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ANALYSIS OF E-BUSINESS MODELS FOR DIGITAL MEDIA CONTENT

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Abstract

The digitalization of media content and the development of new communication and distribution channels change the media sector and the business environment worldwide. Over the last ten years, technical advances have enabled the consumers to digitize, store, share and modify the content quickly and cheaply on a mass scale. Presently there are lots of file sharing tools and peer-to-peer networks with which the consumers can illegally copy and share content for free. Consequently, companies have implemented internet-based business models for digital content. At the moment, only a limited number of these e-business models are really successful and realize profits. In this context, the following core questions arise: What kind of e-business models are suitable to manage digital media content? What are the key requirements for companies to be successful in the economical utilization of copyrighted media content, especially in the internet? How do the present e-business models fulfil these requirements? The target of this paper is the analysis of e-business models for digital content. In this context the authors examine different aspects with regard to the management of rights on digital content, the consumption of digital content, and the organization of internal processes and structures. The analysis is focussed on e-business models for digital media content in the German music market. The results of this analysis will show that the presented e-business models do not fulfil all requirements. Hence, the attractiveness of these e-business models is lower than peer-to-peer networks and the illegal download because of the restricted usage of digital media content.

Keywords: E-Business Models, Digital Content, DRM, Consumer Based Requirements, Economical Requirements.

1 INTRODUCTION

The digitalization of media content and the development of new communication and distribution channels are changing the media sector and the business environment worldwide. Characteristics of this process are changes of media usage and consumer behaviour. Digital media content will be bought via the internet and be transmitted to friends or third persons instantly. As a consequence, it is estimated that sales volumes in traditional distribution channels will decline - for example a decrease of 21,3 % in trade of audio carrier in Germany in 2003 is estimated (IFPI 2003).

In the future companies which are active in the media sector have to face tremendous challenges: Firstly, managing the risks of the market developments (e. g., altered demand and increasing cost pressure) and secondly, making use of the full potentials of digital media content (e. g., multiple use and low distribution costs). Many of them are forced to change their business models, especially if they want to operate internet-based, and thus have to adapt their value-added processes. There are already approaches to manage these challenges. For example, Disney achieved a five times higher exploitation of rights related to the movie “The Lion King” than Sony with its “Men in Black” using a traditional business model (Eisenhardt and Galunic, 2000). Apple was able to increase the sales of its “iPod” by implementing an electronic music store named “iTunes”. In this context the following core questions arise: What kind of e-business models are suitable to manage digital media content? What are the key requirements for companies to be successful in the economical utilization of copyrighted media content, especially in the Internet? How do the present e-business models fulfil these requirements? In order to find answers, the following aspects have to be clarified:

- the management and enforcement of the rights on digital content,
- the circumstances under which a consumer is willing to pay for the usage of media content and
- the internal and economical requirements to realize efficient e-business models.

The target of this paper is to analyze e-business models for digital content. The authors examine different aspects with regard to the management of rights on digital content, the consumption of digital content and the organization of internal processes and structures. The analysis is focussed on e-business models for digital media content in the German music market.

After the introduction, chapter 2 describes the state of the art of e-business models for digital content. The state of the art of rights management for digital content is explained in chapter 3. Chapter 4 analyses the external consumer based requirements. The information was collected in a survey based on a 72 people random sample of media content consumers, most of them using file sharing tools. They were contacted in Internet forums. Afterwards, chapter 5 summarizes the internal economical requirements, which is based on literature review. At the end of chapter 3, 4 and 5, the presented e-business models are evaluated according to criteria based on their outcome. Finally, chapter 6 summarizes the results of this paper and indicates fields for further research.

