

Digital Video Usage and DRM

Results from a European Consumer Survey

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The Informed Dialogue about Consumer Acceptability of DRM Solutions in Europe



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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>

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. INDICARE’s mission is to raise awareness about consumer and user issues of Digital Rights Management (DRM) solutions.

The goal of the two INDICARE consumer surveys 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. The first INDICARE survey was published in May 2005¹ and covered digital music usage and DRM. The current survey’s focus is on digital video content: the extent to which European Internet users already use video content from the Internet, the channels through which they obtain it, their willingness to pay for certain usage rights, as well as their knowledge and attitude towards DRM. Included in the survey is the usage of digital video files from various sources. Explicitly excluded are watching videos from physical media such as DVDs or Video CDs on the computer and video games.

Given the low market penetration of commercial digital download services to date and the large availability of free video content on the Internet, we did not differentiate explicitly between licensed and unlicensed digital video content. We believe that looking at current usage behaviour gives rather clear ideas about what consumers will expect from future commercial offerings.

The study is also designed to show that the markets for digital music and digital video content are comparable only to a limited degree. While the type of music concerned (e.g. pop or classical music) only has a limited impact on usage behaviour, different types of video content (e.g. movies or news and sports) are associated with very different consumption habits and usage patterns. This diversity will lead to a more complex ecosystem on the side of distribution, access as well as usage rights.

The resulting complexity will also affect the way DRM protection is designed, applied and accepted, as the number of technological challenges (e.g. interoperability) is likely to increase.

¹ Dufft, Nicole, et. al.: Digital music usage and DRM – Results from a European consumer survey. Online available at: <http://www.indicare.org>

1.2 Methodology

The survey was conducted among 2,731 Internet users in five European countries: Spain, Germany, France, the United Kingdom (UK) and Sweden. These countries account for about 64% of GDP and 55% of the total population in the 25 member states of the European Union.²

The survey was conducted on the Internet by the German subsidiary of the French consumer survey institute Ipsos in January 2006. A representative sample was selected from an online panel of Internet users. In a first step, Internet users that already have used digital video content were identified. Only these users were then asked detailed questions about the way they use digital video content.

Results are representative for all Internet users from age 15 in the respective countries with regard to age, gender, as well as Internet usage frequency (basis: Ipsos-Capibus™, 2005).

Due to the large number of respondents, the results of this survey are statistically very robust. However, some statistical uncertainties remain, which have to be kept in mind when interpreting the survey results: with a probability of 95%, the actual share of digital video users can deviate up to 2 percentage points from the displayed results (standard deviation). Differences between countries below 6 percentage points for digital video users have to be interpreted with caution.

1.3 Questionnaire

The questionnaire was designed to cover four areas:

- In the opening part, we wanted to find out if consumers have ever watched non-physical digital video content on their computer or portable player. We were also interested in the reasons why consumers chose not to watch digital video files.
- The second part asked consumers to reveal their usage habits, preferences and expectations in more detail. Another objective was to find out about content sources. Here, it was especially important to differentiate between content types.
- The third part was designed to provide information about usage rights consumers are willing to pay for when purchasing digital video content. This is important, as DRM systems should be laid out to support these needs and preferences.
- The final part specifically focused on awareness of copyright, DRM and related privacy issues. We also wanted to find out under which circumstances consumers are supportive of DRM.

In order to avoid biased answers, our intention to learn about DRM was not explicitly mentioned. Accordingly, DRM-related questions were only asked at the end of the questionnaire. The full questionnaire is included in the Annex section of this report.

² Eurostat, <http://epp.eurostat.ec.eu.int>

2 Experience with digital video content

2.1 Users of digital video content

22% of European Internet users frequently watch digital videos on their computer

One objective of this study was to obtain facts about the extent to which Internet users in Europe already use digital video content, i.e. how many of them stream, download and watch video files (e.g. music videos, movie trailers or full-length videos) on their computers or mobile devices. Explicitly excluded from the survey are video games, the playing of physical media such as DVDs or using the computer as TV receiver.

Compared to music, the usage of digital video content is still at a relatively early stage in Europe: on the one hand, many Internet users (61%) have gained first experiences with watching digital video content on their computer. This can include, for example, watching short video clips from company websites. On the other hand, only less than a quarter (22%) watch digital video content *frequently* (see figure 2.1). This compares to 34% of European Internet users that frequently listened to digital music on their computer in 2005.³

Downloading and mobile video not yet widespread, but have future potential

Survey results also show that the downloading of digital video content is less widespread than simply watching streams: only 38% of all Internet users have used their computers to *download* video content (e.g. movies or TV shows); 14% say that they do so frequently. 24% do not yet download video content from the Internet but plan to do so in the future, which is a first indication that there might exist commercial potential for video download services.

Portable players such as mobile phones, the video iPod or PlayStation Portable, are used by 22% of the Internet users to watch or download digital video content (compared to 40% that used MP3 players in 2005 and 21% that used mobile phones to listen to music). However, almost half of the users that watch or download mobile video content say that they do so frequently (10%). An additional 24% show interest in watching mobile video content in the future.

³ While results cannot be directly compared due to different countries covered in the two surveys and a slight variation in the lower age groups, the figures still provide for quite a good overview of Internet users in the EU.

Figure 2.1: Experience with digital video content*

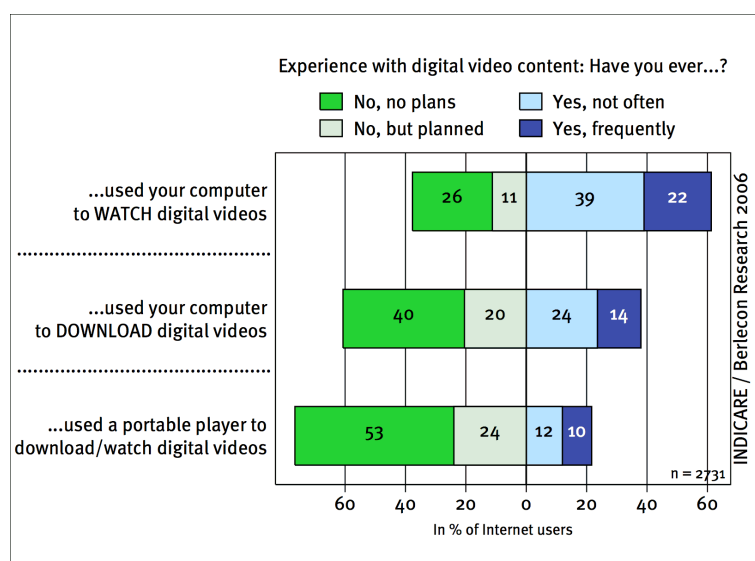


Table 2.1: Experience with digital video content

	Have you ever...		
	Used your computer to watch digital videos? (excl. playing DVDs or using PC as TV receiver)	Used your computer to download digital videos?	Used a portable player (e.g. mobile phone, video iPod) to watch / download digital videos?
All	61	38	22
Spain	74	60	27
Germany	47	23	9
France	64	35	26
Sweden	67	38	26
UK	53	34	20
Male	66	46	24
Female	56	29	19
15 – 19 years	72	51	32
20 – 39 years	69	44	26
≥ 40 years	51	28	15
Heavy Internet *	69	46	23
Light Internet **	48	23	18

* daily Internet users, ** weekly or less frequent Internet users
 Answers counted: "yes, I do that frequently" or "yes, but not very often"
in % of Internet users
 n = 2,731

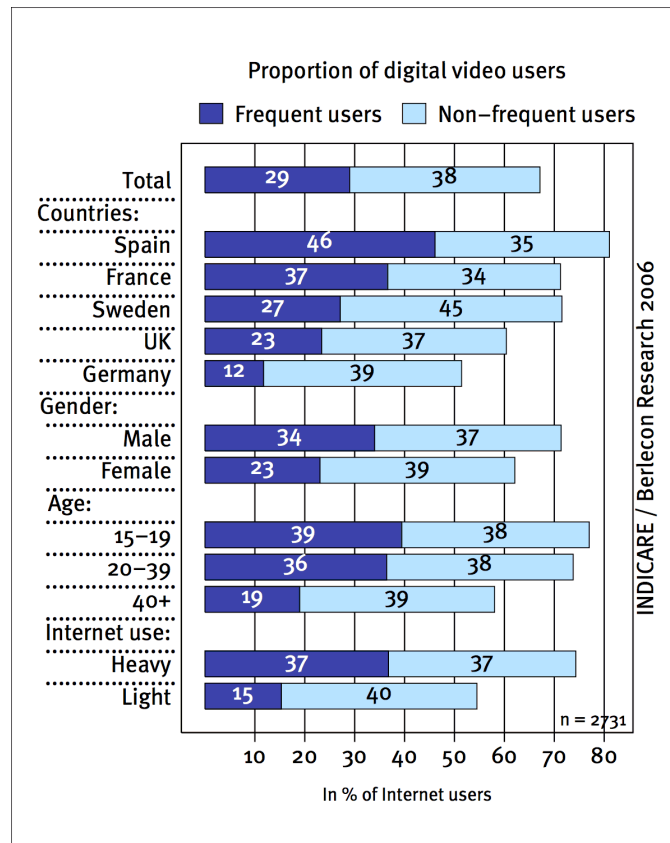
Source: INDICARE / Berlecon Research

* Deviations from 100% in the figures displayed result from "don't know / no answer".

Frequency of digital video usage depends on Internet usage intensity

Figure 2.2 displays the breakdown of frequent digital video users, i.e. those respondents that use their computer and/or portable player to watch and/or download digital video content frequently, compared to those that only do so every once in a while. While the share of non-frequent digital video users is similar among countries and age groups, significant differences exist in the proportion of frequent users.

Figure 2.2: Proportion of digital video users



In Spain, almost half of all Internet users frequently watch or download digital videos. But the same holds true for only 12% of German Internet users. Males watch or download digital videos more frequently than females. And most frequent users are below 40 years of age, with no significant differences between teenagers and 20- to 39-year-old Internet users. This is in contrast to digital music, where a more clear-cut focus on teenagers was observed.

Not surprisingly, figure 2.2 also indicates that there is an apparent relationship between Internet usage and digital video usage: 37% of the heavy Internet users (daily or several times a day) are frequently consuming digital videos. The same holds true for only 15% of light Internet users (weekly or less often). This relationship can to some extent explain the large differences between countries, as the intensity of Internet usage varies quite significantly between the countries covered (see Table 2.2).

