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Author(s)	<i>Enrico Turrin (FEP)</i>



eContentplus

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¹ OJ L 79, 24.3.2005, p. 1.

Goal: Provide an overview of the current business models framework in Europe in terms of e-book market developments, digital libraries projects and more in general initiatives aimed at making digital book content available.

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Executive summary

One of the Arrow project's tasks is to explore possible business models facilitating co-existence and interoperability between public institutions and commercial publishing initiatives. In Europe, beyond the digital libraries initiatives, different solutions driven by the private sector are emerging for the coexistence of public and private offer. Arrow will try to provide schemes, guidelines, procedures and tools to facilitate existing and emerging initiatives to interoperate. The project focuses also on identifying business models enabling access to copyrighted works and creating databases and testing clearance mechanisms for out of print and/or orphan works.

This report aims therefore to illustrate, on the basis of preliminary studies already conducted and the existing experiences, possible business models to make digital content available to users. These models will provide a framework for copyrighted content aggregation with different possibilities regarding the standards used by publishers to provide the content, the storage and access facilities for the digital files, the mechanisms available to end users in order to retrieve the content and the information needs underlying different business models. A number of possible models for co-existence and collaboration between public and commercial e-content collections are conceivable. The report analyses and presents the different opportunities without providing single recommendations.

After a short introduction, the second chapter provides a theoretical framework for the analysis, based on preliminary studies; in particular, a study prepared for the French National Library and Publishers Association on the business models for the participation of publishers in the European Digital Library and a report on the development and impact of electronic books commissioned by the French Ministry of Culture.

According to such studies, digitisation became part of the book production chain quite early compared to other cultural industries, while the main difficulties were in adapting the final product destined to the end user. The transition at market level has been slow and uneven, with some sectors taking the lead. Technological developments are likely to give a strong impulse to the development of the sector.

The transition to the digital environment is determined by a number of factors: the creation of a new consumer experience; the capacity of a digital book to be properly referenced; the network effects. The dynamics that characterise the transition to the digital environment are: the commercialisation of access models; the elimination of intermediaries at various levels (disintermediation) and new forms of competition; the fragmentation of uses and multiplication of value chains; increased opportunities for discriminating between consumers' preferences.

However, the role of traditional actors in the book value chain (authors, publishers, booksellers) is maintained in the digital environment, but some processes need adaptation and some new actors and economic circuits are likely to appear, with relation to the introduction of digital technologies along all the nodes of the value chain. Digitisation multiplies the number of business models with different pricing for cultural products.

For the displaying of digital works in full text version, two main business model categories can be identified: digital bookstores, or individual licenses, destined directly to a public

paying for the content; and digital libraries, or group licenses, destined to entities (typically libraries), which propose to a group of individuals a shared access to books. Those models intersect with the attribution of rights to final users: permanent (a sale in the traditional sense) or temporary (loan if for free, rental if paid). Sales can be enacted by title, or in collections or packages. In digital library models, libraries can permanently buy digital books or can subscribe in order to be able to loan books for a certain period; it is possible to envisage limited or unlimited simultaneous accesses; sales can be realised title by title or by collections or packages. One element of complexity is the definition of the equilibrium tariff for such models. New technologies have allowed the creation of hybrid models of digital libraries, blurring the border between library and bookstore: the sale of consultation rights, measured by a number of downloads or by a number of consulted or printed pages, priced upon direct measurement of consumption.

Digitisation methods depend on the available sources for books and the goals in terms of quality and format. The most common cases are: scanning, when only a paper version is available; digital conversion or adaptation, for more recent works, whereas digital sources are available as part of the production chain, but need to be converted/adapted for distribution/electronic reading. The cost of digitisation can be higher when the work is already available in electronic form, though adaptation costs are likely to decrease in time; results are much better when converting electronic sources. Digitisation costs vary a lot and can be quite elevated; hence the necessity of high levels of investment for the retro-conversion of backlists and in general for the mass digitisation of large collections.

