Business Models for Mobile Music and DRM

Report of the 1st INDICARE Workshop
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by
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INDICARE
The Informed Dialogue about Consumer Acceptability of DRM Solutions in Europe
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eContent

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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

INDICARE Workshop Series

The five workshops within the project each focus on different sub-topics related to DRM: *Business Models and Rights Management; e-Payments for Digital Content; Consumer Perspectives on DRM; Social Exclusion by DRM; Human Factors of DRMs*.

Invited speakers have been selected from organisations which have direct or indirect connections to content-related services and DRM, as well as representatives of consumer organisations. INDICARE has established a network of experts in these fields, and the aim of the workshops is to stimulate discussion between different parties in DRM related business, from customers to content providers and vendors.

First Workshop: Business Models for Mobile Music and DRM

The first of the five INDICARE workshops was held on 30 September 2004 by project partner Berlecon Research. The event took place in Berlin, at Magnus-House, and was organised in parallel with the Popkomm Music Fair, a highly respected annual conference for the key players and interested parties in the European music industry.

More than sixty participants from all over Europe attended the workshop. This event brought together top experts from industry, academia and policy-making to discuss the opportunities and challenges of the currently emerging mobile music market and the role of DRM solutions. The conference had an interdisciplinary approach, with a focus on business models and market developments. Special attention was paid to consumer issues, in particular the level of acceptance of new mobile music services by consumers.

Workshop Topic

The main topic of the workshop was mobile music. As mobile handsets and cellular communication networks evolve, and the penetration of mobile devices reaches over eighty percent of the population, it is obvious that new services appearing are aimed at young and active users who currently represent the major market for value-added services. Many of the issues which providers face are already known from previous experience in music distribution on the internet, but new technologies also raise new problems which have to be solved to successfully exploit opportunities in an expanded market. The topics discussed included:

- The current state of the mobile music market
- Technological developments
- Legal issues
- Business models / case studies
- Consumer acceptance and consumer concerns
- Future trends

2 Workshop Programme

2.1 Introduction to the Workshop Blocks

The workshop was organised around four thematic blocks, with three or four invited speakers for each block, each with different views or perspectives of 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 Current State of the Mobile Music Market – An Introduction

The workshop was opened by *Nicole Dufft*, senior analyst of Berlecon Research. She welcomed participants to the event and outlined the main structure of the workshop. She explained the aim of the INDICARE project to those not yet familiar with it, and introduced the topic of the workshop.

Mobile Music Technologies – What is Possible?

Timo Pastila, business development manager from Nokia Technology Platforms, covered current technologies which facilitate DRM services for providers. He concluded that all technologies needed to create mobile music download services are already available, but providers now need to seize the opportunity.

He also described different types of users, from the *occasional user* (stores 5-10 CDs on mobile phone) to the *power user* (stores over 100 CDs), and the differing needs of each. He pointed out that user experience is one of the most important considerations when creating mobile music download services, but it does not have much to do with DRM technologies – these should be invisible to consumers, and need to introduce as few restrictions as possible. Pastila underlined important technical issues: interoperability

of services among devises needs to be achieved to create successful systems, and for this a *trust value chain* has to be formed. In his opinion, the technical specifications and also the contractual framework are already available to create the necessary trust among content owners, media/device platform, and service provider. The inability to move content between devices would drive consumers to P2P file sharing.

2.2 Block 1 – Mobile Music Standards and DRM

As with internet-based music services, interoperability of music formats and music player devices is a major concern for consumers. Therefore standards which guarantee this interoperability are very important. On the other hand, for content providers there are some other considerations that could override consumer concerns, and so they tend to develop proprietary standards in order to gain certain (monopolistic) market positions in the mobile music market. The workshop's first block introduced three speakers discussing issues related to current and future DRM standards.

Empowering Mobile Content With DRM – Players and Tactics

Gilles Babinet, CEO of Musiwave and board member of the Mobile Entertainment Forum, gave a presentation in which he outlined the nature of legal and illegal content offerings, described the existing and potential future tactics of content providers and players in the music industry, and forecast scenarios for the future of mobile content markets. He also noted that today the mobile music market represents as much as 60 percent of the total mobile entertainment market. He saw the content services as "telco controlled" at the moment, and that their might me a threat that mobile services become "PC slaves".

