

# Human Factors of DRM

**Report on the 5<sup>th</sup> INDICARE Workshop**  
held on 19 January 2006, in Budapest

March 2006

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▶▶ INDICARE

<http://www.indicare.org>



The Informed Dialogue about Consumer Acceptability of DRM Solutions in Europe



## About INDICARE

INDICARE is the “Informed Dialogue about Consumer Acceptability of DRM Solutions in Europe” (<http://www.indicare.org>). INDICARE has gathered an extensive body of experience and knowledge through its work and dialogue with industry stakeholders and interest groups. It initiated dialogue primarily through a peer-reviewed online publication, the organization of international expert workshops, interviews, and two major consumer surveys. 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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This publication is a deliverable of the INDICARE project. INDICARE is financially supported by the European Commission, DG Information Society, as an Accompanying Measure under the eContent Programme (Ref. EDC - 53042 INDICARE/28609). This publication does not express the European Commission’s official views. In its views and opinions the INDICARE project is independent from the European Commission and the views expressed and all recommendations made are those of the author/authors. Neither the European Commission nor the author/authors accept liability for the consequences of actions taken on the basis of the information contained in this publication.

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## Comments

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## 1 Introduction

INDICARE is a European Union funded research project aimed at creating an informed dialogue on consumer acceptance of Digital Rights Management (DRM) Solutions in Europe. The overall goal of INDICARE is to raise awareness, to help reconcile the diverse interests of multiple players, and to support the emergence of a common European position with regard to the consumer and user issues of DRM solutions.

Beside maintaining an electronic discussion forum on the project web site and providing input to it with articles and a web log, the project's instruments include a consumer survey, five thematic workshops, state-of-the-art reports, policy papers as well as user and consumer guides.

### 1.1 INDICARE Workshop Series

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Each of the five workshops within the project was focussed on a particular sub-topics related to DRM: Business Models for Mobile Music and DRM; E-Payment and DRM for Digital Content; DRM in Public Science, and Human Factors of DRMs. Reports on the first four INDICARE workshops are already available at the INDICARE website (<http://www.indicare.org/events>).

The aim of the workshops is to stimulate discussion between different parties concerned with DRM, from consumers to content providers and vendors.

### 1.2 Fifth Workshop: Human Factors of DRM

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The fifth and last INDICARE workshop was held on 19 January 2006, and organised by project partner SEARCH Laboratory. The event took place in Budapest, in the Informatics building of the Budapest University of Technology and Economics.

Around forty participants from all over Europe and overseas attended the workshop. This event brought together experts from the area of Digital Rights Management related to diverse topics, each focusing on the reception given to DRM by consumers. The workshop had an interdisciplinary approach, with special attention paid to consumer issues, in particular the level of consumer acceptance of DRM systems.

Slides of the presentations are available at the INDICARE website (<http://www.indicare.org/events/>).

### 1.3 Workshop Topic

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In recent years several online content services have been initiated. Consumers in retail-oriented societies now have different music stores to choose from, and with the start of *iTunes* video downloading, a new market is rapidly opening up. E-books and other DRM-protected content have also been around for a while. Besides downloading, with the spread of broadband connections, streaming is also becoming a good option for the handling of content. However, not everyone has an equal opportunity to access such services. People living in poorly developed areas, and special groups such as disabled persons – especially blind people – may not find offerings that meet their needs.

The purpose of the 5th INDICARE Workshop on the Human Factors of DRM was to put consumers and their needs in focus: we wanted to point out the deficiencies of today's DRM-protected offerings and devices, and pin-point the actions that could be taken to enhance existing systems to the benefit of consumers.

The key speakers represented a very wide range of stakeholders: from consumer associations to collecting societies, from research institutes to private project members of the Digital Media Project, from blind people's associations to content providers. In order to keep the discussion within bounds, five thematic blocks had to be selected:

- consumer surveys
- accessibility
- content providers' experience
- consumer rights
- consumer initiatives

In each of the blocks two to three speakers presented their case in a 25-minute-long intervention, and after each section a lively debate followed, in which participants were encouraged to ask questions and to discuss their views with the panellists.

## 2 Workshop Programme

### 2.1 Introduction

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The workshop was organised around five thematic blocks, with two or three invited speakers for each block, each with different views or perspectives on the topic. Each block was followed by a forum in which the panel, consisting of the speakers in that block, answered questions from the audience.

