for young Internet users that are at the same time the most frequent users of digital music.

The survey results also illustrate that a very significant knowledge gap about DRM exists in Europe. 63% of the European users of digital music have never heard about Digital Rights Management, an additional 23% does not exactly know what DRM is.

It can be concluded that significant information efforts are needed to ensure that consumers have a basic understanding of DRM, copyright, and the legal foundations for the usage of digital music. Such understanding seems necessary not only to prevent illegal behaviour, but also to defend consumer rights against possible violations.

Online music stores have to enhance their information policy and customer care

The lack of information does not only concern digital music users in general but also users of online music store in specific. 79% of the users of digital music stores did not know whether the music they purchased was DRM-protected or not. In addition, most users did not know whether any usage restrictions applied. Of those that knew about usage restrictions, the majority did not know the details of the restrictions.

It can be concluded that the information policy of online music stores about the application of DRM systems and/or the application of usage restriction needs to be significantly enhanced. Online music stores that apply DRM technologies at least have to inform their customers that certain restrictions apply and how they are implemented. This is not only necessary for the sake of informed consumers. It is also necessary for the sake of satisfied customers, since a lack of knowledge about usage restrictions often results in problems when consumers want to use their purchased music files.

This is confirmed by survey results showing that about half of all digital music store users are not sure what they are allowed to do with the purchased content and have technical difficulties when using it.

Consumers are not willing to give up flexibility

The survey identifies device interoperability as the key demand of consumers. In addition, consumers frequently burn, share, and store music files. They will therefore hardly accept digital music offerings that do not support this behaviour. Commercial digital music offerings have to make sure that their applied DRM systems support these demands of consumers. Otherwise they might lose customers to services that allow, for example, the easy transfer of files between devices or the sharing with others.

Our survey results also confirm that consumers “don’t want all for free but they want value for money”. The majority of users is, for example, willing to pay for music files that offer them more flexible usage rights, the ability to transfer files between devices, and the ability to share. Obviously, users are not willing to give up their flexibility in the use of digital music, even if restricted content would be offered at half the price. It follows that DRM systems have to aim at supporting device interoperability and sharing features and apply relatively relaxed usage rules in order be accepted by consumers.

The Internet is an excellent tool to promote new music

Findings from the INDICARE survey also indicate that digital music on the Internet is an excellent tool for musicians and their labels to promote new works and foster sales. This is particularly true for less known musicians, since many digital music users discover new music and unknown artists over the Internet.

Even more interesting is that many Internet downloaders spend money on music after they have discovered new music: 64% of the digital music users who have discovered a new artist on the Internet have subsequently bought a CD by this artist, 31% have visited a concert, and 16% have bought more digital music by this artist. The music industry should, therefore, aim at making it easy for consumers to discover new music on the Internet, e.g. by supporting sharing and recommendation features.

Older usage groups offer potential for online music stores

An interesting finding of the INDICARE survey is that older users are a very interesting target group for the providers of digital music. While young Internet users are currently the most frequent users of digital music, older age groups show strong interest in using e.g. MP3 players in the future. Digital music users above 40 download music from P2P networks less often, but purchase music from online music stores as often as younger user groups do. More often than on average, older users spend money on digital music and CDs after having discovered new music.

The efforts of digital music stores should therefore not only focus on teenagers but particularly target older Internet users that are most inclined to spend money on new music. They typically care more about copyright and are better informed about DRM and legal issues than younger users.

Opinion on subscription services differs between countries and age groups

Subscription services are attractive to less than half of the users of online music stores. The opinion on subscription services differs quite considerably across countries and age groups. Subscription services are most attractive to Hungarian and French users. They are least attractive to teenagers.

We also find that the willingness to pay for music files that expire after a subscription period is limited: 80% would rather pay 1€ for a song that they can listen to for as long as they like than paying only 20 cents for a song that they can listen to for only a month. Accordingly, services where DRM technology makes songs expire after a certain subscription period are only attractive to a limited share of users. Providers of subscription services, therefore, carefully have to identify their specific target groups and pricing policies.

Frequent P2P users are also paying customers for the music industry

A more detailed analysis of frequent users of P2P networks reveals that the common perception of file sharers that generally do not want to pay for music is too simplified. Frequent P2P users are generally very active users of digital music, they use portable audio players or their mobile phone more often than the average Internet user does. And many of those who do not use those devices yet, consider doing so in the future.

We find that P2P users that have discovered new music on the Internet, subsequently buy CDs or purchase music from online music stores almost as often as the average digital music user does. The share of frequent P2P users that have bought music from online music stores or used subscription services over the past 6 months is even above average. We can conclude from these results that P2P users are not just free riders, but also an interesting target group for the music industry.