2 E-BUSINESS MODELS FOR DIGITAL MEDIA CONTENT

Traditional business models for media content are generally based on selling physical media or on free consumption of content, financed by advertising revenues. Over the last ten years, technical advances (e. g., MP3, CD writer or peer-to-peer networks) have enabled the consumers to digitize, store, share, and modify the content quickly and cheaply on a mass scale. At present, there are lots of file sharing tools and peer-to-peer networks which help consumers to illegally copy and share content for free, e. g., KaZaa, eMule/eDonkey, Filetopia, Gnutella Clients, or Morpheus. As a consequence, companies have implemented internet-based business models for digital media content and entertainment. In the following, these e-business models are presented and examined. With regard to the examination of e-business models we start with a classification based on two criteria. The first criteria is the *type of compensation*, e. g., flat rate or pay per download (or usage) of digital media content. According to

Wirtz (2000), the compensation or the revenue is used to structure e-business models for digital media content. Buhse (2004) applied this characteristic to describe scenarios for e-business models, especially for online-music stores. The second criteria is the *dependency on supplier or its technology* (composed of soft- and hardware). During the analysis of e-business models, we noticed that some of the suppliers try to generate customer loyalty by creating a state of dependence. In this context, they often use technology. Hence, we use this second characteristic to structure the present e-business models for digital content.

According to these criteria, we could identify four categories of e-business models. Most of the analyzed e-business models are offered by the music industry. The reason is that the music market is the most dynamic market for digital media content in the internet.

A. E-business models based on "pay-per-download" and independent of technology of the supplier

This category of e-business models nearly corresponds to traditional distribution channels except for:

- The opportunity to buy single songs and not the whole CD.
- The offer of additional services, e. g., a search function or the possibility to download music of unknown artists for free.
- The necessity of registration with personal data.

The offer comprises well-known media content, e. g., songs of international music charts. The offered digital media content is in a data format (e. g., WMA or MP3), which is not restricted to any hardware. Often the customers do not buy the content but its usage. They receive the license to download the content once, to burn it on CD five times and to export it five times on a mobile device. That could increase the complexity to administrate the rights of the digital content. The additional services are not so sophisticated in comparison to other types of e-business models. The goal of these suppliers is only to sell the digital content. These e-business models are directly competing with peer-to-peer networks and illegal file sharing. So far, most of these e-business models are not profitable. Examples of this category are Mediamarkt, Karstadt and Tiscali with music on demand via OD2 and T-Online with the music platform "musicload".

B. E-business models based on "pay-per-download" and dependent on technology of the supplier

For these e-business models, long-term customer relations are crucial. Hence, the offered digital media content is in a data format depending on the technology of the supplier. The offer does not really differ from e-business-models of the category A. However, the customers have greater freedom to use the digital media content, particularly with regard to the technology of the supplier. The offer contains more additional services, e. g., personal notes of the artist about the song and costumers' chart lists with their favourite songs. The suppliers of these e-business models benefit from selling hardware components, because the offer of digital media content advances it. Examples of this category are Apple iTunes and Sony Connect.

C. E-business models based on a flat rate

The main goal of these e-business models is to attract consumers, which use peer-to-peer networks for illegally copying and sharing of digital media content and have a willingness to pay for it. For this reason the customers get a broad offer of content without any restrictions concerning its usage within the time of the flat rate. They only have to pay a low flat rate. The biggest problem of these suppliers is the acquisition of the customers. Therefore the suppliers provide detailed information about their offer. For the advancement of the offer, there are lots of additional services, e. g.:

- play lists
- individual administration of the collected media content
- information about the artists, the content or important events such as concerts
- communities

These e-business models are only attractive for suppliers, if they manage to attract a huge number of consumers. Examples of this category are Napster and Rhapsody.

D. E-business models based on commissions (named "Super Distribution")

This category of e-business models represents a new idea of selling digital content. The customers are both the vendees and the vendors. They get a low rated commission if they can sell their acquired content. At the moment, there are only few offers with mostly unknown media content. But the advantage of these offers is that the customers can use the digital content without any restrictions. In the future the customer's acceptance will be the key success factor for these e-business models. Examples are few unknown offers: www.dorfdisco.de, www.bevision.de, or www.fredadrett.de. These offers are based on the Potato System, a development of the Fraunhofer Institute.

At the moment only two or three of the presented e-business models realize profits. The reasons are very different (Sönke, Panten and Schäfers, 2004) (Dernbach, 2003) (FAZ.NET, 2004): Either, the customers are willing to pay for the content, such as for erotic content (e. g., Visit-X) or for online computer games (e. g., Tiscali). Beside the digital content, the suppliers sell also hardware (e. g., Music-Player) and profit by a mixed calculation with a positive result (e. g., Apple). In this context it is necessary to analyze to what extent these categories of e-business models are able to fulfil the following requirements based on the rights management, the consumers and the economical conditions of digital content.