The workshop was opened by *Kristóf Kerényi*, research engineer at SEARCH Laboratory. He welcomed participants to the event, and introduced the INDICARE project to those not yet familiar with it. He explained the aim and topic of the workshop and outlined the main structure of the event.

Kerényi, in his keynote presentation, emphasised that the aim of INDICARE was to bring together different stakeholders of DRM in events like this, in order to create a dialogue where the voices of not only the content providers, but also consumer rights specialists and disabled people can be heard. Therefore, he said, "consumer-centric" business models are needed, to create more acceptable DRM systems.

### 2.2 Consumer Surveys

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It is very important to explore usage patterns and other behavioural aspects of users with regard to digital content, since many experts agree that only such business models can win against traditional non-digital distribution channels and illegal offerings which provide more to the consumer (a value added over the common "buy in the store and own a copy" scenario). The common topic of

the first block of presentations was on what consumers want, how they use content today in the early age of digital media, and what they know about DRM.

### 2.2.1 DRM – Not Necessarily Evil

*Alapan Arnab*, a PhD student from the University of Cape Town, started with a strong statement: recent lapses like the Sony BMG rootkit case – which did no favour for the reputation of digital rights management – have merely reinforced earlier prejudices in which DRM is simply jargon for “evil” technology. Beside the Sony BMG case, he analysed the Vodafonelive! offering, and identified a number of problems, among which the main issue was that Vodafone did not state in the Terms and Conditions of Purchase that songs were protected with DRM. Although in the FAQ there was some implication of DRM, this was not stated before or during purchase. In Arnab’s opinion, therefore, Vodafonelive! users were not legally bound by DRM restrictions, since for a contract to be valid, both parties must be aware of all terms and conditions of the contract.

Arnab talked about an on-line survey made by his team, which collected 292 full responses to an impressive 91 questions, investigating consumer habits and attitudes towards DRM. Respondents were from countries all over the world. Unfortunately he had to rush through his findings, but the results can be seen in the workshop slides (<http://www.indicare.org/events/>).

Arnab, in the last part of his presentation, introduced “good DRM”. This, Arnab said, exploits the opportunities in technology to the benefit of the consumer rather than mega-companies, which use DRM only as an enforcement of copyright. DRM can also be used to protect personal data and ensure privacy, which – in protection of medical information, for example – increases consumer trust in technology. He also mentioned enterprise DRM and DRM for traditional media as having very important roles in the future. He finished by identifying common components across the three mentioned DRM application areas (consumer, enterprise, media), and proposed changes to existing DRM systems to create services which will be capable of serving most content protection-related needs in the future.

### 2.2.2 Private Copying Habits

*Dr. Péter Benjamin Tóth* from ARTISJUS, the Hungarian Bureau for the Protection of Authors’ Rights, introduced the results of two surveys to support his statement that Digital Rights Management may not be the best way of addressing today’s problems. Instead he proposed that Collective Rights Management – a term he preferred to “collecting society” when referring to ARTISJUS – could be a better choice.

He made his case by presenting the formulae used to determine the collection of levies, and supported his point with the figures derived from the two surveys. Examining content copied to blank CDs and DVDs – both in a representative survey carried out by GfK (Gesellschaft für Konsumforschung) and in another by the Free Association at the Sziget Festival (the biggest music festival in Central-Europe, confirming respondents as “power users” of music) – he concluded that at least 90 per cent of data burned to blank media was content protected by copyright, but subject to free copying. From this he derived the calculated amount of levy per carrier that *should* be a fair compensation for authors, and then showed the *actual amount from use*. Interestingly, even though the

amount from use was at least 5 times smaller than the smallest calculated amount, most consumers think that even this small amount would be unfair for them to pay. Levies have to be set so low, Tóth said, because there is also a strong black market presence to be contended with on the blank CD and DVD market, and consumers here too vote with their wallets.

### 2.2.3 INDICARE Surveys – Digital Music and Video Content

*Philipp Bohn*, analyst and INDICARE team member from Berlecon Research, talked about the results of the first consumer survey on digital music (Dufft et al. 2005) and introduced the second consumer survey on digital video use, which was then under preparation. Meanwhile it is available online on the INDICARE web site (Dufft et al. 2006).