Table 2.2: Breakdown of Internet population in EU countries

	Spain	Germany	France	Sweden	UK
Internet users in % of total population	36	54	48	72	57
Breakdown in % of all Internet users:					
Male	60	52	53	55	52
Female	41	48	47	45	48
15 – 19 years	11	13	9	10	10
20 – 39 years	51	39	53	39	43
≥ 40 years	38	48	38	51	47
Heavy Internet *	74	46	73	67	59
Light Internet **	26	54	27	33	41

* daily Internet users, ** weekly or less frequent Internet users

Source: Ipsos-Capibus™, 2005

Differences between countries stem from differences in Internet population and Internet usage intensity

Spain's high proportion of frequent digital video users, for example, can partly be attributed to a high proportion of heavy Internet users there. We have to keep in mind, however, that digital video usage is not *generally* widespread in Spain, but only among those that use the Internet. And Spain has only a comparably low share of Internet users in percent of total population. Only 36% of all Spanish consumers use the Internet, but 74% of these are daily users.

Germany, in contrast, has a larger share of Internet users in percent of the total population. But among the Internet users, there is a larger share of light users. The low share of heavy Internet users is reflected in the low percentage of frequent digital video users. In particular *mobile* video usage is considerably lower in Germany than in other countries (see Table 2.1).

Differences in Internet usage intensity also exist between age groups, but to a lower degree than between countries: 59% of the 15- to 19-year-old, 63% of the 20- to 39-year-old, and 66% of the above 40-year-old Internet users can be defined as heavy – i.e. daily – Internet users. This partially explains the observed differences in the frequency of digital video usage between age groups.

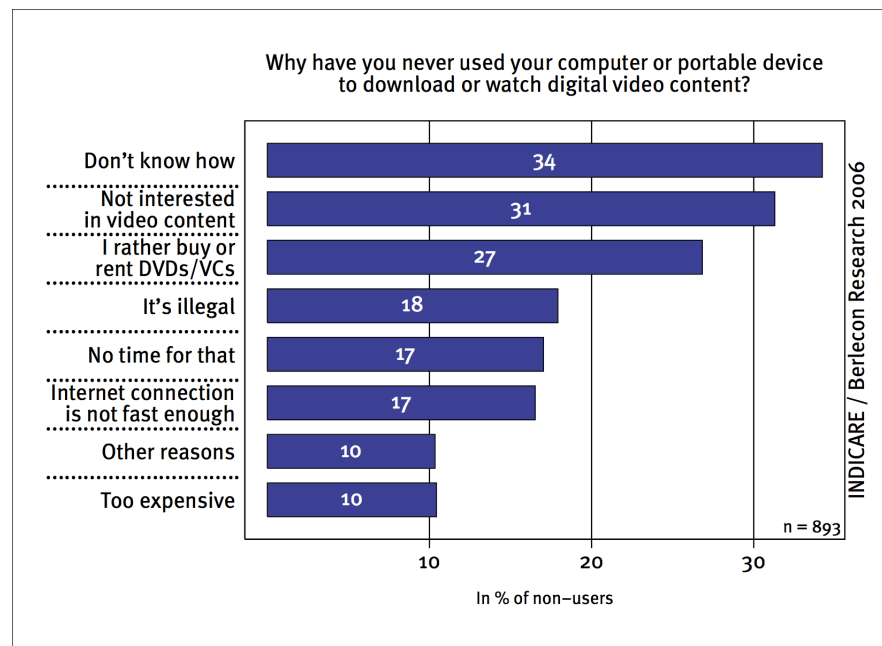
2.2 Reasons for not using digital video content

Particularly light Internet users do not know how digital videos can be used

The main reasons why Internet users hesitate to download or watch digital videos is a lack of knowledge and awareness about products and services related to digital video content. About one third of all Internet users say that

they do not know how to use digital videos (see figure 2.3). Another third is simply not interested in video content. Table 2.3 shows that knowledge about how computers or portable devices can be used for digital video consumption is clearly related to the intensity of Internet usage: only 27% of the daily Internet users, but 42% of the weekly or less frequent internet users do not know how to use digital video services.

Figure 2.3: Reasons for not using digital video content



Another important reason for not using digital video files is that respondents rather buy or rent DVDs or pre-recorded videotapes.

Slow Internet connections are not seen as a major reason for not watching or downloading video content, with some differences between countries (see table 2.3). Germany's low broadband penetration rate (compared to the UK, France, and Sweden⁴) is reflected in a comparably high share of respondents stating that their Internet connection is not fast enough (23%).

Another interesting finding is that price is not perceived as an important reason for refraining from watching or downloading video content. Only 10% say they have never used their computer or portable device to download or watch digital video content because it is too expensive. This might partly be due to the fact that they do not know about prices of digital video services. Another reason is that many popular types of video content are offered free of charge on the Internet, as for example movie previews and advertisement (see also section 3.1 below).

Some variations can be found in the results for teenagers: a higher percentage of teenagers is interested in video content, but lacks a fast

⁴ According to the latest available OECD broadband statistics of June 2005, Sweden had 16.5, UK 13.5, France 12.8, Germany 10.2 and Spain 9.3 broadband subscribers per 100 inhabitants. Among the countries polled, only Sweden, the UK and France are above OECD average.

Internet connection and/or thinks that digital video content is too expensive.

Table 2.3: Reasons for not using digital video content

Why have you never used your computer or portable device to download or watch digital video content?								
	I don't know how that works	I'm not interested in digital video content	I rather buy or rent DVDs / VCs	It is illegal	I never found the time	My Internet connection is not fast enough	Other reasons	It is too expensive
All	34	31	27	18	17	17	10	10
Spain	33	18	24	13	22	13	16	2
Germany	43	36	33	18	16	23	9	16
France	20	22	24	29	13	16	12	8
Sweden	41	41	26	26	10	15	13	9
UK	30	31	23	7	23	12	5	10
Male	34	29	26	14	16	18	13	9
Female	34	33	27	22	18	15	8	11
15 – 19 years	36	23	27	31	28	32	7	33
20 – 39 years	39	22	28	22	19	15	12	11
≥ 40 years	31	38	26	14	14	16	10	7
Heavy Internet*	27	32	28	19	18	16	10	12
Light Internet**	42	31	26	16	16	17	11	9

* daily Internet users, ** weekly or less frequent Internet users
in % of digital video non-users
n = 893

Source: INDICARE / Berlecon Research

Key findings _ Chapter 2

- Many Internet users (61%) have gained first experiences with watching digital video content on their computer. However, only less than a quarter watches digital videos frequently. This compares to 34% of European Internet users that frequently listened to digital music on their computer in 2005.
- Downloading video content from the Internet is not yet very common: 38% of all Internet users have tried to download content, but only 14% do so frequently. The fact that a quarter of all Internet users show interest in downloading video content from the Internet in the future indicates that there is potential for video download services.
- Mobile video content does not play an important role to date. However, two results might point towards commercial potential for mobile offerings: first, a comparatively high share of mobile video users frequently consumes video content on the go (once tried, they stick with it). Second, almost a quarter of all Internet users – younger as well as older ones – are interested in using mobile video content in the future.
- Lack of knowledge and awareness are the most important reasons for not consuming digital video content. Insufficient bandwidth and high costs are currently not perceived as important barriers – except in Germany.

3 Usage of digital video content

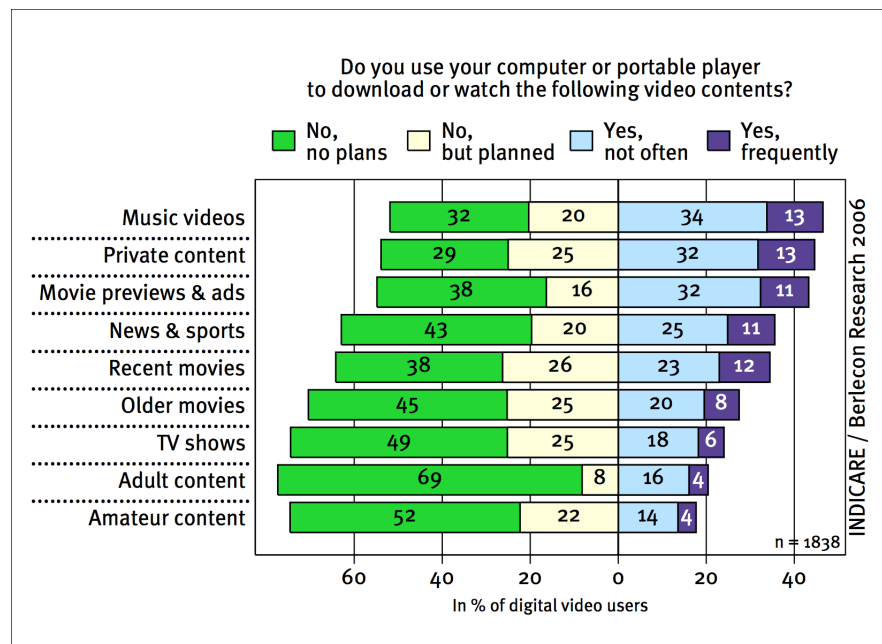
3.1 Types of digital video content

Music videos, private content and movie previews / advertisement currently most important content types

Table 3.1 shows the types of video content users download or watch on their computer or portable player. Music videos, private content, as well as movie previews and advertisements are currently the most frequently used content categories.

Music videos are watched and/or downloaded by almost half of all digital video users, 13% consume digital music videos frequently. Hardly surprising, music videos are particularly popular among younger users: 26%* of the teenagers watch or download digital music videos frequently. The share of older Internet users (above 40 years) consuming digital music videos is at 35%, of which 6%* watch them frequently (see table 3.1). There are several possible explanations for the high popularity of digital music videos. First, traditional music TV channels decided to shift their focus away from being broadcast distributors of music videos some time ago. Second, there is some rise in popularity of Internet outlets by traditional broadcasters (e.g. mtvU) and community-based platforms (e.g. MySpace), which feature musical content. As a final driver, new devices for downloading and watching digital music videos (e.g. video iPod, PlayStation Portable) are gaining popularity.

Figure 3.1: Types of video content



* Numbers marked with an asterisk do not appear in figures or tables.

Private content is the second most important content category people currently use on their computer. Private content is recorded for family members and close friends, e.g. videos of family events or holidays and other homemade productions. An additional 25% show interest in using private content. In contrast to music videos, private content is particularly popular among older user groups. Teenagers are presently the least active users and also the least interested in using private content in the future. The current focus of private content usage is most likely on producing, editing, and watching videos on the computer, not on downloading. In the U.S., however, platforms were springing up in 2005 offering the distribution and sharing of private content (e.g. YouTube, Veoh, Brightcove). Such services could also become of interest in Europe.

Movie previews and advertisements as content categories are surprisingly popular as well. They are probably often a first way of trying out digital video content. But their high popularity also shows that consumers are open for and actively choose to watch smart and entertaining advertisements. This result implies that the Internet is indeed a very important channel for marketers to place video commercials. Consumers are opposed, however, to being “force-fed” commercials, as we will see below (see section 4.1).