The will to fight piracy usually leads to trying to propose an attractive legal offer and to protect files and electronic content with DRM systems or proprietary file formats. DRM systems can be helpful in managing differentiated offers, and are crucial also to protect moral rights, but finding equilibrium between the restrictions they impose and the usages permitted to customers is essential. Proprietary formats make piracy more difficult but can make publishers dependant on the producers of reading devices or the owners of distribution platforms, while users can feel constrained. The recommendations are to privilege interoperability and to structure accessible metadata.

The theoretical framework also includes an economic simulation of the potential profitability of book digitisation, based on technical and non-technical costs. The conclusions are that the sales performances needed to make digitisation profitable seem reasonable, but beyond the breakeven points for individual works, it is important to consider the size of the entire investment necessary to digitise a collection.

The third chapter illustrates the main findings of the information gathering process based on interviews with many professionals and experts in the field of digital publishing and book digitisation in general. It provides an overview of the main business models in the e-book market, and of digital libraries and digitisation initiatives in Europe, structuring the results according to the theoretical backbone built in the previous chapter.

The picture of e-book markets in Europe is very fragmented and diversified. The sector is very dynamic, though not in a uniform way: fast expanding markets and initiatives go alongside very underdeveloped markets and businesses striving to find a place in the panorama of digital publishing. Given its relatively early stage of development, however, it is quite difficult to get a complete and precise idea of the sizes and trends. Rates of growth in the developed markets

are high, but even in the most developed ones the overall size of electronic publishing compared to the printed book market is very small. The lack of adequate portable reading devices has contributed markedly to this slow development.

Given the characteristics of works in the STM sector this is by large the one that has been involved the most in the digital transition. However, more and more publishers start offering their books in electronic format in other fields. A wide range of different business models for providing access to copyrighted digital book content has arisen after some years of experimenting. One main distinction can be drawn between models targeting end users (B2C – business to consumer) and models targeting businesses (B2B – business to business).

In the B2C field, the most common model is that of pay-per-download of individual titles. There is also the possibility of buying a reading device pre-loaded with an e-book collection. The other, quite different model is based on granting to the user a temporary right of consultation, generally on subscription schemes. Possible methods of delivery are download or reading online. B2B models are group licence models offered to libraries, and provide the grounds for the creation of digital libraries. Libraries are usually allowed either to buy titles or to subscribe to collections for a determined time; the way of accessing works is mainly online on the suppliers' websites. Libraries either pay individual prices for the books they purchase or a subscription fee for having access to a collection. Another model is the hybridising of library and bookstore based on the sale of consultation rights ("pay-per-view"); the fee paid is linked to actual consumption.

Users can be granted a limited number of simultaneous accesses, in which case prices tend to depend on the actual usage, or simultaneous unlimited accesses, with price determination based in most cases on the number of users of the institution. This raises the question of what the fee should be to give users unlimited access to copyrighted works by a digital library with a potential audience of millions like Europeana. The making available of books on the internet without an adequate compensation of right holders would in fact seriously prejudice the normal exploitation of works, and the fixing of a fair remuneration for a library with millions of potential users is unrealistic.

A further step in the hybridising of digital libraries and digital bookstores is the possible role of libraries in redirecting their users to the websites of commercial players which allow the purchase of e-books that have been object of a search on the library's portal.

All of the "commercial" digital library models allow their users access to e-books not only on their premises, but also remotely, but in any case access to the copyrighted works made available by libraries is and needs to be limited to their users. The library models, though less frequent, are quite important in economic terms. No significant business models have been reported based on the free distribution of e-books, supported by advertisement or other sources of income unrelated to the end user.

A clear pattern of pricing of e-books has not yet emerged. Costs for producing electronic books are usually as high as for paper books, and in addition VAT rates on e-books are higher in most EU countries. Subscriptions can have very different fees, according to the user's profile.

For the time being the offer is relatively limited in terms of total number of titles, especially in comparison with the availability of printed books. In addition, many works in the public domain are available to the public in digital format thanks to digitisation initiatives by a large number of libraries across Europe, out of public initiatives or public-private partnerships, aimed in particular at preserving and making available the various national cultural heritages, often on a small or medium scale.