### 2.2.4 Panel Discussion

Besides asking for clarification from the speakers on some details, two interesting questions were raised. Reflecting on the INDICARE surveys, the first one was about the reason for the difference between young and old in their willingness to pay for digital music. Philipp Bohn said that it probably has historical reasons: the older generation is already used to paying, and they use the internet rather as an information source – they discover new music on the web, and then go to the CD store and buy it. Péter Benjamin Tóth added that the willingness to pay does not have to be connected to the physical world. While elder people spend more on music, younger people still spend more money on portable player devices. Therefore, the question is not whether downloading music harms music sales – since we must keep up with new technologies – but rather how we can turn young internet users into paying customers.

The second question, addressed to Alapan Arnab, was whether there were any DRM systems in use that supported privacy. Arnab said that there were only academic experiments, and while results were promising, in practice there was, as far as he knew, no such system in operation. He added that DRM systems will only be successful if everybody is willing to use them, which means privacy implementations have also to be a part of DRM systems.

## 2.3 Accessibility

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From the viewpoint of consumers, DRM systems put restrictions on how they can use digital content. Even for able-bodied consumers these restrictions prove too much of a burden, but for disabled consumers DRM systems can prevent them from using protected content at all. Naturally digital products have to be protected from all means of extracting content from the protected form, but copyright law provides exceptions for the disabled, and these, too, have to be taken into account. In the second block of presentations two blind content creators and users presented their views on today's DRM implementations.

### 2.3.1 Copyright and Accessibility in Hungary

*Norbert Márkus* from the KFKI Laboratory of Speech Technology for Rehabilitation, and also a jazz pianist and composer, started his talk with a very extensive introduction to the history of accessibility on personal computers. He said

that in the '80s and early '90s blind people were not in a much worse situation than their sighted colleagues. Then with the arrival of window-based systems (including Microsoft Windows) their situation got much worse, but current technology has improved their ability to work with the latest computers. However, nowadays the problems are due to carelessly designed layout. Even if normal text-based screens, including web pages and e-books, can be viewed with so-called screen readers (the text-to-speech interface used by the blind instead of a traditional visual display), today's page layout tends to over-emphasise graphical layout, making most modern animations and graphical representations hardly accessible to people with sight loss. Blind people, he said, need a different type of visualisation, and he also showed some good and bad examples for accessibility on the web.

The situation arising with the coming of DRM systems created yet another difficulty for accessibility, since, though allowed by copyright law, making content accessible for the blind in many cases makes it available for content pirates, also. For this reason content publishers often lock out even disabled people so as not to facilitate pirates obtaining the content. This presents great difficulties for blind or partially-sighted people.

Returning to his profession, Márkus also talked about music scores in Braille form, which are represented in computers as BMX (Braille Music XML). BMX files can have different representations, such as visual or Braille. The situation with this is the same as with other content: publishers fear piracy, and therefore the biggest database of music for the blind has also encountered a problem. There is no solution yet how to continue operation.

### 2.3.2 Disability Rights and Digital Rights Management – Lock out pirates, not disabled people

*Hugh Huddy* from the Royal National Institute of the Blind, head of Campaign for Good E-Document Design, gave a talk about new opportunities and hurdles that e-documents pose for the blind. After demonstrating some special programs that make laptops, mobile phones and other electronic equipment blind-friendly, Huddy talked about a new world in which paper is no more. All publications today exist in electronic form, he said, so there is no reason why e-content cannot form accessible versions. This opens up the opportunity for blind and partially-sighted people to have an equal chance in accessing information, but, he said, just as we create artificial barriers for handicapped people in the physical world, we are re-creating such barriers for the blind in the electronic world.

After recounting a case study of a person who bought an e-book at Amazon and was unable to read it, he talked about Disability Rights Management and laws which outlaw discrimination: the same content must be available under the same terms, at the same time, for the same price, for everyone.

At the end of his presentation, Huddy talked about the responsibility of technology companies, policy makers and also users to create a world where the "Right to Read" is a reality.

### 2.3.3 Panel Discussion

Some participants wanted to find out in the discussion round how many people were affected by accessibility issues due to the lack of DRM systems complying

with Disability Rights Management standards. There was no clear answer to this from either side, but Hugh Huddy implied that it was very hard to tell, because blind people usually do not know what the problem is when they face a situation where something is not readable with a screen reader. Huddy said that an example of this is iTunes, which does not work with a screen reader.

In connection with the outlawing of discrimination, Lars Grøndal noted that no EU sanctions are implemented in cases where accessibility to digital content is not provided.