In the age group above 40, news and sports are the second most popular content category. However, due to a comparably low interest among teenagers, this category only ranks fourth overall. 59%* of teenagers neither currently use digital video content in this category nor plan to do so in the future.

High potential interest in watching digital movies and TV shows

About one quarter of digital video users indicate that they would be interested in watching or downloading movies and/or TV shows in the future. This indicates that there is indeed considerable potential for offerings of online digital movies and TV shows, even though these categories are not yet overly popular.

Only 20% of the video users say that they watch or download adult content and a mere 8% signal interest in this content category. This low result contrasts with appraisals (e.g. from EITO) that estimate Western European revenues from online video in adult entertainment (€60m) to outplay online video revenues from sports (€47m), movies (€15m), and music videos (€12m) in 2006.⁵

Amateur content such as blogs and podcasts are not very widespread to date and currently form the least important content category. More than half of the users also have no plans to consume amateur content in the future. And a comparably high share of 8%* of “don’t know / no answer” in this category indicates that many digital video users in Europe do not know exactly what amateur content actually is. This lack of knowledge and interest might be

* Numbers marked with an asterisk do not appear in figures or tables.

⁵ European Technology Observatory 2005, based on estimates and projections.

⁶ Internet Protocol Television, where content is delivered using the Internet Protocol over a broadband connection.

due to the fact that in contrast to the U.S., no European video blogs or podcasts have become very famous until now (such as Rocketboom or TikiBar TV in the U.S.). The low current importance of amateur content contrasts the high attention that this type of content is attracting in the media at present.

Table 3.1: Types of digital video content

Do you use your computer or portable player to download or watch the following video contents?									
	Recently released movies	Older movies	TV shows	Music videos	Adult content	News & sports	Previews & ads	Amateur content	Private content
All	34	27	24	47	20	36	43	18	45
Spain	63	51	37	61	23	40	46	28	57
Germany	13	11	9	29	17	18	39	10	33
France	32	23	20	48	19	35	46	17	51
Sweden	30	24	22	39	21	41	40	15	42
UK	23	18	27	49	22	39	45	14	34
Male	37	30	27	49	30	41	44	21	45
Female	31	24	20	44	7	28	42	13	44
15 - 19 years	40	25	27	65	13	22	37	20	37
20 - 39 years	39	32	27	51	24	36	50	20	47
≥ 40 years	27	22	19	35	19	40	37	14	44
Heavy Internet*	38	30	27	50	23	41	49	21	47
Light Internet**	26	21	17	39	15	21	29	10	38
Frequent video***	50	41	36	63	30	45	55	28	53

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users

Answers counted: "yes, I do that frequently" and "yes, but not very often"

in % of digital video users

n = 1,838

Source: INDICARE / Berlecon Research

Some significant differences in the popularity of content types can be observed between countries: In Germany, for example, previews and advertisements are the most common form of digital video content, followed by private content. Recently released movies are watched and/or downloaded by only 13% of German digital video users. This is in sharp contrast to Spain, where recently released movies are the most important content category, consumed by 63% of the users.

The UK is one of the oldest IPTV⁷ markets in Europe ("Homechoice" already started in 1992⁸), and also displays an above average share of consumers

⁷ With Internet Protocol TV (IPTV) digital content is delivered using the Internet Protocol over a broadband connection.

⁸ Cf. BBC News: TV's future down the phone line, March 14, 2005.

that watch or download digital TV shows. But overall, digital video usage is not particularly high in the UK (also compare results from the UK in table 2.1). This shows that technology is only one of the necessary factors for the success of digital content offerings.

3.2 Sources for digital video content

Company websites, ripped DVDs and P2P most important sources

Looking at the sources of digital video content reveals that company websites, ripped DVDs and P2P networks are most frequently used to obtain digital video files (see figure 3.2).

Table 3.2: Sources for digital video content

Are you using the following sources to obtain digital video content?									
	Own DVDs (ripped)	DVDs of family (ripped)	P2P networks	Download portals (VoD)	Mobile operator	TV station website	Company websites (previews, podcasts ads)	Video blogs / podcasts	Other sources
All	37	39	36	18	13	21	42	14	17
Spain	50	53	67	21	19	22	50	22	24
Germany	24	22	11	5	6	23	35	7	9
France	39	41	32	21	10	17	40	14	14
Sweden	38	46	26	17	15	21	44	11	22
UK	23	25	31	19	13	23	39	11	12
Male	38	39	40	21	14	23	44	15	19
Female	35	39	30	13	12	18	40	12	14
15 - 19 years	35	44	43	19	16	18	37	17	17
20 - 39 years	39	40	41	19	14	21	47	16	19
≥ 40 years	34	35	26	15	12	21	39	11	14
Heavy Internet*	41	41	40	20	14	24	48	17	20
Light Internet**	27	33	25	11	10	13	28	7	11
Frequent video***	46	50	52	27	19	30	53	24	27

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users

Answers counted: "yes, I do that frequently" and "yes, but not very often"

in % of digital video users

n = 1,838

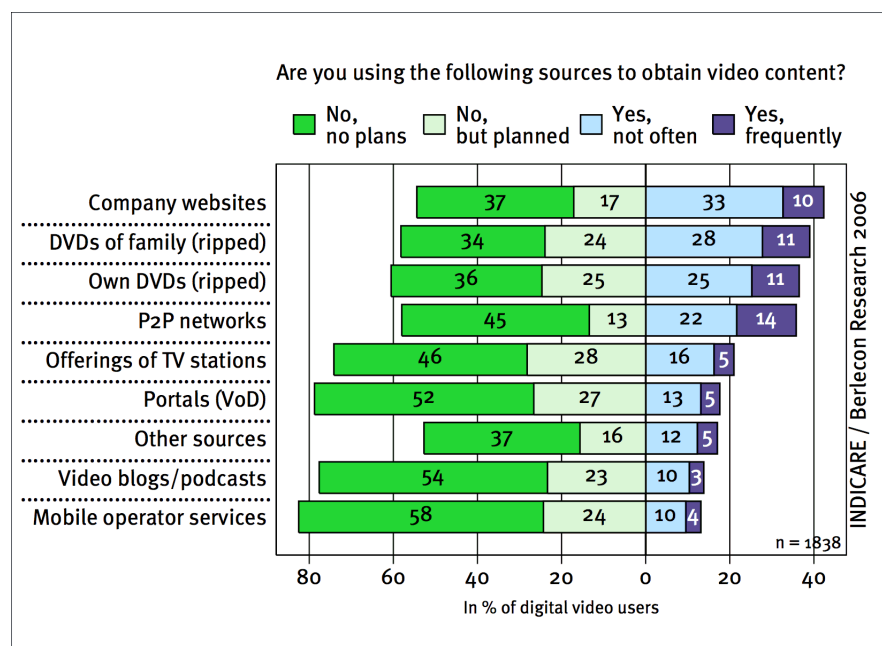
Source: INDICARE / Berlecon Research

Company websites are accessed to watch movie previews or advertisements by 42% of digital video users. This underlines the importance of these content types as found in section 3.1 above. It illustrates once again that smart and entertaining video commercials and movie previews can very efficiently be placed on the Internet to reach potential customers. The numbers also illustrate that consumers seem to prefer actively pulling

advertisement from the Internet instead of being pushed into commercials (also compare section 4.1).

The high share of video users ripping (transferring into files) their own DVDs or those of friends and family is in line with findings from the first INDICARE consumer survey, which showed that ripping CDs is the most important source for digital music (77% of all digital music users rip CDs). However, the strong result for digital videos is somewhat surprising, considering that it requires more sophisticated skills and tools to rip DVDs compared to ripping music CDs. We can expect that the ripping of DVDs will increase further, since about a quarter of all video users say that they plan to do so in the future.

Figure 3.2: Sources of digital video content



While the usage of P2P networks for downloading video content is significantly lower than for downloading music (36% compared to 51%), it reaches considerable dimensions in individual countries. In Spain, 67% of the digital video users access P2P networks. In Germany, only 11% use P2P networks, which reflects results from IFPI's annual consumer study on burning⁹: 14% of German users download movies from P2P networks. Overall, the percentage of users that plan to use P2P networks in the future is at "only" 13%.

Future interest in using download portals, offerings of TV stations and mobile operator services

One reason for the popularity of P2P networks might be that licensed download platforms for digital video content are rather rare in most European countries to date. Only 18% of digital video users have obtained video content from download portals, and 13% from mobile operator

⁹ Online available at: <http://www.copy-control.de/wirtschaft/wirtschaft-402.htm>

services. But 28% would be interested in downloading from commercial portals, with 24% of video users considering mobile operator services to get content in the future.

Similarly, there appears to be untapped potential for TV stations: only 21% of the digital video users navigate to TV stations' websites to watch or download digital video content at present, but 27% are interested in such offerings in the future. These results are in line with section 3.1 above, which shows high interest in watching or downloading movies and/or TV shows.

Also the results for blogs and podcasts as sources for digital video content are in line with those from section 3.1: only 14% use these (mostly) amateur sources today to obtain video content, which indicates that the subject may currently be over-hyped. At the same time, there is a quite significant share of current non-users that plan to use blogs and video podcasts in the future (23%).

Country differences depicted in table 3.2 largely reflect differences in the intensity of Internet usage and the frequency in digital video usage in general. Some individual results might be noteworthy: in Sweden, for example, mobile operator services are used significantly more than in other European countries polled, although 98% of its territory has mobile 3G coverage (i.e. mobile broadband) and mobile phone market penetration is at 110%¹⁰ (i.e. number of units used exceeds the country's number of inhabitants).

3.3 Local storage of digital video content

Few users store large numbers of video files on their devices

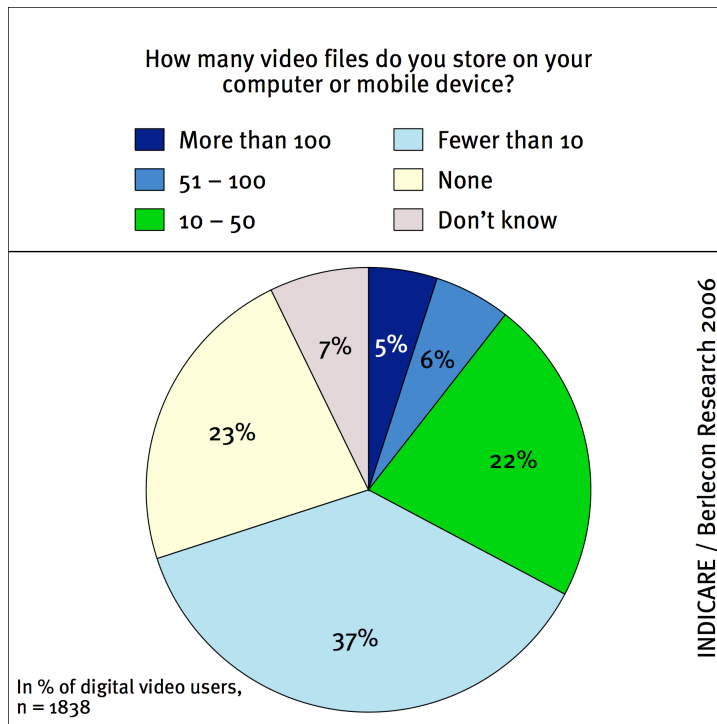
Survey results illustrated in figure 3.3 show that local file storage is far less important for digital video content than is the case with digital music: 72% of the digital music users (but only 33% of digital video users) keep more than 10 music or video files respectively on their devices. This lower inclination to store video files might be due to the higher storage space that a single video file requires. At the same time, however, the hard-drives of computers are usually equipped with large amounts of storage today and additional storage space is inexpensive to purchase.