The presence of copyrighted works in digital libraries is at the moment close to non-existing, for various reasons: the main interest in preserving cultural heritage and ancient works; the presence of a good library system; legal uncertainty; difficulties in finding agreements with right holders; cost of finding information on right holders (in particular for out of print or orphan works) and/or of clearing rights on books to be digitised. The very few cases existing outside of the commercial models usually rely on ad hoc individual agreements with right holders. Access to digitised works is allowed only on the premises of the libraries involved, or on institutional intranets/extranets, and the books involved are for the majority out of print. Some pilot projects are being set up in this field, which generally involve libraries and broad joint right holders' representations following negotiations among the parties. The most interesting cases are the hybrid models that include books under copyright in the collections that users can search and browse: for viewing excerpts of the copyrighted e-books and purchasing them, users are redirected to the suppliers' websites.

In the field of digital libraries, a very relevant case is the European Digital Library, Europeana, which aims at providing access to Europe's cultural and scientific heritage through a cross-domain portal. Europeana is a decentralised model: it does not host files of works but redirects to the relevant institutions after displaying search results. For the time being, it does not provide access to copyrighted works.

In line with the theoretical assumptions, the digital book market comprises a number of actors, some of which are the same as in the traditional printed book value chain and some have appeared due to the new roles and opportunities enhanced by the transition to the digital environment. Some actors just specialise in providing technical solutions to others in the value chain.

Recent publications come already in a digital format, as this kind of technology is normally embedded in the first phases of the book value chain, but still need to be adapted for the creation of e-books. In most cases, these activities are outsourced to specialised technological companies. The most common electronic formats are the e-book PDF and the ePub and the PRC (Mobipocket), which are open standards. No single dominant model has emerged yet. Many argue that open standards are the most advantageous, since they offer a higher degree of interoperability and compatibility of reading and delivering solutions. The ePub format is considered as particularly flexible. For older titles, e-books are produced from hard-copy books, by scanning; the resulting images can be converted into a text format by an optical character recognition program, to be indexed and made full-text searchable.

Information about the cost of producing an e-book in a format adequate for commercial exploitation confirm what outlined in the theoretical framework: costs can vary widely and the overall investment needed to create a significant catalogue of e-books could be particularly relevant, especially until a few years ago, although more recently light versions of digital asset management systems have been developed.

Various e-book readers have appeared but none has become a market dominant; an alternative scenario is developing in the meantime, which sees a multiplicity of reading devices, related to communication (mobile phones), professional usage (micro computers), culture and entertainment (iPhone, game consoles, etc.). Dedicated e-readers are not widely available in Europe for the time being; in many countries they are not commercialised yet and in those where they are they have been introduced only recently.

The large majority of the actors of the e-book market who provided information are using or plan to use DRM systems in order to protect their works, but many recognise that often DRM technologies are not particularly user-friendly; this is why some of them prefer to adopt watermarking solutions, a lighter form of protection. It is widely acknowledged that a higher degree of standardisation and interoperability of solutions would help remove some barriers to the expansion of the market.

Face to the relevant costs of digitisation, the availability of resources is quite limited, in particular as far as public support for digitisation by publishers is concerned. In some cases, public authorities expect the market to drive such initiatives by private actors. In general, plans for mass digitisation are not common, again due to financial constraints.

This business sector is characterised by high fixed costs and usually low market volumes, which makes profitability difficult to achieve. A high share of the necessary investment often resides in the information technology system requirements for managing large databases and connecting a number of players with different file formats and business models. However, technology is catching up in this field as well. Given such difficulties, many initiatives have been born as joint efforts. In general it takes some years before businesses start recording profits, and some more before the initial investment is recovered; the number of players in the market might take a while to grow appreciably in the near future in countries where the sector is still underdeveloped, while in the more developed ones a rapid expansion is already taking place.