Highest share of frequent digital music users in Sweden

If we look at results on the country level, no consistent picture about trends in different countries emerges. Some selected results are nevertheless interesting to observe. The survey results reveal, for example, that the highest percentage of frequent digital music users can be found in Sweden. At the same time, however, Swedish Internet users have the lowest level of information on DRM and copyright.

Hungary has the highest share of users that know about DRM and has, at the same time, the lowest share of frequent P2P users. The highest percentage of frequent P2P users can be found in Spain and the Netherlands.

Internet users from Germany and the UK are most inclined to spend money on digital music: Germany and the UK have the highest share of online music store users and the highest share of users that bought digital music or CDs after they had discovered new music on the Internet.

8 Annex 1: Questionnaire

Introduction

Welcome to our latest survey.

This survey is part of the European research project INDICARE. We would like to ask you a few questions about the way you are using music on your computer or mobile devices, e.g. your mobile phone or MP3 player.

The aim of this survey is to better understand what consumers – that's you – want, how they behave and what they think about digital music and related technologies. By participating, you can help companies, government, and consumer interest groups to better meet your needs.

Participating in the survey will take about 15 minutes of your time. It goes without saying that your individual answers will be kept confidential. The research results will only be published in aggregated form (meaning: so-and-so many percent of Internet users...). Nobody will be able to figure out your individual responses.

The results of the survey will be made available to the public on the INDICARE website www.indicare.org, presumably in April.

Screener

What is your age?

- below 10 years
- 10 – 15 years
- 16 – 19 years
- 20 – 29 years
- 30 – 39 years
- 40 – 49 years
- 50 years and older

Are you ...

- Male
- Female

What is your highest educational degree?

- I have no degree / still going to school
- GCSE in 1-4 subjects or equivalent
- 5 or more GCSE or equivalent
- 2 or more GCE A Level or equivalent
- College/University degree

(Answer categories adjusted to country specifics)

Are you ...

- Working (Full time / more than 30 hours per week)

- Working (Part time / less than 30 hours per week)
- Not working / still a student

How often do you use the Internet or the World Wide Web? Do you use it for business or in your spare time?

- Several times a day.
- Daily.
- Several times a week.
- About once a week.
- Less frequently.

Experience with Digital Music

Have you ever…

- ...used your computer to play digital music files such as MP3 files or to rip CDs (transfer them into a file)?
- ...used your computer to listen to Internet radio (i.e. radio stations broadcasting over the Internet)?
- ...used a MP3 player to download, store or play digital music?
- ... used your mobile phone to download, store or play music files other than ringtones?

Answers:

- Yes, I do that frequently
- Yes, but not very often
- No, but I'll possibly do so in the future
- No, and I have no plans to

Why have you never used your computer or mobile phone to listen to music? (multiple answers possible)

- I don't know how that works
- It is illegal
- I don't have the technical equipment to do so
- It is too expensive
- I'm not very interested in music
- I just never found the time to do that
- Other reasons

Usage of Digital Music

Digital music files like MP3 files can be obtained from a variety of sources. Approximately, how often have you used the following sources over the past 6 months?

- Your own CDs as a source for copying or ripping them (transferring them into a file).
- CDs of family members and friends by copying or ripping them (transferring them into a file).
- P2P networks like Kazaa, WinMX, or eDonkey.
- Online music stores like iTunes, AOL Music etc.
- Monthly music subscription services like the NEW Napster 2.0.
- Other music-related web sites like musician's homepages or online music magazines.
- Email or instant messages you received with music files attached.
- A music download or streaming service for your mobile phone (NOT ringtones).

Answers:
- Weekly or more often
- Several times per month
- Less often
- Never

And how often have you over the past 6 months...

- Burned your own mixes to CDs?
- Shared music files with family members or friends?
- Shared music files with other people?

Answers
- Weekly or more often
- Several times per month
- Less often
- Never

Overall, how many music files do you store on your computer?

- None
- Fewer than 10
- 10-100
- 101-500
- 501-1000
- More than 1000

What type of music have you downloaded from the Internet over the past 6 months? (multiple answers possible)

- Music you've heard before by artists you were already familiar with.
- Music you didn't know by artists you were already familiar with.
- Music by artists you didn't know before.

Have you ever done the following after discovering a new artist on the Internet? (multiple answers possible)

- Downloaded more music by this artist.
- Bought digital music from this artist.
- Bought a CD by this artist.
- Visited a concert by this artist.
- Followed this artist in the media.
- Other

Did you ever have any of the following problems when downloading or buying music from the Internet? (multiple answers possible)

- Tracks were not full length, bad sound quality, or otherwise inferior.
- The service was not accessible / files could not be downloaded.
- I had problems with playing the songs on my computer.
- I had problems with forwarding songs to other computers or devices like MP3 players.
- I had problems with burning songs to CDs.
- Songs I was looking for were unavailable.
- I didn't know who to turn to when I needed help.
- I was not sure what I was allowed to do or not with the music I acquired.
- I had other technical difficulties.