A question was raised about the technical possibility for hackers to create a fake screen reader to extract content from protected e-books, for example. Hugh Huddy replied that earlier such kind of tools existed, but now Windows uses fingerprints to determine the authenticity of screen readers, and therefore such attempts are now considerably more difficult.

## 2.4 Content Providers' Experience

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In the last block of presentations in the morning session, two content providers talked about their experience in the digital content market, and the difficulties and opportunities they see in serving consumers. This section was somewhat similar to the first block where surveys were presented, because the two speakers considered consumers as a potential market for which they have to compete, and therefore the best possible fulfilment of consumer expectations was crucial in their view.

### 2.4.1 DRM in Practice

*Miklós Gyertyánfy* from T-Online talked about the T-Group member's music offerings and use of DRM (also covered in Kerényi 2005). T-Online Hungary, operating the Origo portal, had 60% market share in music downloading in Hungary. Almost two years old, it offered 200,000 songs, and it also featured a video-on-demand service. T-Online chose Microsoft's DRM solution because it was compatible with most players, and this is how they could benefit consumers the most.

Gyertyánfy mentioned that while they intended to do so, it was not at present possible to introduce electronic video sell-through (video downloading and burning), since MS technology did not support it. He also talked about T-Online's new pilot project with IPTV, into which they will incorporate all previous DRM-related experience.

He mentioned that the biggest problem is that there are too many different types of equipment on the market using different technologies, and that interoperability is in many cases not guaranteed. Therefore, he said, they have a difficult time in moving consumers over to the Windows Media files from MP3. He said that the reason most consumers prefer MP3 is that it is a better supported cross-platform. This forms a vicious circle, Gyertyánfy said, which can only be broken by connecting the service and the hardware – like Apple did with iPod and iTunes. One system is good for consumers, since users do not want to understand technology, just use the content anytime, anywhere.

### 2.4.2 Role of Mobile in DRM – Human Factors

*Péter Verhás* from T-Mobile started his presentation by talking about the technical solutions which are used to protect content. He talked about OMA DRM 1, which is used by the vast majority of phones today. This uses the phone, not the SIM card, as the authentication token, which means that interoperability was not even an issue when the system was designed. However, they provided a “re-load” service for the devices: the content provider has a record of what a specific consumer has purchased, and this enables him or her to re-download the content for the new device. Registering what a consumer has purchased also gives content providers the advantage of knowing their customers and their habits.

Verhás then talked about the decisive role of mobile phones in the future of the on-line music market. There is a strong contractual relationship between the telecommunications provider and the consumer, so collecting money happens anyway on a monthly basis. This gives mobile operators an advantage over any other provider, he said. He also emphasised that while mobile phones are becoming the DRM enabler devices today, their usage patterns differ between countries; thus cell phones do not enable content usage and DRM in the same way across cultures.

### 2.4.3 Panel Discussion

Both speakers attracted a huge wave of complaints and questions regarding their services and attitudes towards consumers: it seemed as if they were the only representatives of the content providers, with some workshop participants blaming them for the current – in many cases unfriendly – situation with real-world content offerings. While the majority of these questions were of a technical nature, some questions also related to more general issues.

A question for Péter Verhás was whether, beside the mentioned advantage of having a contractual relationship with consumers, there was any other reason why new providers were reluctant to enter the market. Verhás answered that many consumers were still afraid of paying on-line, and therefore paying for content together with the monthly telephone bill was considered a huge advantage by many people. On the other hand, since consumers controlled their own devices, service providers did not have a real option to control who else provides content to consumers.

## 2.5 Consumer Rights

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The lunch break was followed by the fourth block of presentations, this time with consumer rights in focus. One of the questions most interesting to consumers is about their rights and legal status when dealing with digital content. Consumers are often criminalised, advertisements on the streets and television spots emphasising that downloading music is illegal. On the other hand, content providers often impose conditions that are unfair and in many cases unacceptable to consumers. In the fourth section, three speakers tried to give an overview of the state of the art in European legislation, and implementation of regulations valid for DRM.