Mobile DRM – Standards and Solutions

Niels Rump, senior consultant of Rightscom, proposed a wide definition of DRM, in which policy management and policy enforcement are equally important components. He described today's chaotic situation as the result of a lack of interoperability, and as an illustration of the need for standardisation to achieve fully automated DRM systems. He introduced three alternative levels of standardisation, from *no* formal standardisation, through standardised building blocks, to the complete standardisation of DRM systems. Rump also described the *Rights Locker* model as a possible model for future DRM systems.

Proprietary DRM Solutions

Michael Bornhäusser, CEO of Secure Digital Container (SDC), presented the current status of DRM standardisation in great detail. He described the demands of consumers (i.e. ease of use, entertaining applications, and functions to browse, purchase, store, copy, burn, distribute within their own en-

vironment, and to distribute), content owners and content distributors with respect to DRM systems and defined prerequisites for the attainment of the ideal DRM system. In his opinion, the ideal DRM system has to be easy to use, be device independent, implemented without client installation, related to the user and not to the machine, support data transfer to different devices, be prepared to handle new media formats, support superdistribution, as well as has to be approved by content owners for all kinds of content, device types, and distribution channels. Technically, he suggested to focus on Java as an application layer that is independent from most operating systems and widespread on PCs, handhelds, set-top boxes, and mobile phones. Bornhäusser described the current DRM patent holders and standards and also made some predictions about the future DRM market.

In the second half of the presentation Bornhäusser highlighted the conflict between today's fast time-to-market requirement from content providers and the need for standardisation. He touched some implications of proprietary solutions for both consumers and providers, since in their fight for market share carriers would have to use non-standardised solutions, standardisation would need too long. Additionally, full-solution standardisation of DRM systems would possibly limit competition to only competitive factor, i.e. the price. Also the IP holders of DRM systems might not contribute appropriately to the standardisation. Finally he described the paradigm for future standardisation.

Panel Discussion

In the first panel discussion questions were asked about the current market share of mobile music capable phones. It was mentioned that there are very few compatible phones at the moment, but that others are coming out, as mobile music is just starting up.

Questions were asked about who are more important – low frequency users or power users. The panel's answer was that content providers do not really distinguish between them, and that both are treated equally. As a side remark, it was mentioned that at the moment only 20-25 percent of owners of the compatible SX1 mobile phone use the download option frequently.

It was pointed out that while today ringtones represent the bulk of mobile music sales, they are going to be replaced by CD quality music in the near future. This poses a risk to the music industry, because such music could easily be transferred to other music devices, e.g. home audio systems.

Some questions were asked about whether we could end up with a platform war, in which different players compete on the market with different DRM systems and platforms. These platforms may have to compete with today's free systems, such as MP3. Interoperability of different platforms was seen as a serious issue. Timo Pastila pointed out that the security of future systems is very important, and for interoperability reasons a trust relationship between different DRM applications has to be developed.

2.3 Block 2 – Content Protection Beyond Technology

Technological copy protection is certainly one of the main goals of current DRM systems, but they are not very successful in protecting content from attack and unauthorised redistribution. On the other hand, they limit legitimate use by applying rules and limitations on content which are too strict, and are thus quite consumer unfriendly. This block discussed alternative approaches to technical copy protection in order to achieve better DRM models, and thus greater acceptance from consumers.

Legal Measures to Protect Copyright in the Mobile World

Dr. Martin Schäfer from Böhmert & Böhmert talked about the necessity that all business models and legal and technical measures hav to support each other to achieve a high level of copyright protection. He argued for the co-operation between hardware providers, mobile network providers and content providers. Schäfer talked about the legal prerequisites for successful business models: a clear distinction between legal and illegal uses of content should be made, whilst ISPs should be legally obliged to co-operate with content owners.

Competing with Sources of Illegal Music

Bill Rosenblatt of GiantSteps Media Technology Strategies and DRM Watch gave a presentation on what could be learned from the success of peer-to-peer file sharing systems, in order to promote more successful business models for mobile content. Rosenblatt started by describing the advantages of P2P systems for consumers (e.g. anyone can participate, files are playable on many devices, have no limitations, do not expire, can be shared, or the content is free) versus those of legitimate services (e.g. guaranteed content, good sound quality, few ads, no spyware, additional information). He also mentioned superdistribution as a desired model which has to be "tamed" through DRM, and exploited by new services. He gave to examples of P2P services that imply DRM technology, i.e. Wippit and Bitmunk. He mentioned fingerprinting and watermarking as ways to limit illegal distribution while maintaining present P2P infrastructures. Rosenblatt emphasised the role of legislation and new business models when transforming P2P networks to legitimate services, but considered the EU as being well positioned to legalise such P2P experiments in the mobile market.