3 RIGHTS MANAGEMENT FOR DIGITAL CONTENT

Based on copyrights law, rights define the general and economical utilization of media content. This means for example the way of usage (e. g., listening or printing), the possibilities of editing (e. g., extracting or multiplying) or the kind of transfer (e. g., copying or selling). For content provider and media enterprises, beside media content, rights are the central objects of business. Before digitalization the content was an inseparable element of the supporting medium, and copying and distribution processes were associated with expenses and a loss of quality. The enforcement of rights was supported by the physical medium. In the digital world the copying and distribution process is cheap and easy to realize without any supporting medium but a computer and the Internet. Consequently, it is now necessary to combine the rights with the digital content to enforce them.

In this context Digital Rights Management (DRM) came up, which was consuetudinary defined as "*a type of server software developed to enable secure distribution – and perhaps more importantly, to disable illegal distribution – of paid content over the Web*" (Streamcast Networks 2002). Technologies to support this idea of DRM are watermarks, rights expression languages and encryption. The combination of these technologies constitutes DRM systems which include the following functional elements (Hess and Unlü 2004):

- *Access control*, which could possibly be supported by encryption.
- *Use control*, which could possibly be supported by rights expression languages.
- *Handling of rights violation*, which could possibly be supported by watermarks.
- *Accounting* (function in the widest sense), which could possibly be supported by rights expression languages.

The following DRM systems provide some of this functional elements: Microsoft Windows Media Rights Manager, Open Intellectual Property Management and Protection, RealNetworks Helix DRM or IBM Electronic Media Management System. This interpretation of the meaning of DRM is focused on the enforcement of copyrights (Rump 2003). An advanced definition of DRM, which concentrates on managing copyrights, is: "*DRM covers the description, identification, trading, protecting, monitoring, and tracking of all forms of usages over both tangible and intangible assets. …"*(Iannella 2001). This definition includes an examination of the value-added processes of enterprises with regard to digital content.

We can identify some relations to Business Rights Management (BRM). Instead of just protecting content, BRM is rather a practical concept of a few media enterprises and deals with organizational

and especially internal aspects of Rights Management. This includes the communication of rights along the value-added processes and the regulation of identifying, utilizing, and administrating rights on media content (Documentum 2002). BRM exists since media enterprises deal with content and their copyrights. The digitalization determines new demands on organization and internal processes of Rights Management. Recently, there are efforts to analyse relevant processes and to support them with standardized software. Especially systems provider, e. g., SAP, IBM, Rightsline, or Jaguar, are drivers of this development.

Both approaches of Rights Management have the intention to commercialize rights on media content. BRM examines the internal relevant processes. DRM focuses primarily on the enforcement of rights on media content. Presently, media enterprises have the problem that consumers (every third German over 10 years) burn CDs or DVDs (FFA 2004). They do not accept the legal offer, but use file sharing tools instead to illegally download digital content, especially songs, movies, or computer games. The customer acceptance is one of the most important factors, which are critical for the success and survival of e-business models for digital content. At the moment, the technology of DRM stands for restrictions with regard to use the digital content for free, what leads to a low customer acceptance.

Most of the content providers deploy DRM systems to protect their digital content and their copyrights. Suppliers of e-business models of the *category A* use technology which controls the access and the usage. After that, they need special support to account the downloaded content. With regard to access and usage control, they often deploy Microsoft Windows Media Rights Manager because of its ubiquitous spread.

Suppliers of e-business models of the *category B* use protection technology based on a proprietary development. The customer has to install a client which takes the DRM functions such as the access control, the usage control and the accounting. The customer cannot deploy another software to use the offer of digital content. In e-business models based on a flat rate (*category C*), the customer can consume the digital content during the validation time of the flat rate. For that, they also need a client which is active during this time. The suppliers control only the access and the usage. The accounting depends on the flat rate and is independent of the usage of the digital content.