### 2.5.1 DRM and Contract Terms – Consumer Rights Jeopardized

*Lars Grøndal* from BEUC (The European Consumers’ Organisation) on secondment from the Consumer Council of Norway, started his speech by introducing the controversy between business interests and consumers’ interests. He said that much of the controversy originates from a conflict between standard terms of contract regulating how consumers can use digital products legally, and DRM control of consumers’ *de facto* use of digital content. With a case study on iTunes’ standard terms, he illustrated how unfair terms and conditions of purchase can be: terms of contract can be changed unilaterally by the content provider to their benefit, while all responsibility is transferred to the consumer in the event of a security flaw, for example. This is generally considered unfair by consumers, because they generally do not expect new terms to apply later.

In a perfect world, the market will react instantly to consumer needs, Grøndal said, while unfortunately consumers are not able to correct all types of business behaviour contrary to their interests. In this sense, consumers are in a slightly worse situation than businesses, which are protected by copyright and anti-circumvention regulations. On the other hand, he said, consumers have other opportunities, since national consumer legislation can contain exceptions: in Norway, for example, one can legally circumvent DRM measures either to achieve accessibility or to be able to play purchased content on another player. He concluded his presentation with the statement that “business interests are not the only ones that deserve protection” (cf. also Grøndal 2006).

### 2.5.2 A New Balance between Authors’ Exclusive Rights and their Limitations

*Dr. Anikó Gyenge* from the Hungarian Ministry of Justice talked about the well-known controversy between copyright law and TPMs (technical protection measures). After discussing a couple of examples of functions implemented in DRM systems which are infringements of copyright law, she concluded that not all technical functions can be legally interpreted, therefore not all measures are protected by copyright law. Her main point was that DRM systems not only have to provide technical enforcement of copyright, but they also have to provide for the exceptions and limitations within it.

She cited *free use* as an example of to what extent DRM restricted legal copyright exemptions. Free use, she said, was generally not implemented in DRM systems, and administrative regulations were not used by the beneficiaries of free uses. Therefore it was in many cases more convenient to allow infringement of protection in the case of free uses, rather than to provide an official means of circumventing DRM protection. She concluded that while consumers might not be in a very favourable situation regarding the technical implementation of copyright and the legal protection of DRM systems, there is a difference between written law and enforced law: since the regulatory system is hard to interpret in practice, judges in many cases do not apply the legislation – to the benefit of consumers.

### 2.5.3 The Experiences of iRights.info – Is there a Need for Additional Consumer Information on Copyright Law After its Revision in Europe?

*Matthias Spielkamp*, editor of iRights.info, introduced their project to the workshop participants. iRights.info is an information web site, supported by the

German Ministry of Consumer Protection, providing additional information to consumers about copyright regulations and DRM, since, as Spielkamp pointed out, from laws and standard terms and conditions “no one is able to understand what is going on”. As an example he said that they examined the contract terms of three music services available in Germany: after having copied and pasted them into Word, correcting font size and layout, he found that iTunes, MusiCloud and Sony Connect had 33, 18 and 55 pages of usage terms respectively. Therefore it is obvious, he said, that messages in plain language and explanations of legal regulations are needed to educate consumers about their rights and limitations, since information provided by the content industry is not easy to understand.

On iRights.info consumers can find more than 40 texts on basic aspects of law and usage, and there is news every week. iRights.info follows an interdisciplinary approach and uses current media tools to educate German consumers about their rights regarding digital content and DRM. Fairness, openness, reliability, independence and finding the correct balance between alternatives are their main approach to the topic.

Spielkamp talked about the experiences of iRights.info, and concluded that while the two-year-long project was soon going to end, they were looking for additional funding, as he saw that there was a clear demand for additional consumer information on copyright law at a European level (cf. also Spielkamp 2006).

#### 2.5.4 Panel Discussion

After the consumer rights session a very lively discussion followed. The first question was about whether consumers were ultimately depressed by trends in DRM, or if DRM in its current form was acceptable. Grøndal said that with the latest developments and national regulations the situation was becoming more acceptable for consumers. Spielkamp answered that in his opinion open content was the best content. He said the argument that nobody will create content if everything is free is a doubtful one.

Alapan Arnab raised the question of terms and conditions. He argued that iTunes was a piece of software, and that is why its terms and conditions were similar to that of software. Lars Grøndal said that it was an unfortunate thing that terms were created in the US for the US, where more restrictions are accepted by law. He said that for Europe the terms were just translations, not adaptations. Matthias Spielkamp remarked that in many cases they were not even translated. He talked about a German campaign which analysed licensing terms, and went to court to attack them. Lars Grøndal referred to a controversy: in the Norwegian version of iTunes the terms and conditions state that Luxemburg laws are applicable in the event of any doubt. Who, in Norway, knows Luxemburg laws? he asked.