Among the frequent users local storage is somewhat more common: 56%* of the frequent digital video users have more than 10 files stored locally. In Spain the high share of users that store video files (59%* of users have more than 10 video files stored on their computer) mirrors the high percentage of frequent digital video users and the high popularity of ripping DVDs or downloading from P2P networks in this country.

¹⁰ Cf. EE Times: Mobile TV stalls in Sweden, May 12, 2005.

* Numbers marked with an asterisk do not appear in figures or tables.

Figure 3.3: Local storage of digital video content



3.4 Stimulation for downloading and watching

Demand for “follow-up” content exists

We also wanted to find out what stimulated video users to download and/or watch a specific digital video. As can be seen in figure 3.4, “traditional” promotion channels such as recommendations from friends or the media and previews or trailers on the Internet are the most important stimuli for consuming digital videos.

Figure 3.4: Stimulation for downloading and watching

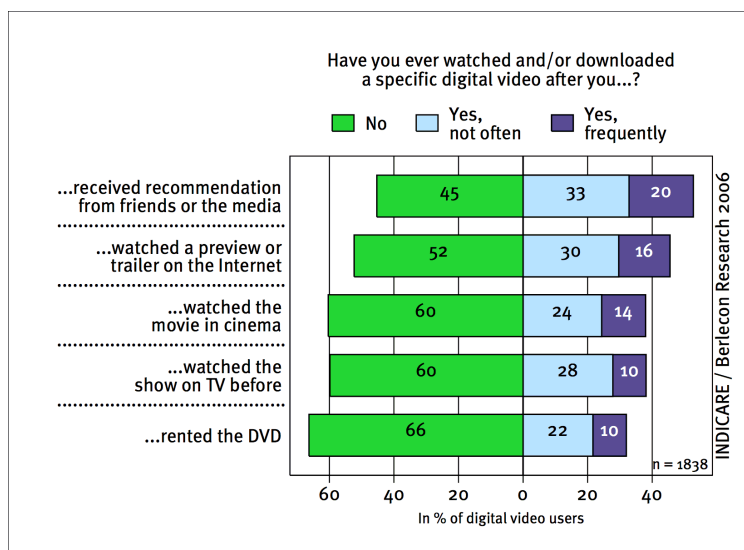


Figure 3.4 also shows that a significant share of consumers (38%) wants to watch or download digital video content they had previously watched in the cinema or on TV. The same is true to a lower degree for content that users had already watched on rented DVDs (32%). Particularly teenagers are inclined to obtain the digital version of a specific video via the Internet, which they already consumed through other channels. These results indicate that digital channels not necessarily “cannibalize” but might actually complement traditional channels.

Indeed there seems to exist a potential for exploiting the commercial value of movies and TV shows in different stages of their life cycle. But there are currently very few commercial services and arrangements on the market that serve this kind of “follow-up” demand.

Table 3.3: Stimulation for downloading and watching

	Does it happen that you download the respective digital video or watch it via Internet after one or more of the following activities?				
	Watched movie in cinema	Rented the DVD	Watched preview or trailer	Recommendation from friends or media	Watched the show on TV before
All	38	32	46	53	38
Spain	63	51	66	76	58
Germany	16	13	23	33	20
France	39	32	46	52	30
Sweden	30	28	39	48	33
UK	32	27	44	46	42
Male	41	34	49	58	43
Female	34	30	41	46	32
15 - 19 years	48	43	48	56	43
20 - 39 years	43	35	50	58	43
≥ 40 years	29	24	39	45	30
Heavy Internet*	42	34	50	57	42
Light Internet**	27	26	35	43	29
Frequent video***	53	45	61	70	52

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users
 Answers counted = “Yes, I do that frequently” and “Yes, but not very often”
 in % of digital video users
 n = 1,383

Source: INDICARE / Berlecon Research

Key findings _ Chapter 3

- Looking at the types of video content European Internet users are consuming shows that there is not *the* single “killer content”. Rather, users are experimenting with different types of content. Music videos are the most popular content category at present, closely followed by private content (e.g. family videos) and movie previews / advertisements.
- Similarly, there is no single most important channel for obtaining digital video files. Instead, the sources are rather diverse, with company websites being the most important one, followed by ripped DVDs and P2P networks.
- P2P networks play a less prominent role as a source for digital video than is the case with digital music (36% vs. 51% for music). But they have reached a very significant share in certain countries (e.g. 67% of digital video users in Spain compared to only 11% in Germany).
- The high popularity of movie previews and advertisements offered on company websites shows that consumers actively choose to watch smart and entertaining advertisements. This emphasizes, on the one hand, that the Internet can be a very efficient channel for marketers (particularly for the movie industry) to place commercials. On the other hand, consumers increasingly seem to prefer pull (as opposed to push) advertisement.
- Service offerings by download portals, mobile operators or TV stations are currently not widely utilized. There is, however, an apparent future potential for such services: a quite significant share of consumers indicate that they are interested in watching digital movies and TV shows in the future, and that they would use services from TV stations, download portals or mobile operators.
- That does not mean, though, that digital channels necessarily cannibalize existing channels. A considerable share of users are actually watching or downloading digital versions of a specific video via the Internet that they had already consumed through other channels. This indicates that digital video offerings could be well suited as a complement and to exploit the commercial value of movies and TV shows in different stages of their life cycle.

4 Advantages and willingness to pay

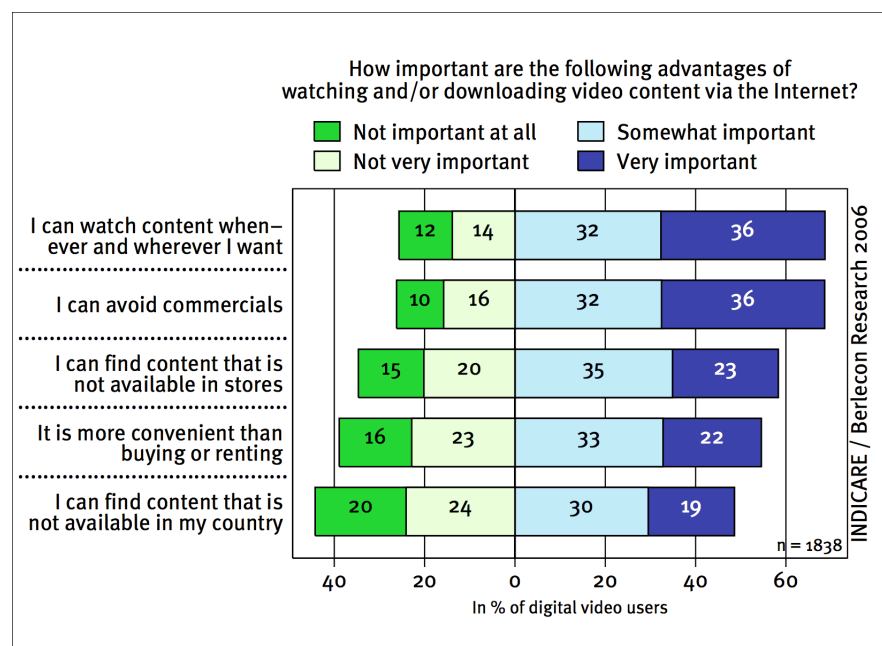
4.1 Advantages of digital video usage

Perceived advantages relate to experiences from traditional media

The large availability of very diverse content from all over the world and the convenience of getting content simply with a click of the mouse from the Internet are often cited as major advantages of digital distribution channels. However, if we look at results from the survey, we find that current digital video users do not perceive these advantages as the most crucial ones.

Even though about half of the digital video users acknowledges that the Internet offers more diversity, a substantial share of digital video users does not think that finding content that is not available in stores or in the country where they live are important advantages of video content from the Internet (see figure 4.1). It appears that a significant share of consumers does not want to obtain more diverse content from the Internet, but rather the same material that is already available from traditional channels (e.g. stores).

Figure 4.1: Advantages of digital video usage



Advantages related to experiences with traditional media such as broadcast TV are perceived as more important: 69% of digital video users find that avoiding commercials and watching content whenever and wherever it is convenient are important advantages of downloading and watching digital video content on the Internet (i.e. time-shift). Users are obviously annoyed of being forced to accept commercials when they watch movies or TV shows via traditional channels.

The opinions differ on whether it is more convenient to obtain video content from the Internet than buying or renting it: slightly more than half of the

users believe this is an important advantage, while the other half does not agree or does not know.

No large differences in the assessment of the advantages of digital video usage between age groups can be observed. However, differences between countries are considerable. These differences are related to the fact that heavy Internet users and frequent video users are distributed unevenly between countries (see section 2.1 above) and generally value the advantages of digital video usage much higher than light users. In Germany, for example (which has a lower percentage of heavy Internet and frequent digital video users) the advantages of digital video content are rated as clearly less important than in other countries. 34% of German digital video users obviously do not see any advantage in the convenience of obtaining video content from the Internet at all.