Only the e-business models of the *category D* do not use protection technology. The suppliers offer incentives by the opportunity of reselling the digital content. In this context, accounting plays a decisive role because the commission system is more complex than in e-business models of the category A, B, or C. Figure 1 shows an overview:

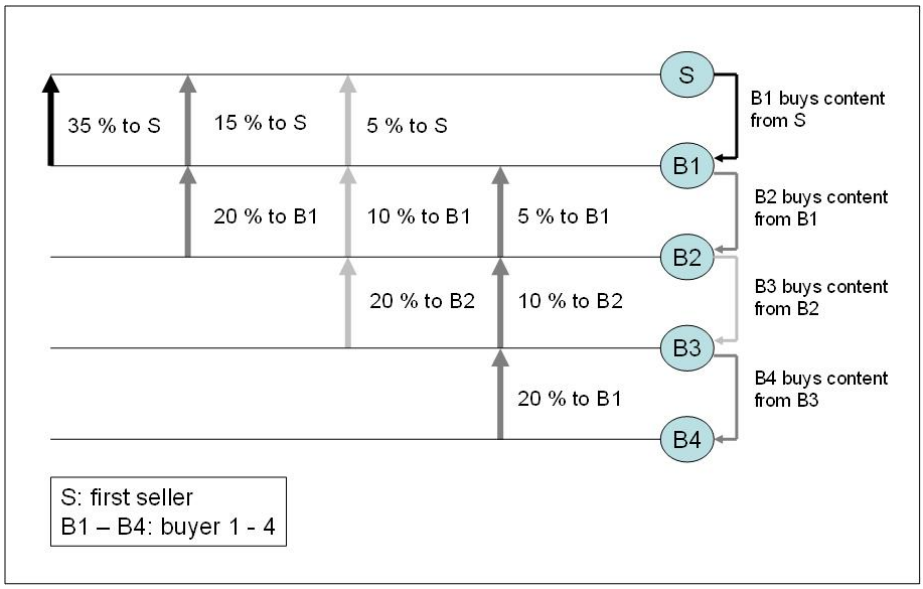

Figure 1. Commission systemin in e-business models of category D (4FriendsOnly 2004)

It is necessary to prove the operational reliability of this system together with an offer of content on a mass scale and lots of customers. At the moment the e-business models of this category offer only few and independent content and have comparatively few customers.

The deployment of DRM systems is widely-used by the suppliers of digital content in the Internet. It has the goal to control the customers and their behaviour. For this reason it leads to a lower customer's acceptance. It seems to be that the technology is in the centre of the implementation of e-business models. But the consumers of digital content are the target group of these e-business models and content provider should focus their requirements.

4 CONSUMER BASED REQUIREMENTS

In an explorative survey with a group of media content consumers, using file sharing tools or internet forums, the consumer based requirements should be identified. The survey is based on a quantitative research with a random sample of 72 persons. We conducted the survey in German and English language over a period of two months. The questionnaire consists of 21 closed-ended and 10 open-ended questions. To contact the interviewed persons, we placed an invitation for participation in several online-forums (e.g., www.emuleforum.net, www.gnutellaforums.com, www.hifi-forum.de). The predominant part of the interviewees is male and german. The average age of the interviewed persons is 25 years with a range between 12 and 60 years. The results of this survey are restricted to give first recommendations because of the small random sample. In the second step, the validity and reliability have to be proven.

The survey led to the following results: 82 % of interviewees are willing to pay for digital content. The average price acceptance for the different types of digital content is shown in table 1. The weekly budget for entertainment (music, movie, cinema, or print articles) is in a range between 1 and 15 €, independent of the type of digital content the interviewees would like to buy. By using file sharing tools, 69,4 % of the interviewees have primarily downloaded music, 45,8 % movies, about 30 % computer games or other software, and 19,4 % electronic articles or ebooks. The biggest part of the interviewed persons have been using file sharing tools for more than 2 years.

Type of digital content	Average price acceptance
Music	0,67 € (per song)
Movie	13,92 € (per movie on DVD), 6,68 € (per movie in cinema)
Text (e. g., print article, e-books)	15 € (per book), 0,81 € (per print article)

Table 1. Average price acceptance for digital content

The reasons for using legal digital content are better offers, higher quality and the opportunity to support the favourite artists. The risk of lawsuit and a distinct personal sense of justice have not been mentioned so often as a reason to use legal offer - only by approximately 20 % of the interviewed persons. Further reasons to prefer a legal offer of digital content are buying a genuine, collectors passion, or buying presents for friends.