Almost no licensing models for digitising and making available copyrighted works by libraries or clearing mechanisms for dealing with out-of-print and orphan works currently exist, especially on any large scale. For digitising and making available copyrighted works by libraries, there are no generalised models, and in most countries there are no models at all. Initiatives in this field are built on voluntary agreements set up on ad hoc bases between libraries and right holders. Otherwise, there are business models by suppliers of electronic books which provide libraries with access to collections of works under copyright at some fee. As for mechanisms for clearing rights on out-of-print and orphan works; so far only a few experimentations have been undertaken, and it is still early to draw any conclusions. Experiments of licences for making available copyrighted works concern mainly out-of-print and orphan books.

Some actors report the lack of such established clearing mechanisms and of a more general legal framework dealing with the issue as one of the main obstacles to the inclusion of certain titles in the digitisation initiatives by libraries; this problem is coupled with the objective difficulties often encountered when trying to trace the right holders for some titles (made worse by the non inclusion of digital rights in the large majority of contracts). Some countries

envisage the possibility of addressing the issue of orphan and also out-of-print works through collective management of rights.

The rights information infrastructure the Arrow project plans to build would provide a great help in clarifying the status of many works that are potentially orphan and therefore lie in a sort of juridical “limbo” given the absence of established legal mechanisms for dealing with them.

In sum, the e-book market in Europe is at an early and uneven stage of development, and reading devices are only starting to become available. Many difficulties hinder developments in this field, from economic obstacles to legal, to technological ones. The main challenges include:

- building trust among stakeholders about entering the field of digital books, be it authors, publishers or librarians;
- absence of reader devices and lack of standard deployment and interoperability (difficulties in communication between different initiatives, different data collection policies and metadata schemes, risk of market lock-up);
- increasingly mainstreaming digital versions in the normal editorial flow;
- high levels of investment needed and reduced public support for digitisation (including insufficient library budgets);
- difficulties in negotiations of digital rights;
- implementing suitable technical measures of protection;
- difficulties in retrieving rights information, in particular about out of print and orphan works;
- lack of established clearing mechanisms for orphan and out of print works (especially for libraries).

The fourth chapter presents all the information gathered at national level from 16 European countries: Austria, Belgium, Bulgaria, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Poland, Slovenia, Spain, Sweden and United Kingdom. Country overviews are provided and individual cases are presented in detail.

In conclusion, the present study contributes to:

- analyse and understand the existing European players’ (authors, publishers, e-retailers, RROs, libraries) business models with relation to e-books, in terms of digitisation and commercialisation;
- consider current and prospective initiatives for the digitisation and making available of copyright works by libraries;
- identify the main information requirements of the stakeholders for such business models;
- verify the criteria, framework and capacity of coexistence and interoperability among different models (commercial, public sector, etc.) in the field with a view to providing users with highest degree of access to e-content;
- investigate the existing or emerging initiatives related to management of orphan works and out of print works;
- look at the economic impact of policies implemented by the public sector, at national and European level, in this domain;
- define a role for Arrow in the current market situation, as neutral as possible with relation to the existing business models.

The report focuses mainly on ways to make copyrighted content available; it thus clarifies the business models underlying rights information requests such as those that the Arrow system will contribute to satisfying and studies models enabling access to copyrighted works through digital libraries such as Europeana. It also identifies the needs by players involved in digitisation initiatives and in the e-book market (for rights information, rights clearance mechanisms, interoperability, standards, etc.), thus defining the business models enabled or enhanced by the project and setting the framework for ensuring Arrow's neutrality with respect to the different business models applied. Against this background, the interoperable search infrastructure that is expected to be the outcome of the Arrow project, based on a network of national databases, could represent a huge step forward in the direction of facilitating further initiatives of all kinds. In particular, it appears that the system's services would be useful to libraries in order to identify rights information and facilitate the clearance of rights for orphan works - and possibly out of print, too - in the framework of digitisation initiatives.

The findings of this report are the result of a joint research effort involving a network of actors related to the book industry (publishers associations, national libraries, collecting societies and their representative organisations), all partners or supporters of the Arrow project, under the coordination of the Federation of European Publishers. The information here presented was retrieved mainly through interviews with over 60 stakeholders of the e-book world (in addition to the ones already mentioned, also individual publishers, e-distributors and aggregators, libraries and various other experts).