Consumer Acceptance of DRM – a Key to Success

Machiel van der Velde, a policy adviser from Consumentenbond, presented the Dutch Consumer Association's perspective on copyright and DRM systems. He described consumers' perceptions of content, and the risk the digital environment poses to them. He pointed out that today's DRM systems place too many restrictions on use, even limiting legitimate use of content. In his view, consumers expect something different from DRM systems than what they do today. He urged for the better communication of the fact that

DRM solutions are applied, clear contracts and functionality, legal guidance, user-friendliness, fair trading and maintaining open access to works in the public domain. He said that better privacy protection is also a key issue for consumers. In addition, he emphasised the lack of interoperability and the support for legal exemptions. Van der Velde concluded with the observation that while DRMs have the potential to ensure more effective markets, they could also harm societies' legitimate interests and assist the growth of monopolistic tendencies. He underlined that levies on blank media and DRM systems should not exist simultaneously, and as a final word he declared that DRM systems and business models should be designed with the consumer in mind.

Panel Discussion

The discussion after the second block of presentations provided the arena for an intriguing battle between advocates of legal restriction and representatives of consumer interests. The opening shot was the assertion that DRM is a means of combating piracy. But who are the pirates? Surely it is not fair for the music industry label consumers as pirates. Who can say that a particular copy is illegal of not?

This led to the contention that copyright should control use, not access. This argument maintains that there are no illegal *copies* of content, just illegal *uses* of content, and that DRM systems should therefore determine whether a particular use is illegal or not.

There was a discussion on intellectual property rights not being analogous to physical property rights.

The eternal question was also asked: is DRM really about protecting content? What in fact *is* the exact purpose of DRM? One line of argument was that the goal of DRM is to make as much money for the music industry as possible. The other line was that DRM exists to encourage legitimate use and ensure payment for it.

The scale of piracy was also a question for debate. According to the music industry, from a business point of view, the circulation of one, two, three or even ten illegal copies is not an issue. But sharing music with four million people *is* an issue. The question is about scalability of the copying process. Duplicating a few CDs with a home burner is a much smaller threat than sharing music files over peer-to-peer networks with several million users. According to one survey, three times more recordable blank CDs were sold over the last year than original music CDs.

It was also suggested that different business models should be tried out and that the industry should learn from the results.

2.4 Block 3 – Mobile Operator Strategies

In the third block, a service provider and three mobile operators introduced their ideas on how to create a music service which gives the ultimate experience for its users. While they shared common views on some issues and disagreed on others, the most important aspect in each presentation was that the mobile music industry can only win if it understands consumers in order to serve them better.

Mobile Music and DRM – A Service Provider's View

Franz Jachim, COO of UCP Morgen, (deputised by Martin Schmitt) a content delivery service provider, investigated the question of DRM from both content and service providers' and consumers' points of view. He said that in the future DRM would need to adapt to several devices and retailers, so a high level of flexibility would be required, which might lead to problems.

According to his analysis, consumers today do not really have an idea of what DRM is, and if they do, they perceive it mainly as a form of revenue collection, restrictions and reduced user rights. The question of privacy is also a serious issue as well as the fears on non-future-proof systems (e.g. due to mergers or bankruptcy of content and technology providers). Since consumers are usually only in direct contact with their mobile operators, they tend to blame the latter when services fail to meet expectations.

Therefore, he said, a high level of transparency is required: consumers created the demand for private copying, backup copying and sharing, and thus rights should be tied to the consumer and not the device. He also concluded that having invisible DRMs – a trend expected in the near future – does not mean that users do not have to be well informed: it should be made clear to them that the content they have obtained incorporates DRM solutions were used. They should also be informed of what types of use are permitted.