Table 4.1: Advantages of digital video usage

How important are the following advantages of watching and/or downloading digital video content via the Internet to you?					
	I can find content that is not available in my country.	I can find content that is not available in stores.	I can watch content whenever and wherever I want.	It is more convenient than buying or renting DVDs in a store.	I can avoid commercials.
All	49	58	69	55	69
Spain	66	75	84	71	82
Germany	27	34	43	32	58
France	54	68	78	61	69
Sweden	37	49	71	47	63
UK	51	55	56	53	66
Male	50	61	71	56	69
Female	47	54	66	52	67
15 - 19 years	45	55	72	60	62
20 - 39 years	55	65	73	56	70
≥ 40 years	42	51	63	51	68
Heavy Internet*	54	64	74	59	73
Light Internet**	35	45	55	43	58
Frequent video***	60	70	81	67	77

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users
 Answers counted: "Very important" and "Somewhat important"
in % of digital video users
 n = 1,838

Source: INDICARE / Berlecon Research

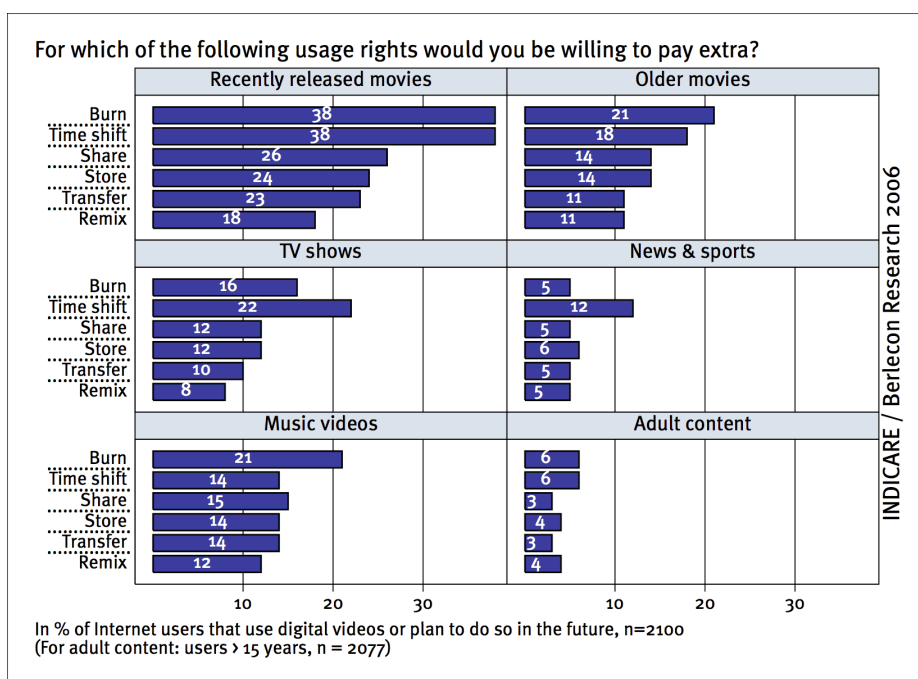
4.2 Willingness to pay for usage rights

Consumers are willing to pay extra for extended usage rights in movies

To get an idea about the usage rights consumers expect when they pay for digital content offerings, we asked the survey participants: “Assuming a piece of digital video content you are interested in is only available for a fee: For which of the following usage rights and type of content would you be willing to pay extra?”

Survey participants were asked to indicate their willingness to pay extra in various content categories because we expected that the demands differ considerably, for example between recently released movies and news. This is an aspect that does not apply to digital music where demands and expectations of usage rights do not vary strongly between different types of music such as pop music and country music.

Figure 4.2: Willingness to pay for usage rights (by content formats)



The first important result is that although “recently released movies” is not the most popular content category to date (compare figure 3.1 above), consumers would like to have and are most willing to pay extra for specific usage rights in recently released movies (see figure 4.2). Users actually seem to be aware of the value of movies and know that they have to pay if they want to burn, share or store movie files. In particular, users would pay for the possibility to burn movies on CDs or DVDs and watch them whenever it is convenient for them without taking into consideration release dates or movie schedules (time-shift). The same holds true (although to a lower extent), for older movies, music videos and TV shows.

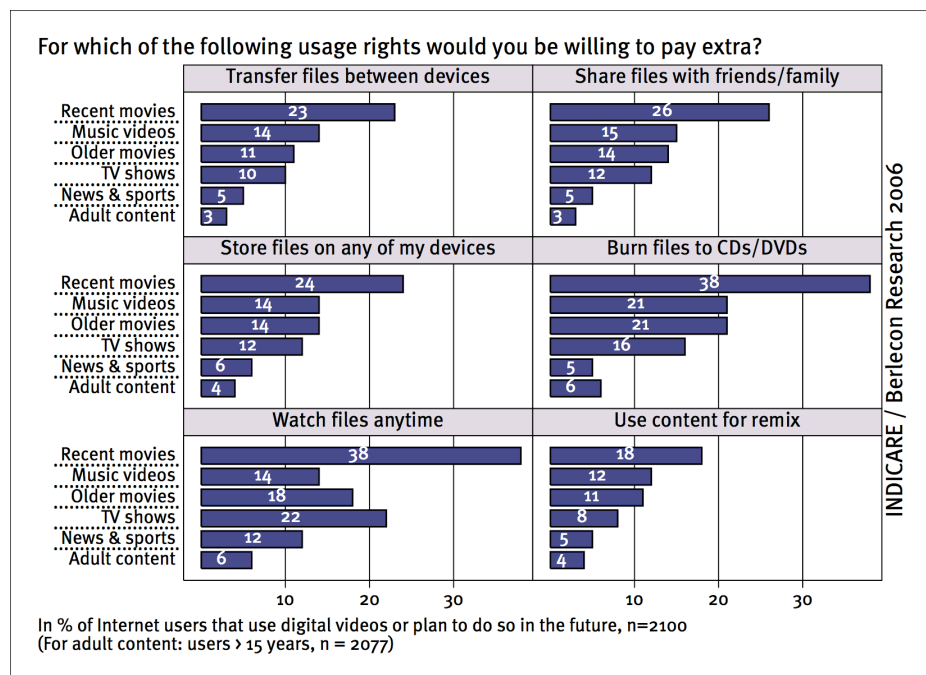
Consumers want to burn music videos and time-shift TV-shows

Music videos are the most important digital video content category to date (see section 3.1 above). Consumers are especially interested and willing to pay for the right to burn music video files to CD or DVD. However, most music video offerings today explicitly exclude the right to burn music videos. For example, Apple's iTunes Music Store (iTMS) allows the burning of music audio files, but not the burning of music videos.¹¹

Within the category "TV shows", the possibility to time-shift is most important to consumers – actually even more important than to burn or store the shows. This indicates potential in Europe for services like TiVo in the U.S., which allow TV shows to be recorded and watched independent of screening times.

Similarly, some consumers would be willing to pay for the ability to time-shift news and sports content. But they are reluctant to pay for any further usage rights in this content category. Most likely, consumers expect to do very little with news and sports besides watching it a limited number of times and potentially watch it anytime and anywhere. Even file transfer between different devices is not regarded to be very important, although one would expect that consumers want to watch news and sports on portable devices, for example.

Figure 4.3: Willingness to pay for usage rights (by usage rights)



In almost all content categories, only a limited percentage of consumers would also be willing to pay for the ability to share content with friends and family – with the exception of movies (see figure 4.3). Sharing features are

¹¹ Extracted from iTunes terms of service: "You shall be entitled to export, burn (if applicable) or copy Products solely for personal, non-commercial use. You shall not be entitled to burn Video Products.", <http://www.apple.com/support/itunes/legal/terms.html>

less important in all content categories than the right to burn and/or time-shift.

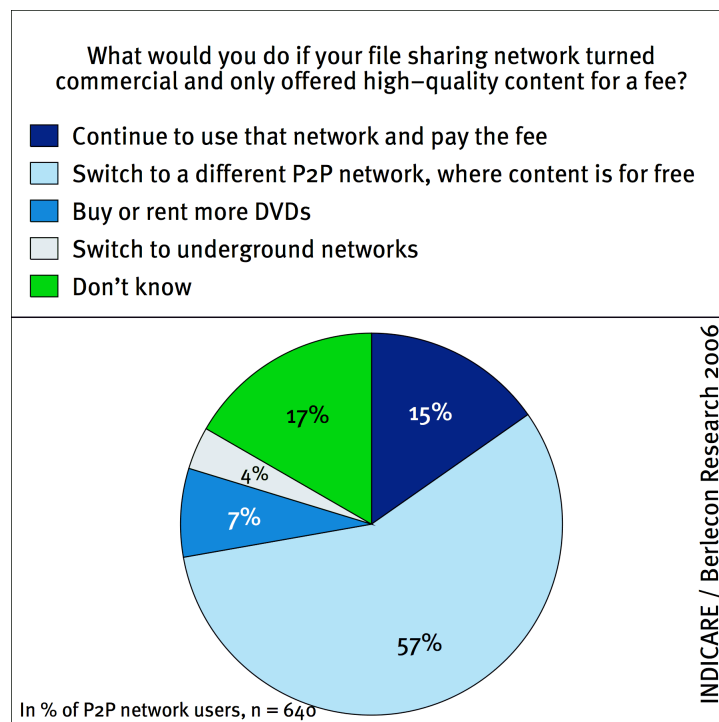
Digital technologies open up new possibilities to reuse digital content in individual, creative ways for derivative works. Even though the right to use content for homemade productions and remixes is not valued by a high share of users, after all, 18% would pay extra for the right to reuse recent movies and 12% for the right to reuse music videos for their productions.

4.3 Willingness to pay for P2P offerings

The majority of P2P users would not switch to commercial P2P services

The potential of commercial file sharing services is currently intensely discussed by the media industry. Examples of commercial P2P networks are mashboxx, iMesh, Peer Impact or Bertelsmann's Gnab. While most of these services are primarily targeted at music users up to now, they usually also carry music videos and shorter video content (deals to distribute movies are currently being negotiated with content providers in the U.S.¹²). Other companies are currently testing new services that will allow users to purchase movies and music video downloads based on P2P technology. For example, UK cable firm NTL is cooperating with BitTorrent to distribute movies and music videos¹³.

Figure 4.4: Willingness to pay for P2P offerings



¹² Cf. Mercury News: "NBC Universal makes deal with Peer Impact", Nov. 18, 2005.

¹³ Cf. Reuters.com: "UK cable co. NTL signs BitTorrent file-sharing deal", Feb. 10, 2006.

We wanted to know how current users of P2P networks would react if “their” file sharing network turned commercial and only offered high-quality content for a fee and what the actual potential for commercial P2P services is. As figure 4.4 shows, 15% of current P2P users would continue to use this network and pay the fee. An additional 17% state that they are unsure – their decision would probably depend on factors such as fee structure, catalogue and service quality. This adds up to 32% of P2P users that could potentially be turned into paying customers of commercial P2P platforms. However, 57% of current P2P users would switch to a different P2P network, where content is for free. Another 4% would switch to networks such as Internet Relay Chat (IRC) or Usenet, where infringement is close to impossible to track. Only 7% of P2P users would buy or rent more DVDs. Obviously, a higher share of teenagers would rather switch to a different P2P network than pay the fees for “their” current network. Apparently, loyalty to a specific P2P service or brand is limited.