1. Introduction

One of the Arrow project's tasks is to explore possible business models facilitating co-existence and interoperability between public institutions and commercial publishing initiatives. The purpose is not to homogenise business models, which is neither realistic nor desirable, but to valorise cultural, economic and social diversity making the different options interoperable. In Europe, beyond the digital libraries initiatives, different solutions driven by the private sector are emerging for the coexistence of public and private offer.

Currently, some digital libraries offer book collections online at national level, involving books in the public domain, freely accessible by users, and equipped with their own search facilities. Some specific arrangements allow the display of copyrighted works on intranets. In November 2008, Europeana - the European Digital Library - was launched; it implemented an interoperability model in the form of a single access point to the databases of European institutions (libraries, museums, archives and audio-visual archives). At the same time, there are private initiatives (in place or under development) that offer the possibility to search book collections and to access at defined conditions (usually not for free) the related books; such platforms have an additional component: they must offer "commercial" elements that make the collections appealing for potential customers. A peculiar element is the "preview system", which allows users to have glance of the book but not to access the full text. Libraries do not need this, since they offer full text access since the first step.

There are two issues still unsolved in the current situation. First, in most cases the private and public initiatives are not interoperable. Second, the private offer is still characterised by a high level of fragmentation and the lack of a co-ordinated approach at European level. Furthermore, in many countries it is difficult for the industry to afford the high investments necessary to implement these types of initiatives.

Arrow will try to provide schemes, guidelines, procedures and tools (e.g. metadata mappings, standard web-resolution mechanisms) to facilitate existing and emerging initiatives to interoperate. Standardisation, interoperability and stakeholders' collaboration are crucial aspects of the project, which focuses also on identifying business models enabling access to copyrighted works and creating databases and testing clearance mechanisms for out of print and/or orphan works. The underlying principle is that the issues focused are very interconnected and should be addressed together: before establishing clearing mechanisms, it should be clarified for what business models the rights are requested, and interoperability between different resources is required in practice when this business framework is in place - otherwise the risk is to create tools for interoperability that nobody has the incentive to use.

This report will therefore illustrate, on the basis of preliminary studies already conducted and the existing experiences, one or several business models to make digital content available to users. These models will provide a framework for copyrighted content aggregation with different possibilities regarding the standards used by publishers to provide the content, the storage and access facilities for the digital files, and the mechanisms available to end users in order to retrieve the content (authentication, subscription to a collection, pay per download, pay per view, etc.). A number of possible models for co-existence and collaboration between public and commercial e-content collections are conceivable. The report analyses and presents the different opportunities without providing single recommendations.

The aim of the present research is to focus on a number of issues:

- analyse and understand the existing European players' (authors, publishers, e-retailers, RROs, libraries) business models with relation to e-books (defined as any kind of text based e-content), in terms of digitisation and commercialisation;
- consider current and prospective initiatives for the digitisation and making available of copyright works by libraries;
- identify the main information requirements of the stakeholders for such business models;
- verify the criteria, framework and capacity of coexistence and interoperability among different models (commercial, public sector, etc.) in the field with a view to providing users with highest degree of access to e-content;
- investigate the existing or emerging initiatives related to management of orphan works and out of print works;
- look at the economic impact of policies implemented by the public sector, at national and European level, in this domain;
- define a role for Arrow in the current market situation, as neutral as possible with relation to the existing business models.

The findings of this report are the result of a joint research effort involving a network of actors related to the book industry (publishers associations, national libraries, collecting societies and their representative organisations), all partners or supporters of the Arrow project, under the coordination of the Federation of European Publishers. The information here presented was retrieved mainly through interviews with over 60 stakeholders of the e-book world (in addition to the ones already mentioned, also individual publishers, e-distributors and aggregators, libraries and various other experts).