Case Study 1 – O2

Michaela Schenkel presented the new business model of O2 – a German mobile operator – which is built around providing music download services

supported by DRM technologies. O2 had carried out market research which showed that there is consumer demand for mobile music services. They also understand that consumers require a broad content portfolio, a transparent pricing structure and no restrictions regarding content usage. They contracted with five major record labels, and provide their content in full length and good quality, while maintaining low size for easy download. Billing is arranged through a customer's usual mobile phone bill, on a per content object basis. Standard technologies such as previews are supported, together with value-added services, e.g. exclusive tracks and tracks prior to official release. O2's content is available for selected phones and also for their own digital music player. They will also support burning the songs onto CDs, which creates maximum interoperability.

Case Study 2 – Orange

Gerard Grech, head of Music & Video Global Marketing at Orange – another mobile operator – outlined his company's mobile music strategy. They have also surveyed market needs for mobile music and found a high demand for ringtones, and also an emerging demand for higher fidelity music. They have made efforts to analyse their customer base, and decided on a more personalised music service strategy as opposed to a mass market approach to services. They support every possible mobile phone, not just selected models, and they have set up a mobile internet service, in which everyone can have their own home page, capable of being personalised. By combining compelling magazine-like content with personalised favourite information, and supporting on-line communities with shared interests (to 'build a shrine'), they expect to see a faster growing mobile music market as a result of consumers being treated as individuals.

Case Study 3 – Vodafone

Sascha Lazimbat, senior manager for line development at Vodafone D2, presented Vodafone's music portfolio. Most of their system's components – including entertainment and personalisation – are common to the two previously mentioned operators. However, they have their own process of product evolution, which targets those groups of consumers who are willing to spend more on mobile music entertainment. Vodafone has MusicDownload USP, which combines the mobile and PC experience of the new generation of music services. In particular, their system would allow two downloads, one for the mobile phone and one for the PC.

Panel Discussion

In the discussion phase the audience was extremely interested in further details of the music services of the three operators. The following are some of the issues discussed:

Pricing: In many cases the cost of downloading music from mobile operators is higher than the cost of downloading from internet-based music services. The reasons are different contractual terms with the record labels

and data transfer costs: consumers do not usually need to pay extra for data connections when browsing the operator's music store or downloading tracks, since the cost is included in the price of a piece of music.

Backup of tracks: In case a device which was used to download or store music malfunctions, some providers have recovery licenses, so the consumer does not suffer a big loss. The terms under which such licenses can be granted depends on the music industry.

Standards: Distribution of digital content is a major business. The question was whether in this case standardisation of DRM is in the interest of telecom providers. The answer was that although DRM is at present seen as limiting rights, it is designed rather to promote a wider range of business models. For this reason standards were considered to be of high importance. Participants also referred to superdistribution.

Each provider emphasised that they are in a very good position, since they are in direct contact with their customers, unlike the record industry. Personalised offers and billing can easily be solved via existing channels. The telecom industry is also involved in data traffic when consumers download tracks, so they can easily become internet service providers. Personalisation is also a driving force for the use of the music portals.

2.5 Block 4 – Opportunities and Challenges for the Music Industry

In the fourth block, we heard three interesting presentations introducing traditional, standards-based, and new, DRM-less music services, and some thoughts were also presented on the challenges and opportunities for small, independent record labels.

Mobile Superdistribution – The Need for Open Standards

Dr. Willms Buhse, head of product and marketing at CoreMedia and vice chair of Open Mobile Alliance, talked about OMA's new DRM standardisation. First he gave some facts about the future development of the mobile content market. Next, he introduced and explained in detail the two OMA DRM standards, the earlier of which (version 1.0) is now employed in a huge array of mobile handsets, recently, more than 120 models with DRM installed and more than 30 which would enable superdistribution. OMA has also finished work on the specification of the second version, which adds trust to the previous model, enabling the distribution of high-value content. Unfortunately, consumers will have to wait for its implementation. Buhse emphasised the importance of superdistribution, which encourages the emergence of new concepts and business strategies. He also underlined the revenue potential of viral marketing (i.e. a marketing strategy which attempts to motivate consumers to pass on a marketing message to others). CoreMedia, he said, is a technology provider for OMA's open standard, which is of high importance in driving the music market. He pointed to some advantages of the system for consumers, i.e. allowing to share within a domain (e.g. the family), to transfer to other copy protection systems (e.g.

set-top boxes or computers), or to enable a reward mechanism (the 'digital tupperware').