In contrast, the reasons for using illegal offers of digital content with the aid of file sharing tools are:

- no costs (for 83,3 % of interviewed persons)
- possibility of downloading a file to preview the content (76,4 %)
- eliminating the necessity of buying a whole CD because of a single song (69,4 %)
- convenience (56,9 %)
- unwillingness or resistance to obey to the interests of the media industry (55,6 %)

In addition, it was mentioned that in file sharing tools there are a wide range of digital content (music or movies) and the only option to get unknown content, which you cannot buy in a legal offer. After analyzing the reasons to use an offer of digital content, we asked about characteristics and features, which have an influence on the attractiveness of consumption of digital content. Table 2 shows an overview. Further important characteristics, which increase the attractiveness of consumption, are an affordable price, freedom of unrestricted use of digital content and simple usability without too much advertising.

Increase attractiveness	Minimum requirements	Decrease attractiveness
• High data quality • Usability • Additional information about the digital content • Community features • Diverse pricing models • Independence of hardware	• Correctness of content • Reliable payment transaction • Privacy protection	• Suggestions about other products of possible interest • Membership in a club • Merchandising offerings • Personalised buying via customer profils • Personalised ownership rights • Restriction in the number of possible copies

Table 2. Features or characteristics with an influence on the attractiveness of consumption of digital content

Characteristics which are typical for the application of DRM systems such as “restriction in the number of possible copies” or “personalised ownership rights” decrease the attractiveness of consumption. In the qualitative analysis it is absolutely clear that the interviewed persons do not accept protection technologies, especially with regard to restricted usage of digital content. Similar results are found in (Fetscherin 2003).

Based on this analysis, the results are:

Offer of content: The consumers require a broad offer of digital content which is not only well-known but also considers special interests. Most of the e-business models (*category A, B, or C*) are limited on well-known media content, e. g., songs of international music charts. E-business models of the *category D* contain less content of independent artists. In many e-business models, one can nearly find every artist, but often with a restricted repertoire. Frequently, there is not an opportunity to buy the content directly from the artist. Especially offers with an emotional background such as collectors passion, buying a present for friends or the acquisition of a genuine are lacking.

Price of content: The prices of the offered content nearly correspond to the average price acceptance of the interviewed consumers. Mainly, the analysed e-business models with a flat rate (*category C*) are not higher than 15 Euro. In e-business models of the *category A, or B*, there are prices for single songs with a range between 0,99 and 3,00 Euro which are higher than the consumers’ acceptance in the survey. In those, the average price acceptance of a song is 0,67 Euro. Another study of Hansen (2004) suggests a accepted price of 0,50 Euro for a single song. Too high prices may cause problems in the future because of the absence customer acceptance.

Restriction of usage: For the interviewed consumers restrictions with regard to usage of the digital content decrease the attractiveness of the offer. In e-business models of the *category A, B, or C*, the usage of content is restricted. The restrictions are different:

- E-business models of *category A*: restriction with regard to the number of utilization (e. g., copy or export) of digital content.
- E-business models of *category B*: technical restriction which is dependent on the technology of the supplier.

- E-business models of *category C*: temporal restriction which is dependent on the period of validity of the flat rate.

Only in e-business models of the *category D*, the customers get all freedoms and the whole responsibility to use the content. Likewise, the customers get the opportunity to earn money by reselling the content. In the survey, we found out that 31,9 % of the interviewed persons are willing to sell their own content for a commission.

Additional Services: In the survey, the interviewed consumers prefer additional services such as information about the content and community features. The opportunity to support the favourite artists is the most stated reason to use a legal offer. Services, which have the goal to earn more money (e. g., merchandising offers, customer profiles for personalized buying or offering a club membership), are unfrequently required. At the moment the analysed e-business models offer the additional services on a different scale. The e-business models of *category A* concentrate on the selling of digital content without a huge number of additional services. Only suppliers of e-business models of the *categories B and C*, which are interested in a long-term customer relationship, have a broader offer of cost free services.

The analysis shows that most of the presented e-business models do not fulfil all consumer based requirements. However, the prices of the content and the offer of additional services comply with the requirements of the consumers. The offers do not afford a special experience of using the digital media content, e. g., by emotions, or events. After that, the attractiveness of these e-business models is lower than peer-to-peer networks and the illegal download, because of the restricted usage of digital media content in the German music market.