Table 4.2: Willingness to pay for P2P offerings

You said that you use P2P file sharing networks. What would you do if the network you are using turned commercial and offered high-quality content for a fee?					
	Continue to use that network	Switch to different P2P network	Buy or rent more DVDs	Switch to underground networks	Don't know
All	15	57	7	4	17
Spain	11	66	7	3	13
Germany	18	44	14	7	17
France	21	51	5	4	19
Sweden	17	44	10	4	24
UK	18	53	9	4	16
Male	16	57	7	4	15
Female	13	57	7	3	19
15 - 19 years	6	65	8	5	16
20 - 39 years	16	57	8	3	17
≥ 40 years	20	53	7	4	17
Heavy Internet*	16	57	7	4	16
Light Internet**	12	58	10	2	18
Frequent video***	18	59	5	4	15

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users
in % of P2P network users
n = 640

Source: INDICARE / Berlecon Research

We conclude that P2P technology per se does not seem to be the primary reason for consumers to prefer file-sharing networks over other channels – otherwise there would probably be a higher willingness to switch to

commercial offerings. While costs are an important factor, they are not the only reason why consumers like free P2P networks. We have seen in section 4.1 above that consumers are actually willing to pay for extended usage rights, particularly for high-value content. Simply legitimizing the technology and concept of P2P seems not sufficient to attract a large customer base. The high degree of convenience and particularly the absence of any usage restrictions appear to be very important factors besides costs that make P2P networks attractive today.

Key findings _ Chapter 4

- There are two major advantages that consumers associate with digital video usage: first, to watch content wherever and whenever they want (time-shift) and second, to avoid commercials. Users are obviously annoyed by the way commercials are placed in traditional media channels today. Their attitude towards content consumption is apparently about to change from passive to more active consumption, where viewers have control over their own schedules and content preferences. There is only a slight majority of users, however, that acknowledges the advantages of finding diverse and/or international content on the Internet.
- Our findings also indicate that there is demand for commercial digital video content offerings, given that consumers' expectations of what they can do with the content are met. A significant share of consumers is actually willing to pay for extended usage rights such as burning, time-shifting or sharing. This is particularly true for high-value content such as full-length movies. Content providers should adjust their policies accordingly to meet consumers' demands.
- P2P as a legal distribution channel still needs time to be accepted by active P2P users. Only a limited share of current P2P users would continue to use a network that turned commercial. Given a significant proportion of users that would be willing to pay extra for extended usage rights, we conclude that the absence of any usage restrictions is one of the most important factors besides costs that make P2P networks so popular today.

5 Copyright and DRM

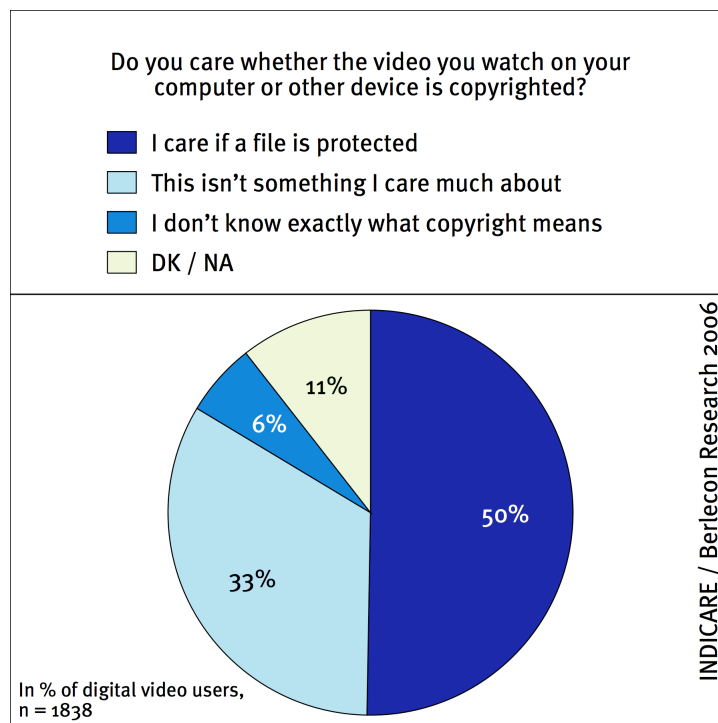
5.1 Attitude towards copyright

Half of all consumers of digital video content care about copyright

In the public debate about piracy of digital content, the media industry often complains about users of digital content increasingly failing to appreciate copyright. Figure 5.1 shows that indeed one quarter of the consumers of digital video content do not care much about copyright protection. An additional 6% do not know exactly what copyright means and 11% could not provide an answer to the question. But half of all digital video users state that they care if a file is copyrighted or not. This is more than the share of digital music users that cared about copyright in the first INDICARE survey on digital music in February 2005 (43%).

It does not come as a surprise that teenage users care least whether or not a file is copyrighted or do not know what copyright means (see table 5.1). It is interesting, though, to see that a slightly higher share of heavy Internet users care about copyright compared to light Internet users.

Figure 5.1: Attitude towards copyright



There are considerable differences in the results for different countries: copyright is least acknowledged in France and most acknowledged in Germany and Spain (see table 5.1). Considering the high usage of P2P networks in Spain, the fact that users care about copyright does not necessarily allow conclusions about their preference to obtain content from legal sources.

Table 5.1: Attitude towards copyright

	Do you care whether the video you watch on your computer or other device is copyrighted?		
	I care if a file is copyrighted	I don't care much	I don't know exactly what copyright means
All	50	33	6
Spain	59	25	7
Germany	66	16	5
France	36	48	6
Sweden	49	38	5
UK	44	38	5
Male	48	37	5
Female	54	29	6
15 - 19 years	40	34	12
20 - 39 years	49	35	6
≥ 40 years	55	31	4
Heavy Internet*	53	32	6
Light Internet**	44	36	5
Frequent video***	48	38	6

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users
in % of digital video users
n = 1,838

Source: INDICARE / Berlecon Research

5.2 Awareness of DRM and usage restrictions

The majority of digital content users is not aware of DRM

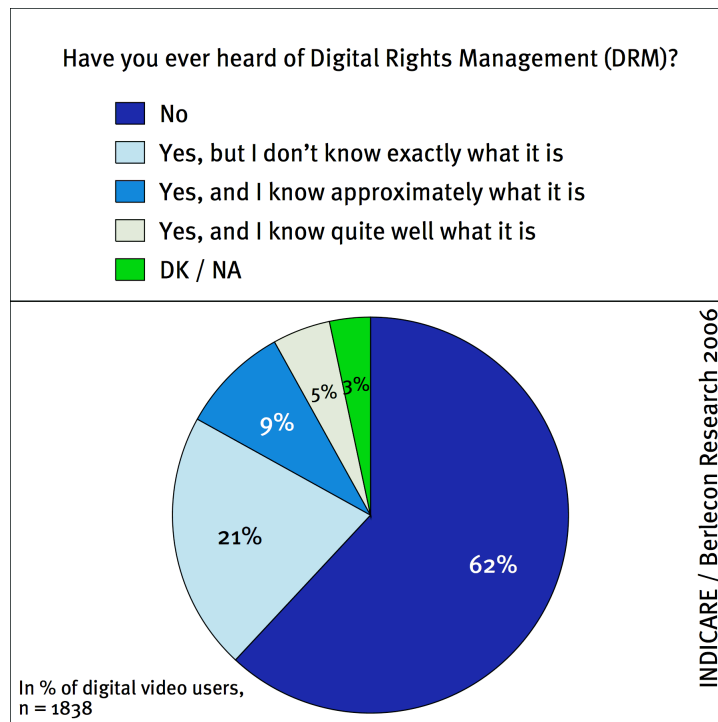
Even though DRM technologies are widely applied by media companies when distributing digital content online, a large share of users of digital content is not aware of the application of these technologies at all. 62% of all respondents that have experience with digital video content have never heard about DRM. An additional 21% has heard about it, but does not know exactly what it is. Only 14% claim to have a precise idea of DRM.

These results are exactly in line with findings from the digital music survey from February 2005. One would expect that the awareness of DRM should have risen since, as Sony BMG's rootkit incident or Apple's anti-trust cases in the U.S. and France have resulted in a vivid debate about DRM, which also extended into the mainstream media¹⁴. But obviously this debate primarily concerned consumers in the U.S. and less so in Europe.

¹⁴ Cf. Helberger, Natali: The Sony BMG rootkit scandal. INDICARE Monitor Vol. 2, No. 11. Online available at: <http://www.indicare.org>

The lack of knowledge about DRM is evident in all age groups and even frequent digital video users are only slightly better informed about DRM than average users. There are only insignificant differences between countries, with the exception of France (see table 5.2), where consumers seem to be much better informed about DRM than their European peers – and much better than it was the case in February 2005. At the same time we found in section 5.1 above that French consumers care least about copyright. This result might be due to a more intense public debate about DRM following a lawsuit against a French consumer who made a private copy of a DVD he had purchased earlier¹⁵.

Figure 5.2: DRM awareness



DRM awareness will probably rise over time, when commercial offerings protected by DRM technologies are becoming more widely used and consumers start reaching the limits that DRM can set to usage. For example, consumers that purchased digital content replacing their computers or mobile devices may find that licensed content becomes inaccessible because they were not able to backup their DRM licenses. Hence, independent music producers and labels, for example, are abandoning DRM technologies¹⁶ and use this decision as promotion for their content and consumer-friendliness (“Respect the music” campaign¹⁷).

¹⁵ Cf. Helberger, Natali: It's not a right, silly! – The private copying exemption in practice. INDICARE Monitor Vol. 1, No. 5. Online available at: <http://www.indicare.org>

¹⁶ Cf. Bohn, Philipp: Attitudes towards DRM in the Independent music sector. INDICARE Monitor Vol. 2, No. 6.

¹⁷ Cf. <http://www.respect-the-music.com>

Table 5.2: Awareness of DRM

	Have you ever heard about Digital Rights Management?			
	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	62	21	9	5
Spain	60	27	7	3
Germany	74	11	6	5
France	45	29	15	8
Sweden	72	14	6	2
UK	63	19	11	4
Male	58	20	11	7
Female	67	22	7	2
15 - 19 years	63	23	3	3
20 - 39 years	63	20	9	5
≥ 40 years	61	21	11	5
Heavy Internet*	58	23	10	6
Light Internet**	73	15	6	2
Frequent video***	55	25	10	8

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users
in % of digital video users. Deviations from 100% = don't know / no answer
n = 1,838

Source: INDICARE / Berlecon Research

The majority of downloaders is not informed about usage restrictions

We also asked users that had downloaded digital videos whether they were aware of any usage restrictions when they downloaded content. About half say that they do not know whether usage was restricted or not. An additional 15% did not know or did not answer the question (see figure 5.3). This adds up to 67% not knowing about usage restrictions, which is in line with the findings from the digital music survey (71% said that they do not know whether usage of music files was restricted).

The largest group of users that are unaware of usage restrictions is naturally teenagers. Swedish and French users are best informed about usage restrictions. Users from Spain are least informed, even though digital video content is very frequently used in this country. Only a minority of 13% of all downloaders say that they downloaded restricted content (see table 5.3).