2. Theoretical framework

Several preliminary studies provide a theoretical framework for the analysis of business models;¹ in particular, a study prepared by Numilog for the French National Library (BnF) and the French Publishers Association (SNE) on the business models for the participation of publishers in the European Digital Library² and a report on the development and impact of electronic books commissioned by the French Ministry of Culture³.

Europeana plans to put online several million works in 5 years, both in the public domain and under copyright. Presenting on the internet works under copyright needs to ensure fair remuneration of right holders and in general respect of intellectual property rights. On this basis, the analysis the Numilog study conducts aims therefore at defining different ways of

¹ The choice of the studies synthesised in this theoretical framework, although based on an appreciation of their content, should not be considered as an endorsement of their conclusions on behalf of the present report, whose conclusions have been drawn independently, on the basis of the information collected to this purpose among the project partners and stakeholders. In occasion of the update of the report due in 2010, additional, more recent sources will be taken into account.

² D. Zwirn, *Etude en vue de l'élaboration d'un modèle économique de participation des éditeurs à la bibliothèque numérique européenne (Europeana)*, April 2007

(www.bnf.fr/pages/catalog/pdf/EUROPEANA-NUMILOG2007.pdf).

³ B. Patino, *Rapport sur le livre numérique*, June 2008

(<http://www.culture.gouv.fr/culture/actualites/conferen/albanel/rapportpatino.pdf>).

building an economic model for displaying protected works in the framework of Europeana, and can serve in general as a paradigm for the theorisation of digital library models, especially with a view to providing access to copyrighted works. Some related topics deserving attention are:

- technical feasibility (in particular guarantees offered by measures of protection and of calculation of remunerations of right holders);
- compatibility with the legal and regulatory environment;
- integration as far as possible with the optimal plans of the actors of the book value chain;
- taking into account experiences and success cases of different business models of distribution of digital content;
- the current and potential organisation of the digital book value chain;
- investment and functioning costs for the transition to the digital environment.

2.1 E-books

The Numilog study identifies the main characteristic uses of e-books as full text research through search engines in a book database, online consultation of book pages, either extracts (results of searches) or full text, and offline reading after download. Digital books are not to be confused with internet pages: they can be divided into chapters and have additional features (hyperlinks, videos, etc.), but still they are books, the result of an editorial work on the content and form.

Reading devices can be very different: computers, PDA, smartphones, game consoles, dedicated e-readers. Electronic books have many functional added values:

- accessibility 24/7 from anywhere in the world
- full text search
- taking notes without deteriorating the item
- adapting font size to vision and screen
- use of vocal synthesis and automatic scroll devices for visually and motor impaired
- printing, according to rights provided by publishers
- additional features: hyperlinks, multimedia
- if downloaded, mobility for high amounts of content.

2.2 Digitisation in book publishing

Digitisation became part of the book production chain (composition, correction, paging) quite early compared to other cultural industries. Nowadays, in most cases the initial steps of the chain are digital, and therefore the products of publishing are available in some electronic format; the final step is to convert them in a format suitable for consumption by readers (which especially at the beginning did not use to be the case).

This process has been long undertaken in some sectors, such as scientific, technical and medical (STM) publishing, where the whole chain, from author to reader, already works essentially in the electronic environment.

A further dematerialisation of books is conceivable, given the continuous increase in the number and quality of internet connections and on the multiplication of devices made to use

those connections. Every screen connected to a network is a potential vehicle for the diffusion of e-books.

Some promising technological developments are likely actually to give a strong impulse to the development of the sector. The constant improvement of portable reader devices is one of them; the more and more widespread adoption of the ePub format, as will be noted later, is another one.

The Patino report identifies some determining factors of the transition to the digital environment:

- The consumer experience. The digital shift is also the creation of a new experience, based on three variables: the support used (on one hand, a reading device could appear that gives a strong impulse to the e-book market and secures a good share of it, as the iPod did in the music field; on the other, a wide range of supports has appeared already and e-books have also started featuring on devices created for very different purposes, such as game consoles); the nature of works (dematerialisation allows books to be transformed radically by the addition of heterogeneous content, the partition of the text, etc.); the usage patterns by readers (users are those who will determine the success of electronic reading in the end; the quality of their experience will depend on criteria such as mobility of supports, interoperability of devices and content, availability of content, connection to networks, interactivity).
- The referencing of works. The capacity of a digital book to be properly referenced (in terms of metadata, for example) is crucial to its visibility.
- The network effects. In the digital environment, individual readers are involved in a network of users (through comparison of purchases, users' comments and recommendations, etc.) that can have an important role in promoting works and influencing search patterns.