5 ECONOMICAL REQUIREMENTS

Besides consumers based requirements, the economical requirements and conditions are very important for the survival of enterprises. To be more successful in business, two basic strategies are reasonable: reducing costs and increasing revenues. According to the recommendations for enterprises in e-business of Sönke, Panten and Schäfers (2004), Wirtz (2000) and Buhse (2004) we selected requirements, which we could assign to these two basic strategies.

For reducing costs we selected the following requirements:

- *Maximized digitalization of value-added processes:* Especially in the context of selling digital content, it is possible to reduce the physical contact with the goods. The costs for logistics can decrease. In this case, it is debatable how long the physical distribution, retail trade or wholesale are suitable for selling content. By analysing the revenue of a music CD, a big part (ca. 40 %) goes to physical trading enterprises (figure 2), which could be economised. But this decision depends also on further factors like the intangible and tangible value of the physical good or an acceptable download rate for the digital content. The consideration of these factors are conditioned by the consumer based requirements.

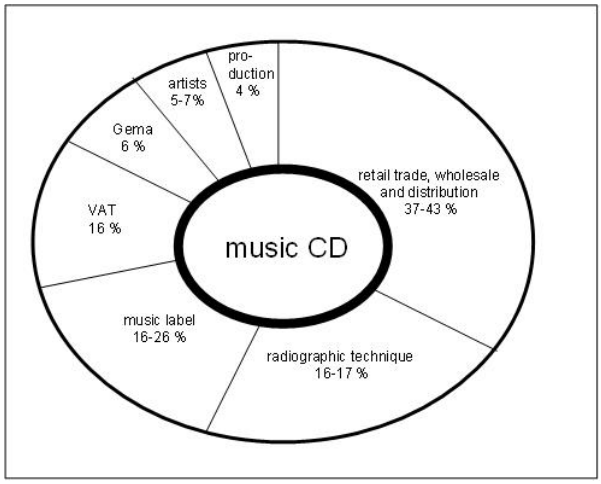

Figure 2. Structure of selling price of a physical music CD in Germany (Hansen 2004)

- *Customer integration in the value added processes:* Customers can adopt activities of the media enterprises, e. g., communicating, consulting of other customers in communities or selling of digital content.
- *Simple cost structures and strict monitoring:* Cost structures should be transparent and adapted to requirements of the core business. In this context it is also important to check whether the application of DRM systems is warrantable in comparison to its usefulness. Especially for BRM and for BRM systems, it is necessary that rights relevant processes are transparent and controllable.

For increasing revenues, we identified the following requirements:

- *Networking and transparency as a valuable consideration:* It is necessary for enterprises to use networking effects. In the field of media content, it is important for the potential consumers to detect efficiently the required content in the Internet. In this context, the legal offer of digital content can be supported by a professional search function. In addition, the organisation of a common content platform by different media enterprises increases the offer and so the attractiveness for potential customers.
- *Acceleration and improvement of the product development and the innovation process:* The development of new content and the generation of rights on content are the core activities of media enterprises. These activities should be supported by innovation processes and corresponding organisational structures. Buhse (2004) suggests a bigger cooperation between artists and consumers. Consumers can be innovation drivers and get special offer in return, e. g., participation in previews of content.
- *Searching and creating new utilization and commercialisation models of rights on media content:* The media industry has different possibilities to commercialise the rights on content. It is dependent on the needs of the potential customers. For example, the selling of ring tones of well-known songs is the most increasing section of the music industry. Therefore, it is also necessary that the media enterprise knows its pool of rights on media content and the commercial potentials very well. BRM systems should support the analysis of rights on media content and the decisions about their utilization.

Not only the customisation of e-business models is necessary but also the value-added and internal processes should be reorganised and updated. On the basis of these requirements and the information about the content provider, which we found in the internet, the analysis of e-business models (chapter 2) with regard to the economical criteria has the following outcome:

Reduction of costs: At the moment the customers can buy digital content via internet and at retail. For example, the companies Mediamarkt and Karstadt (e-business models of the *category A*) manage both distribution channels. In comparison to that companies of the telecommunication and IT sector (e. g., T-Online or Apple) only implement e-business models without selling of physical media with digital content. This is the basis for digitalization of the value-added processes and for reducing costs of physical distribution. After that, it is questionable how long the customers and how much of them will pay the higher price for the physical media.