Figure 5.3: Awareness of usage restrictions

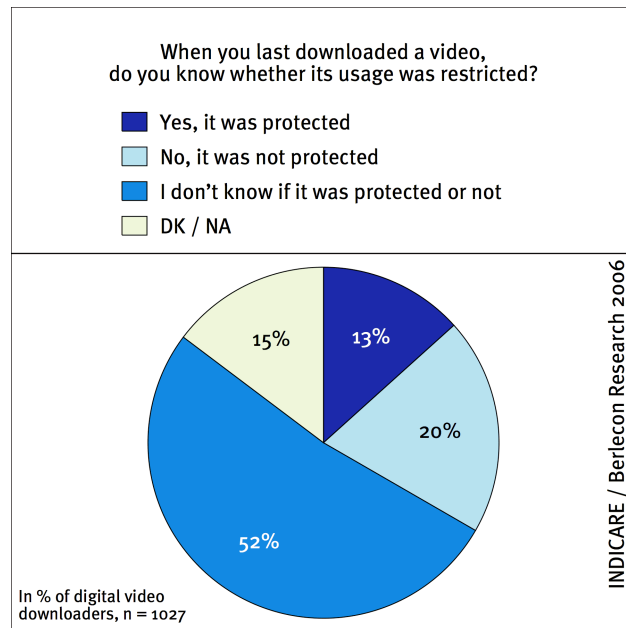


Table 5.3: Awareness of usage restrictions

	When you last downloaded a video, do you know whether its usage was restricted?		
	Yes, it was protected	No, it was not protected	I don't know if it was protected or not
All	13	20	52
Spain	18	11	64
Germany	13	16	51
France	14	32	43
Sweden	10	13	44
UK	9	33	51
Male	13	23	50
Female	14	14	56
15 - 19 years	9	15	57
20 - 39 years	15	20	52
≥ 40 years	13	22	50
Heavy Internet*	15	22	50
Light Internet**	7	14	61
Frequent video***	16	21	51

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users
in % of digital video downloaders. Deviations from 100% = don't know / no answer
n = 1,027

Source: INDICARE / Berlecon Research

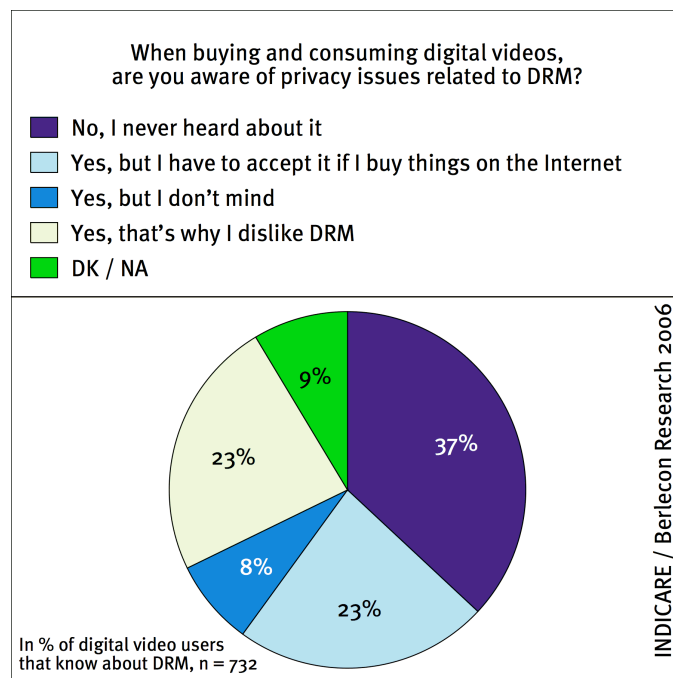
5.3 Attitude towards DRM and usage restrictions

Consumers are not informed about privacy issues or do not mind

DRM technology has the potential to monitor consumers' uses of digital content and to profile their consumption behaviour. We wanted to know if consumers are aware and possibly concerned about this DRM-related privacy issue. We only asked this question to respondents that had at least a basic idea about DRM.

Almost half of those digital video users that have heard about DRM were not aware of the privacy issue related to DRM (37% have never heard about it and 9% did not know or did not answer). At the same time, the acceptance of monitoring is relatively high: almost one third of the users explicitly accept monitoring or do not mind (see figure 5.4). Only one quarter of the users dislike DRM because of related privacy issues. Again, these results are very much in line with findings from our digital music survey in February 2005.

Figure 5.4: Awareness of privacy concerns related to DRM



Interestingly, heavy Internet users and/or frequent digital video users are as uninformed about DRM-related privacy issues as light users. The highest share of uninformed users is among teenagers.

We also find some significant differences between countries: in France, only 18% have never heard about DRM-related privacy issues. This is in line with a general familiarity with DRM as a technology (see section 5.2). More than half of the Spanish users are not aware of privacy issues, despite the high share of heavy Internet users and frequent digital video users. Rejection of DRM due to privacy issues among those users that have heard about DRM is highest in France and Germany.

Table 5.4: DRM and privacy

DRM technology has the potential to monitor your uses of digital content and to profile your consumption behaviour. Are you aware of this privacy issue?				
	No, I never heard about it	Yes, but I have to accept it	Yes, but I don't mind	Yes, that's why I dislike DRM
All	37	23	8	23
Spain	52	19	10	11
Germany	41	21	2	32
France	18	32	5	35
Sweden	50	6	16	11
UK	34	28	7	26
Male	34	22	9	27
Female	43	24	7	17
15 - 19 years	46	13	2	20
20 - 39 years	35	24	7	25
≥ 40 years	37	25	11	22
Heavy Internet*	37	25	9	24
Light Internet**	38	17	4	22
Frequent video***	38	21	10	24

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users
in % of digital video users that know about DRM. Deviations from 100% = don't know / no answer
n = 732

Source: INDICARE / Berlecon Research

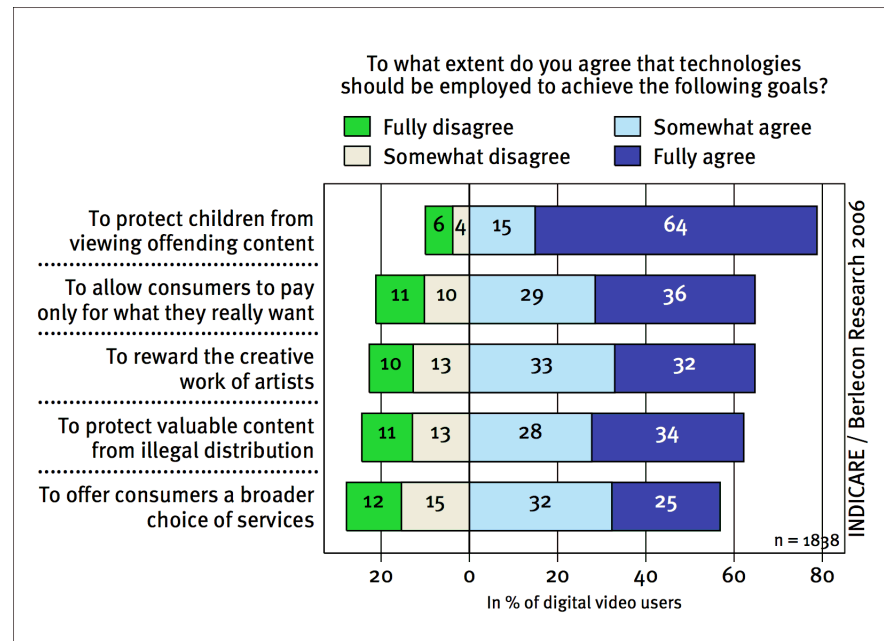
Consumers accept usage restrictions for specific objectives

To find out more about consumers' attitude towards technical protection measures and usage restrictions, we asked them to what extent they agree or disagree that technological measures should be employed in order to achieve certain goals. This question was meant to find out if consumers accept usage restrictions and DRM if they are applied for specific objectives. Figure 5.5 clearly shows that the majority of digital video users fully agree that technologies and usage restrictions are acceptable to protect children from viewing offending content. This is an actual challenge, e.g. for mobile operators¹⁸, the importance of which can be expected to increase in the future.

If DRM technologies are intended to allow consumers to pay only for what they really want, an overall of two thirds agree to the application of technical measures such as DRM for this reason. Similarly, there is a relatively high rate of agreement that the creative work of artists needs to be rewarded and that valuable content needs to be protected from illegal distribution.

¹⁸ Cf. BBC News: Children 'can access mobile porn', Feb. 2, 2006.

Figure 5.5: Acceptance of usage restrictions



The idea that DRM can help to offer consumers a broader choice of services is not very well established with consumers. Only about a quarter fully accepts this as a reason for employing protective technologies, which might have to do with the fact that there is not much variety on the market yet. Generally, consumers of all age groups and countries as well as heavy and light users are in agreement with their evaluation concerning reasons justifying usage restrictions. But there is a relatively high share of 10% to 15% of users that do not have a clear opinion on any of the questions (“don’t know / no answer”).

Table 5.5: Attitude towards usage restrictions

Content providers may apply technologies that restrict certain usage rights. To what extent do you agree or disagree that those technological measures should be employed in order to achieve the following goals?					
	To protect children from offending content	To offer consumers a broader choice of services	To allow consumers to pay only for what they really want	To protect valuable content from illegal distribution	To reward the creative work of artists
All	79	57	65	62	65
Spain	76	55	61	56	55
Germany	75	50	66	61	62
France	81	56	60	63	75
Sweden	79	58	69	61	62
UK	83	65	69	72	71
Male	77	53	63	59	63
Female	82	62	68	66	67
15 - 19 years	79	54	61	61	65
20 - 39 years	78	55	63	60	63
≥ 40 years	80	60	68	65	67
Heavy Internet*	80	59	66	64	66
Light Internet**	76	52	62	58	62
Frequent video***	78	58	63	59	62

* daily Internet users, ** weekly or less frequent Internet users, *** frequent digital video users
 Answers counted: "Fully agree" and "Somewhat agree"
in % of digital video users
 n = 1,838

Source: INDICARE / Berlecon Research

Key findings _ Chapter 5

- Despite the wide application of DRM technologies existing today that restrict usage rights to digital content, a large majority of consumers has never heard of DRM and does not know that these technologies are applied. This finding confirms results from the first INDICARE survey among digital music users. Also the majority of users that have downloaded digital video content were not informed whether usage rights of the respective videos were restricted or not.
- Most users also appreciate the importance of copyright. 50% overall say that they care if a file is copyrighted. Only 6% do not know exactly what copyright means.
- Of those users who know about DRM, almost half of them were not aware of privacy issues related to DRM, e.g. the fact that DRM technology has the potential to monitor uses of digital content and profile consumption behaviour. One third knows about potential privacy issues but does not mind or simply accepts it.
- The majority of consumers agrees that the application of technical protection measures such as DRM are justified to protect children from offending content, to reward the creative work of artists and to allow consumers to pay only for what they really want.