- On P2P networks --> Often, Seldom, Never
- On online music stores or similar shops --> Often, Seldom, Never

Evaluating Digital Music

If you consider how you want to use MP3s and other digital music files, how much do you agree or disagree to the following statements?

- It is important to me that files can be transferred easily between different devices, e.g. PC, MP3 player, mobile phone.
- I want to pass music files on to my friends or family members.
- Listening to music is more important to me (e.g. via streaming) than storing them on any of my devices.
- I am afraid that my files will not be usable on devices I buy in the future.
- I want to sell my purchased music files that I don't like anymore to others.

Answers
- Fully agree
- Agree somewhat
- Disagree somewhat
- Fully disagree
- Don’t know / NA

You said that you have bought digital music in an online or mobile music store. Would you agree or not agree to the following statements?

- Online music stores offer a better selection of music than CD stores.
- Pre-listening to music in online music stores is more convenient than in CD stores.
- Recommendations of others (e.g. playlists) help me find the music I like.
- I find subscription services attractive (i.e. paying a monthly fee to listen to as much music as you like).

Answers
- Fully agree
- Agree somewhat
- Disagree somewhat
- Fully disagree
- Don’t know / NA

If you consider buying a piece of music in an online music store, which of the following alternatives A or B would you prefer?

- A) A song that you can only copy once and burn 3 times for 50 cents.
- B) A song you can do whatever you want with for 1€.

- A) A song that runs on only one device for 50 cents.
- B) A song that runs on any device for 1€.

- A) A song that you cannot share with others for 50 cents.
- B) A song that you can forward to your friends and family members for 1€.

- A) A streamed song (listening only once) for 1 cent.
- B) A downloaded song (you “own” it) for 1 €.

- A) A song without technical restrictions but with a watermark (it can be traced back if you use the song illegally) for 50 cents.
- B) A song without watermark and without technical restrictions for 1€.

- A) A song that you can only copy once and burn 3 times for 50 cents.
- B) A song without technical restrictions but with a watermark (it can be traced back if you use the song illegally) for 1€.

- A) A song that you can only listen to for a month for 50 cents.
- B) A song that you can listen to as long as you like for 1€.

How difficult was this decision to you?

- Please use a scale from 1 to 10, where 1 means “the decision was very easy for me” and 10 means “the decision was very difficult for me”. You can use the numbers in between to graduate your opinion.

Digital Rights Management

Do you care whether the music you download onto your computer is copyrighted or is this something you don’t care much about?

- I care if the music is copyrighted.
- This isn’t something I care much about.
- I don’t know exactly what copyright means

Have you ever heard of Digital Rights Management (DRM)?

- No
- Yes, but I don’t know exactly what it is.
- Yes, and I know approximately what it is.
- Yes, and I know quite well what it is.

When you last bought music on the Internet or on your mobile phone, do you know if it was protected by a DRM system?

- Yes, it was protected.
- No, it was not protected.
- I don’t know if it was protected or not.

Was the usage of the music restricted, e.g. by restricting the number of times you can burn it to CD?

- Yes, but I don’t know exactly how much it was restricted.
- Yes, and I do know the restrictions.
- I don’t know if it was restricted or not.

Do you think that it is legal to…

- Make a copy of a CD / file, which you bought, for yourself.
- Make a copy of a CD / file, which you bought, for your friends or family members.
- Play a file, which you bought, on different devices.
- Download music from P2P networks.
- Offer music, which you bought, on P2P networks.
- To remove electronic copy-protection from files / CDs, which you bought.

Answers:
- Legal
- Illegal
- Depends on the individual case
- Not sure

What is your opinion on Digital Rights Management (DRM)?

- DRM helps to compensate musicians for their creative work.
- DRM helps the music industry to increase their profits.
- I'd rather pay levies for blank CDs and other storage media than paying for DRM-protected music files.
- DRM helps me to pay only for the music I really want (e.g. only single tracks from an album).
- I like online music stores, which only work with DRM.

Answers:
- Fully agree
- Agree somewhat
- Disagree somewhat
- Fully disagree
- Don't know

DRM technology has the potential to monitor your uses of digital content and to profile your consumption behaviour. When buying and consuming digital music are you aware of this privacy issue?

- No, I never heard about it.
- Yes, but I have to accept this when I buy things on the Internet.
- Yes, but I don't mind.
- Yes, that's why I dislike DRM.

Thank you very much for your participation!