Another opportunity to reduce costs is the integration of the customers in the value added processes. Two examples are identified in this context:

- The advisory function via communities or customers' play lists especially in e-business models the *category B, or C.*
- The selling function with regard to the customers' content in e-business models of the *category D.*

The suppliers of digital content do not use these opportunities to the full extent, especially those of the e-business models of *category A.* As an additional service, the offer of community features and play lists improve the position of suppliers.

Increase of revenues: Almost every analysed e-business model (of the *categories A – D*) has a search function which provides the transparency of its offer of digital content. But if the consumer is interested in an offer of unknown artists, he will have difficulties to find this in the whole Internet. Sometimes communities could help to find the required content. Only suppliers of e-business models of the *categories B and C,* which are interested in a long-term customer relationship, offer this possibility.

To increase the offer of digital content there are cooperative e-business models based on digital content of different suppliers, not depending on the category of the e-business models. Especially companies of the telecommunication and IT sector (e. g., T-Online or Apple) cooperate with multiple content creators and, therefore, have a broad offer of digital content. Beside the common offer of digital content, it is necessary that suppliers are innovative and compete with illegal download offer. New types of utilization and commercialisation of rights on media content are necessary. But only few suppliers implement different types of utilization in their e-business models. The e-business models of the *category A* only concentrate on selling of one type of digital content always in the same form. For suppliers, which offer music, it is also possible to sell ring tones. Besides music, Apple offers audio-books to provide the usage of their hardware iPod.

This analysis shows primarily few economical potentials to improve the e-business models and the value-added processes. The outcome does not claim completeness. For the sake of completeness, it is necessary to make a detailed survey of the supplier.

6 CONCLUSION AND OUTLOOK

Media enterprises have to view e-business models as a new and different communication and distribution channel with another consumer behaviour and needs. At the moment consumers prefer to copy and share the digital content for free via peer-to-peer networks, especially in the German music market. That impinges upon artist's or content provider's rights. But the deployment of protection technology and the restricted offer cannot be the only answers to the increasing illegal download of digital media content. The analysis of e-business models consider different aspects of e-business models for digital media content: aspects of rights management, consumer based requirements and economical requirements. The results of the analysis show, that the presented e-business models do not fulfil most of the requirements. Table 3 presents an overview:

E-business models	Category A	Category B	Category C	Category D
Rights Management	• deploy DRM technology • uses ubiquitous systems	• use protection technology • based on a proprietary development	• use protection technology • based on a proprietary development	• offer incentives to enforce their rights • do not use protection technology
Consumer based requirements	• offer of well-known digital content • without a huge number of additional services • restricted use to the number of utilization • too high prices	• offer of well-known digital content • few additional services • restricted use to the hardware of the supplier • too high prices	• a broad offer of content • with lots of additional services • restricted use to the period of validity of the flat rate	• offer only few and independent content • too high prices • opportunity to support directly the favorite artists
Economical requirements	• do not integrate the customers • provide mostly the distribution of physical media too	• integrate customers to inform other customers • do not provide the selling of physical media	• integrate customers to communicate with other customers • do not provide the selling of physical media	• integrate customers to sell their digital content

Table 3. Overview about the important results of the analysis

The analysis refer to e-business models in the German music market. The findings are applicable on other parts of the content industry. In the film industry For example, there are economical potentials: Besides watching a movie, rights on movies afford different types of utilization in the Internet: music to the film, ring tones, game to the film, ebook to the film etc. There are a lots of possibilities to increase the revenues and to reduce costs, too. In order to transfer the results to other areas of application, further research is needed.

Consequently, media enterprises and content provider should invest time to get to know their consumers and potential customers and to enhance their offers. They have to estimate carefully how and to what extent DRM systems are instrumental in selling digital media content. Especially the deployment of systems with the intention to support the commercialisation of rights on media content is necessary. For the successful implementation of e-business models and the efficient deployment of Rights Management tools, it is important to identify the requirements and conditions in the media sector. In this context, the results of this paper are the first step for a further systematic analysis. In the future it will be necessary to adjust the requirements of consumers and to identify the economical success factors.

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