Case Study – Sony StreamMan

Tina Rodriguez, director of eMedia and new technology at Sony Music, presented the new Sony music streaming service *(StreamMan)*, as a case study. StreamMan, she said, is the first personalised music service in the world to provide access to a huge music collection and value-added services like artist information and entertainment. With StreamMan, one can discover, listen to, select and share music anytime, anywhere from one's mobile phone or home PC. Rodriguez said the service has been made available for a number of handsets, and is to be launched commercially in Finland in the winter of 2004. The idea behind StreamMan is that consumers can "change their habits", and can be persuaded to relinquish "ownership" of content if they can have access to it anytime, anywhere.

The interesting thing about StreamMan is that it does not use DRM for the streaming service. Sony considers DRM not to be effective, and the rules difficult to understand for consumers, the usability questionable, as well as having a high implementation cost until such time as an industry standard is arrived at.

She also reported on key statements observed in market research by Sony such as "No technical restrictions or legal limitations", "The widest possible range of repertoire", "Share music and preferences without being illegal", "I will pay for a valuable music service", "Music on the go, anytime and anywhere", and "One device to accompany me with high usability".

Opportunities for Independent Labels

Michael Pohl, head of new media from Kontor Records (an independent label), gave a presentation on their prospects and opportunities in mobile music. He emphasised the importance of co-operation with other actors in the distribution chain. They can form partnerships with mobile operators to

solve distribution and billing, and mobile service providers to solve B2B distribution and customer service. Pohl emphasised the importance of content aggregators, who can collect content and exploit it on all relevant digital business models, providing a centralised service for independent record labels. He sees the role of DRM in enhanced security, which is really needed since downloaded content can easily be transferred via non-networked connections like IrDA or Bluetooth. On the other hand, Pohl mentioned superdistribution as a unique opportunity to reach maximum penetration of a target group with new content. He said that reliable watermarking was the solution for these applications.

Panel Discussion

In the last panel discussion of the day, the audience was curious about Sony's new music streaming service. We learned that today only a limited array of mobile devices is compatible with the service, since high-end programmable smartphones are needed to implement payment solutions. Sony's representative said that subscribers to their service will be charged by the respective mobile operator, and according to a survey they are willing to pay a monthly fee of 10-15 Euros. However, Sony's streaming service was criticised with regard to the ownership of content with the argument that humans are collectors.

Questions were also asked about OMA DRM 2.0. The earlier version of the OMA DRM enabler, while it was a good starting point to launch services for phones with limited capabilities, was described as "weak protection for low value content" (operator logos, ringtones). The new version of OMA DRM adds real security and trust, but requires high-end devices with considerable computing capabilities.

There was also a discussion about ripping (saving to disk) streamed music content. The general conclusion was that as consumers have always recorded broadcast material, this probably will not change in the future, but anti-piracy methods have improved. Streaming was seen as good in any case, since this way content reaches more people, which helps market expansion, encouraging newer solutions.

3 Conclusions

3.1 The Future Outlook for Mobile Music

Thorsten Wichmann, managing director of Berlecon Research, summarised his conclusions on the whole day of workshop activities in his speak "Future Outlook for Mobile Music".[1]

Lessons from Mobile Internet/Content

- Device capabilities and usability are crucial; user friendliness of services will determine the success of a product. Therefore device manufacturers have a crucial role in making mobile music a success.
- Consumers might not behave as expected. Who would have predicted the success of SMS and ringtones and the relatively cold reception of MMS? At the end of the day players that identify and financially exploit actual consumer behaviour will be the winners.
- Mobile internet is not like the internet, they cannot be handled similarly. A vision of equivalence between the fixed and mobile internet did not materialise. Therefore players, power, problems and products will be different in the mobile sphere.

Lessons from Music on the Internet

- Consumers want digital music – no matter what the copyright owners offer. Digital music is a consumer-initiated product, implying strong demands. Device manufacturers can financially exploit this demand through handset capabilities, but consumers will not wait for new services from copyright owners, they will take whatever comes first – be it legal or illegal.
- Consumers are willing to accept usage restrictions, if the copy-protected product is competitive with unprotected offerings. iTunes and other services have shown that consumers accept restrictions if they are not too narrow, but solving legal and technical issues is non-trivial. However, some results from market research by mobile carriers also indicated that consumers will not accept any restriction of uses.