6 Conclusions

Digital video usage is not yet very widespread in Europe

Results from this INDICARE survey among 2,731 Internet users in five European countries show that usage of digital video content is still at a relatively early stage in Europe: even though many Internet users (61%) have made first experiences with watching digital video content from the Internet on their computer, only less than a quarter (22%) do so *frequently*. This compares to 34% of European Internet users that frequently listened to digital music on their computer in 2005.

Downloading video content from the Internet is even less common: 38% have tried to download content, but only 14% do so frequently. However, a quarter of all Internet users show interest in downloading video content from the Internet in the future. This indicates that there is potential for future video download services.

Portable video content does not play an important role to date. However, two results might point towards commercial potential for mobile offerings: first, a comparatively high share of mobile video users *frequently* consumes video content on the go (once tried, they stick with it). Second, almost a quarter of all Internet users – younger users as well as older ones – are interested in using mobile video content in the future.

A lack of knowledge and awareness is the most important reason for not consuming digital video content. A shortage of sufficient bandwidth and high costs are currently not perceived as important barriers, except in Germany.

Significant differences between countries exist

Analysing digital video usage at the country level shows significant differences between the five European countries covered in this survey (Spain, Germany, France, the UK, and Sweden). Spain has the highest proportion of frequent digital video users (46% of all Internet users), followed by France, Sweden, and the UK. Germany has by far the lowest proportion of Internet users frequently consuming digital videos (12%).

These differences can partly be attributed to differences in the Internet population in each country: while Spain has, for example, a relatively low overall share of Internet users in percent of total population, the majority of these users are heavy (i.e. daily) users. Germany, in contrast, has a large Internet population overall, but among these more than half use the Internet only on a weekly basis or less frequently.

Types of video content and channels to obtain it are very diverse

Survey results reveal that the consumption of digital video content is characterized by a high degree of diversity. This diversity relates to the types of video content consumed as well as to the channels accessed to obtain it.

First, we can see that users are trying out many different types of video content and that there is not *the* single “killer content”. Music videos are presently the most popular content category, but they are very closely followed by private content (e.g. family and holiday videos), as well as movie

previews and advertisements. TV shows and amateur content are currently the least popular content categories. The relatively low importance of amateur content such as video blogs or podcasts contrasts the high attention that this type of content is attracting in the media at present.

Second, there is no single most important channel where users obtain digital video files. Instead, the sources are rather diverse with company websites being the most important source, followed by ripping DVDs and using P2P networks. Service offerings by download portals, mobile operators or TV stations do not yet have a large market penetration.

Diversity needs to be reflected in differentiated usage rights and DRM systems

This diversity in digital video consumption is further aggravated when we look at the different usage rights that consumers are willing to pay for when offered commercial services. A considerable share of users is, for example, willing to pay extra for the right to burn or time-shift full-length movies, while the same is true for a much lower share of users in the case of music videos or TV shows.

The diversity of different content types, distribution channels and expectation of usage rights results in a complexity for content providers and (DRM) technology providers alike, because the diversity needs to be reflected in differentiated service offerings for different content types and channels – particularly with respect to the usage rights granted and the technological measures applied to enforce usage restrictions. As a result, the complexity will affect the way DRM protection is designed, applied and accepted, as the number of technological challenges (e.g. interoperability) is likely to increase.

There is indeed potential for commercial digital video services

Our findings also indicate that there is future potential for commercial digital video content offerings, given that consumers' expectations of what they can do with the content are met. First, a considerable share of consumers indicate that they are interested in watching digital movies and TV shows in the future. Second, many digital video users are interested in services from TV stations, download portals or mobile operators. And third, a significant share of consumers is actually willing to pay for extended usage rights such as burning, time-shifting or sharing.

Digital channels do not necessarily cannibalize existing channels. A considerable share of users are actually watching or downloading digital versions of a specific video via the Internet that they had already consumed through other channels, for example TV. This indicates that digital video offerings could be well suited as a complement and as a means to exploit the commercial value of movies and TV shows in different stages of their life cycle.

Consumers apparently prefer active over passive content consumption

There are two major advantages that consumers associate with digital video usage: first, being able to watch content wherever and whenever they want (time-shift), and second, being able to avoid commercials. Users are

obviously annoyed by the way commercials are placed in traditional media channels today.

At the same time, the high popularity of movie previews and advertisements offered on company websites shows that consumers actively choose to watch smart and entertaining advertisements. This emphasizes, on the one hand, that the Internet can be a very efficient channel for marketers (particularly for the movie industry) to place commercials. On the other hand, consumers increasingly seem to prefer pull (as opposed to push) advertisement.

Consumers' attitude towards content consumption is apparently about to change from passive to more active consumption behaviour, where viewers are in control of their own schedules and content preferences.

P2P networks play a less prominent role for digital video than for digital music

P2P networks play a less prominent role as a source for digital video than is the case for digital music. 27% of the digital music users, but “only” 14% of the digital video users frequently use P2P networks. However, P2P usage has reached a very significant share in certain countries (e.g. 67% of digital video users in Spain compared to only 11% in Germany).

But we also find that P2P still needs time to be accepted by active P2P users as a legal distribution channel. Even though half of all digital video users appreciate the importance of copyright (i.e. they care if a file is copyrighted or not), only a minority of P2P users would continue to use their network after it was transformed into a licensed offering. Given a significant proportion of users that would be willing to pay extra for extended usage rights, we conclude that the absence of usage restrictions is one of the most important factors besides costs that make P2P networks so popular today.

Consumers are not aware of DRM and usage restrictions

Despite the wide application of DRM technologies that restrict usage rights of digital content today, a large majority of consumers has never heard of DRM and does not know that these technologies are applied. This finding confirms results from the first INDICARE survey among digital music users. In addition, the majority of users that have downloaded digital video content were not informed whether usage rights of the respective videos were restricted or not.

Of those users that know about DRM, almost half were not aware of privacy issues related to DRM, e.g. the fact that DRM technology has the potential to monitor uses of digital content and profile consumption behaviour. One third knows about potential privacy issues but does not mind or simply accepts it.

The majority of consumers agree that the application of DRM technologies and usage restrictions are justified to protect children from offending content, to reward the creative work of artists and to allow consumers to pay only for what they really want.

7 Annex: Questionnaire

Screener

What is your age?

- Below 15 years
- 15 – 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 video content

Have you ever...

- Used your computer to watch digital content (e.g. video streams, video files or video downloads of TV shows, music videos or movie)?
- Used your computer to download video content from the Internet? (e.g. movies, TV shows)
- Used a portable player (e.g. mobile phone, video iPod, PlayStation Portable) to download or watch digital video content?

Why have you never used your computer or portable device to download or watch digital video content? (Multiple answers possible)

- I don't know how that works
- It is illegal
- My Internet connection is not fast enough
- It is too expensive
- I'm not very interested in video content
- I just never found the time to do that
- I rather buy or rent DVDs or pre-recorded tapes
- Other reasons
- Don't know

Usage of digital video content

Do you use your computer or a portable player to download or watch the following video contents? (Excluded are video games, playing DVDs and using the PC as TV receiver)

- Recently released movies
- Older movies
- TV shows
- Music videos
- Adult content
- News and sports
- Movie previews and advertisements
- Content produced by amateurs (e.g. video blogs, video podcasts)
- Private content (e.g. family videos)

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
- Don't know

Are you using the following sources to obtain digital video content?

- Your own DVDs that you ripped (transferred them into digital files)
- DVDs of family members that you ripped (transferred them into digital files)
- P2P networks like Kazaa, Morpheus, eDonkey, or BitTorrent
- Portals where one can download and stream movies from the Internet (e.g. video-on-demand services)
- Services from mobile operator
- Internet offerings of TV stations
- Company websites (movie previews, advertisements)
- Video blogs or podcasts
- Other sources

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
- Don't know

Overall, how many files do you store in your computer or mobile device?

- None
- Fewer than 10
- 10 – 50
- 51 – 100
- More than 100
- Don't know

How important are the following advantages of watching and/or downloading digital video content via the Internet to you?

- I can find content that is not otherwise available in the country where I live.
- I can find content that is not available in retail or rental stores.
- I can watch content whenever and wherever I want without taking care of screening dates (i.e. time-shift).
- It is more convenient than buying or renting DVDs or pre-recorded tapes in a store.
- I can avoid commercials.

Answers

- Very important
- Somewhat important
- Not very important
- Not important at all
- Don't know

Have you ever watched and/or downloaded a specific video after...

- You watched the movie in cinema?
- You rented the DVD or pre-recorded videotape in a video store?
- You watched a preview or trailer on the Internet?
- You received recommendation from friends or the media?
- You watched the show on TV before?

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
- Don't know

Preferences for digital video content

Assuming a piece of digital video content you are interested in is only available for a fee: For which of the following usage rights and types of content would you be willing to pay extra? The possibility to...

- Transfer files easily between devices.
- Share files with friends or family members.
- Store files on any of my devices.
- Burn files to CDs or DVDs.
- Watch files whenever it is convenient for me without taking care of screen dates (i.e. time-shift).
- Use content privately for my own productions and remixes.

Answers

- Recently released movies
- TV shows
- News and sports
- Older movies
- Music videos
- Adult content
- None of these

You said that you use P2P file sharing networks to download digital video content. What would you do if the respective network turned commercial and offered high-quality content for a fee?

- I would continue to use that network and pay the fee.
- I would switch to a different P2P network where content continues to be available for free.
- I would buy or rent more DVDs.
- I would switch to so-called underground networks like IRC.
- Don't know.

Digital Rights Management

Do you care whether the video you watch on your computer or other device is copyrighted or is this something you don't care much about?

- I care if a file is copyrighted.
- This isn't something I care much about.
- I don't know exactly what copyright means.
- Don't know.

Have you ever heard about 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.
- Don't know.

When you last downloaded a video, do you know whether its usage was restricted, e.g. by limiting the number of times you can burn it to CD or DVD or prohibiting it altogether?

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

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

- No, I never heard about it.
- Yes, but I have to accept it if I buy things from the Internet.
- Yes, but I don't mind.
- Yes, that's why I dislike DRM.
- Don't know.

Content providers may apply technologies (DRM) that restrict certain usage rights of content you acquired. To what extent do you agree or disagree that those technological measures should be employed in order to achieve the following goals?

- To protect children from viewing offending content.
- To offer consumers a broader choice of services (e.g. renting, subscription).
- To allow consumers to pay only for what they really want.
- To protect valuable content from being illegally distributed over the Internet.
- To reward the creative work of artists.

Answers

- Fully agree
- Somewhat agree
- Disagree somewhat
- Fully disagree
- Don't know / N.A.