Matthias Spielkamp continued by pointing to the fact that if one reads them, terms and conditions often proved to be inconsistent in themselves. He concluded that their main purpose was probably to discourage consumers from going to court in the first place. Alapan Arnab pointed to the fact that the traditional advantage of big companies is the potentially unlimited amount of money with which they can finance years of legal action, even if they lose in the end. Hugh Huddy added that conditions under which the contract terms are dis-

played are also in many cases unfair for disabled people: they can unintentionally click on “Agree”.

The last question was about the “fairness” of contracting terms. Lars Grøndal said that there are many different ways such terms can become void. First of all, in many cases one of the last sentences of such terms states that if some regulations are not compliant with national law, they are void. This, of course can render such terms ineffective. But the question is how many consumers are familiar with their national laws? Also, in some cases it is not made possible to print out terms and conditions for a product. Who could remember dozens of pages of legal regulations? Ultimately it is the courts who decide what is fair to the consumer and what is not, but this whole issue is too ambiguous, so the ultimate aim of content providers is to deter consumers from exercising their rights.

## 2.6 Consumer Initiatives

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In the last session of the day two speakers talked about different issues, but the common point was that both represented grass-roots movements. The first presentation talked about the Digital Media Project, an independent initiative also supported by some major industrial players, with the aim of creating an interoperable and free DRM system. The second speaker talked about a movement which aims to digitise books – those works that are no longer available either on the shelves of bookstores, or in digitised form.

### 2.6.1 The Money Factor

*Martin Springer*, a private contributor to the Digital Media Project, started his presentation with a case study: every couple of years the soccer leagues make their exclusive licence deals with three or four content providers, and thus they force their fans to either accept their new proprietary DRM standard, or stop watching the games. Thus if a football fan in Germany wants to follow his team’s matches in national and international games, he needs to subscribe to several service providers and network providers, and spend a lot of money buying incompatible receivers and subscribing to unnecessary programme packages. He concluded that the industry uses DRM as a weapon against competitors, trying to lock consumers into a particular DRM scheme and particular business models. Innovative media usages like sharing content among soccer fans from different European countries are impossible.

Springer suggested that consumers should get involved in DRM standardisation, with the goal of creating a standard DRM that is open and acceptable to both consumers and rights holders. He introduced the DMP project (Jeges 2005; Jeges and Kerényi 2005), in which he works because he intends to defend concepts like privacy and End-user Rights in a DRM standard. He also mentioned the “right to read”, a missing TRU (Traditional Rights and Usages of consumers, that must be made possible by the Interoperable DRM Platform) – previously mentioned by Hugh Huddy. He said that this is why broad participation by every possible stakeholder is needed in the development: the ultimate DRM solution must be acceptable to everyone from the industry, and to all consumers.

### 2.6.2 Silent Revolution – When the Market Fails

*Balázs Bodó*, assistant lecturer and researcher from the BUTE Centre for Media Research and Education, introduced the Silent Library Project, a commons-based peer production. First he illustrated with figures the fact that both on the Hungarian and US markets, considering both books and feature films, only some 20 per cent of the titles that have been published within the last 15 years are still available for purchase. The simple reason is lack of shelf space, he said. However, there is still a considerable market demand for those titles not on the shelves. All are under copyright, but they are not available from legal sources.

The Silent Library Project is an illegal movement, a group of people who started scanning, digitising and sharing such titles with each other, making them available again. DRM has a completely different approach to the SLP, he said: by centralisation and access hierarchy, they tend to re-create scarcity in the digital world, similarly to what is happening in the physical world with books on the shelves. Bodó illustrated the world in 2050 with an imagined scenario in which all works from 2010 will probably only be available in a form protected by impregnable DRM. In this world – when no marketing is behind a product (because it is not in the 20 per cent), and commons-based networks (like SLP) are shut down – most works will not be available to the public, and our knowledge – our common experience – will have shrunk. He concluded his talk with the statement that “Culture is a common good, and common goods cannot be made of private goods”.