Lessons from Consumer Electronics

- "Standard wars" can seriously slow down technology acceptance, for example the past and current battles of DVD+RW, DVD-RW, DVD-R/W, DVD-RAM, SVCD, Blue Ray, etc. harm the industry wanting to introduce new technology. Incompatible DRM systems (WMA, FairPlay) have similar problems.

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[1] See also the editorial of the INDICARE Monitor, Vol. 1, No. 5, by Thorsten Wichmann http://www.indicare.org/tiki-read_article.php?articleId=56.

- Consumer electronics is a "dog-eat-dog" environment: rapidly changing technology, fierce international competition and the need to negotiate with large customers favour big manufacturing companies. Therefore small companies have the only option to be niche players or suppliers to bigger ones.
- A typical problem of new technologies is their orientation towards sophisticated power users instead of producing simple, easy to use devices for the average user. For example most people do not WAP, do not MMS, and do not programme their VCR. Therefore mobile music has to find its place on the spectrum between the passive radio listener and the active digital music geek.

Implications for the Future of Mobile Music

- There will be mobile music with or without official services.
- Speed of market penetration depends very much on the strategic behaviour of players.
- Device manufacturers have a much more important role than operators or copyright owners.
- Usability of services is key to success.
- Ultimately the consumer decides on what services are acceptable or better than others.

Mobile Music Standards and DRM

- Missing standards cause several problems, among which high costs of content distribution (content has to be supplied for each type of device) is only one. Due to missing standards the uncertainty about the future is an obstacle to investment. In addition, creating new solutions threatens with patent law suits.
- Future prospects of DRM depend on perception of DRM by consumers. Will it be understood as "Digital Restriction Management"? DRM has to be an enabler for new, "fair" business models.
- While others fight it out, will MP3 have the last laugh? If usage offer is not good, consumers might turn back to MP3 and ignore the copy-protected music formats.

Content Protection Beyond Technology

- Where is the divide, who differentiates between legal and illegal activities? Is it the content owners, or is it legislation? Is it acceptable if differentiation is based on scalable versus non-scalable copying? Obviously, there is a need to find a common position, since content owners and consumer representatives are still worlds apart.
- Peer-to-peer elements will move into music distribution since it provides advantages over the traditional distribution methods, among them content sharing, recommendation and superdistribution. Music is also becoming a social activity.

Mobile Operator Strategies

- Operators have learned much, they now understand digital content consumption much better than during WAP hype. They can also take on role of "personalisation enabler", an interesting mid-point between selling mass market content and being only "the channel" for distribution.
- Labels, on the other hand, have not learned enough yet. Rights owners want all data, disrespecting privacy, and maximum protection for their content. There is obviously still some learning to do to better get to know consumer preferences.

Opportunities and Challenges for Music Inc.

- Maybe focus on iTunes and "technical" download has led people to overlook streaming opportunities, but streaming is indeed an interesting alternative to download, which also applies to wireline internet. But for this to come true consumer habits will have to change.
- Content aggregators have a special role in this industry, they can be technological pacemakers. Their main purpose is to make digital distribution possible for smaller labels also, alleviating problems of different DRM standards.
- Mobile music can also lead to indirect revenues, for example promotional effects can be of interest.

Closing Points

After having summarised the results of the workshop, Wichmann officially closed the event, which was then followed by a dinner reception, which provided an exceptional opportunity to create networking connections and promote INDICARE to the workshop participants.

3.2 Summary

The first INDICARE workshop, organised by Berlecon Research, was a great success in creating a forum for major players in Europe to discuss their views and learn more about DRM solutions applied in mobile music. Representatives from nine European countries took part in the event, together with some attendees from the United States.

Four blocks of presentations were held, each one followed by fruitful discussions in which the audience could ask further questions elicit opinions from the panel of speakers in that block. Several interesting issues were raised: consumer issues and implications of technology and market developments on consumer positions were central issues of the workshop, and a representative of the Dutch Consumer Association directly described consumer demands and expectations. More detailed articles on the basis of workshop presentations can be expected for the INDICARE Monitor.

The event was also very successful in promoting the INDICARE project to international DRM players and stakeholders. The second workshop will be held on 3 February 2005 in Budapest, with ePayments and DRM in focus.