### 2.6.3 Panel Discussion

In the last discussion round of the day the speakers were asked about their own opinion on which direction the world of DRMs will go in. Matthias Spielkamp asked Martin Springer whether he really believed in creating a DRM system which embraces different cultural and judicial systems. Martin Springer replied that this is a hypothetical belief, and that until reality proves the opposite, he will continue to think this. “Bad and evil” DRM systems, he said, are a fact. One can be sad and run around in circles, but something should be done, and DRM should be turned to the benefit of people. This is why the DMP has been launched. Alapan Arnab added that good DRM systems that both he and the DMP are promoting can only be viable when consumers benefit from protecting their content.

Kristóf Kerényi asked the speakers about “decentralised taste”. Martin Springer replied that the masses and mass taste are controlled by the mass media, operating in a closed feedback loop. As long as the distribution chain is owned by the big studios and labels, taste will be centralised. Balázs Bodó added that this proves the value of commons-based networks; therefore, he said, he does not see any value for consumers in DRM. Alapan Arnab agreed, and added that the law locks up culture for 75 years – 70 years more than it should – because after 5 years the market value becomes so small that nobody will want to pay for that content. Balázs Bodó added that commons-based networks also have a big price advantage: it is cheaper to download something from the network than to go to the library, see whether the content is there, wait for cross-library exchange, and so on. A workshop participant expressed his disagreement with the latter, stating that since works will be available in digital libraries too, DRM does not kill the possibility of retaining content for longer periods.

## 3 Conclusions

### 3.1 Conclusion: The Need for Integrated DRM and Payment Solutions

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*Zoltán Hornák*, INDICARE partner from the Budapest University of Technology and Economics, SEARCH Laboratory, summarised his conclusions on the whole day's activities in his closing speech. Since the workshop moved along different streams, each related to consumer aspects, the conclusions he drew from the whole day's presentations and programme were rather diverse.

From the surveys we learned that there is a clear demand from consumers to obtain content – even if they have to pay for it – but if consumers consider the offerings unfair, they will not accept them, and will choose alternative channels. Furthermore, consumer expectations of traditional usages must be supported, to create viable DRM systems.

In the accessibility session we learned about the difficulties that blind or other disabled people may face when accessing even unprotected content, and also the controversies surrounding DRM and accessibility. And although nowadays accessibility of content and DRM can work together, in the digital world – a world that we can design from first principles – we must be careful not to recreate the barriers that are present for some people in the physical world.

The content providers emphasised that DRM helps them to know their consumer and create new business models, while consumer rights experts doubted this statement. From the rights session we learned that consumers are not in a very bad position after all, because in some countries doing “things in the grey” – like downloading or freeing DRM-protected content – is not illegal under the law, and even if it is forbidden, if judges do not enforce it, legislation does not have much effect. In any case, informing consumers about rights in a clear and understandable manner is a very important issue.

At the end of the workshop we heard about two consumer initiatives, one of which tried to develop a DRM system which was better, interoperable and thus more acceptable to consumers, while the other completely rejected DRM and tried to create an (under)world without DRM.

Hornák's summing up of the day was that DRM has come a long way since the start of the INDICARE project. Comparing conclusions from the first couple of workshops and this last workshop, one can clearly see that while two years ago DRM was mainly about restrictions on content use enforced by the content industry, by now a broad range of stakeholders have started to deal with DRM systems in order to make them more acceptable to consumers. From the last block of presentations one can clearly see that consumers cannot be neglected any more, and that acceptability is also starting to be an issue for content and technology providers.

Hornák thanked the project members and the workshop attendants for their participation, and expressed his desire to continue to deal with the topic even after the INDICARE project ends in February 2006, in order to make more acceptable DRM systems for every stakeholder in digital content distribution.

## 3.2 Summary

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The fifth INDICARE workshop, organised by the Budapest University of Technology and Economics, was a success in bringing together researchers, industry representatives, consumer rights activists, private DRM contributors and – last but not least – representatives of minorities from across Europe to learn more about the current trends in content usage and the problems of average consumers and special groups using digital content.

Five blocks of presentations were held, each one followed by fruitful discussion, in which the audience could ask further questions and elicit opinions from the panel of speakers in that block. Several interesting questions were raised, most of them real consumer issues – the real aim of the INDICARE project. The slides of the presentations are available at the project website (<http://www.indicare.org/events>).

With this event the series of workshops organised within the INDICARE project has come to an end. A large number of interesting topics was addressed, and through the final deliverables of the project (Consumer Guide, User Guide, Policy Papers) the experience gained at these international multidisciplinary events will be built into the results of the dialogue project.

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