The dynamics that characterise the transition to the digital environment are:

- The commercialisation of access models. Since the digital economy relies on a network, more and more models consist on managing access to networks rather than using them to perform sales; traditional sales models are often substituted by subscriptions. The trend is reinforced by other phenomena, such as the diffusion of broadband and mobile access; unity of the net and plurality of devices for displaying make models based on access particularly adequate.
- Disintermediation. The shift, in the digital economy, from a linear value chain to a value net opens possibilities for elimination of intermediaries at various levels; actors thus face new forms of competition.
- Fragmentation of uses and multiplication of value chains. The same characteristics of the digital economy bring about a strengthening of the position of intermediaries; the proliferation of usage patterns and access models requires in fact new intermediary roles for managing the subsequent commercial and financial flows.
- Discrimination. As the dematerialisation of books makes it even harder to refer to marginal costs of production as an element for price fixation,¹ the value of electronic works has to be assessed more and more in the light of their nature of experience goods. In

¹ A common misconception is that the cost of producing an electronic book should be much lower than that of a printed book, while in fact many costs are unchanged and some new are added (especially technological ones; see also par. 3.4). Taylor & Francis has carried out a detailed study of costs, according to which the physical cost of a print book – paper, printing, boards – is less than 9% of the cover price.

turn, a pricing model based on the users' expected utility requires the capacity of discriminating between consumers' preferences.

In this context, the model that sees free distribution of content financed by advertisement revenues is not particularly adequate for the book sector: on one hand, it reduces the perception of the value of cultural products (and of the related need to remunerate creation); on the other, the book industry relies mainly on small, very segmented audiences (with average print runs ranging from 1 to 10 thousand copies in most European countries), which contrasts with the large audiences of media based on advertisement-financed models.

2.3 The actors of the e-book value chain

The role of traditional actors in the book value chain is maintained in the digital environment, but some processes need adaptation and some new actors and economic circuits are likely to appear. These are the main roles in the digital book value chain:

- production: writing, publishing, creating electronic versions;
- archiving of files and addition of metadata for description and indexation (files and metadata must be stored durably and be easily retrievable);
- cataloguing and permitting search of e-books (full text) and metadata on a website equipped with a book database (this allows users to find books and possibly consult pages or extracts);
- distribution of e-books, possibly with DRM (digital rights management) systems, different reading solutions and different business models, connected to specific reading solutions and guaranteed by protective measures (this opens new roles for providers of technical-economic solutions, digital distributors - who are responsible for hosting, delivering, protecting e-book files and metadata - or aggregators - who also take on the role of e-wholesalers, negotiating sales rights over a catalogue of titles);
- purely technical solutions, such as reading software and DRM or production of reading devices (the role of these technical players should ideally be neutral in order to maximize interoperability, but is not always the case);
- sale of digital books, the traditional role of booksellers (including management of orders, payments, delivery and after-sale services);
- loan/rental of digital books, the traditional role of libraries, including making available works for free or upon subscription to an identified group of readers.

Some actors specialise in digital distribution or storing; there are pure e-book stores or online stores of traditional booksellers. Others can combine roles, like aggregators who play also the role of booksellers. Actors create partnerships (common platforms of publishers and booksellers, and/or distributors, etc.). Everywhere some specialised digital distributors enter into agreements and then make commercial deals with digital libraries for loans and for booksellers. Cataloguing and research functions are often object of initiatives by pure internet actors.

Still, as just said, traditional actors are going to maintain some key roles:

- the author is still going to be the central actor in creating books (readers' intervention in the writing process being still experimental and quite marginal, and reassembling books from parts of others not being a proper creation);

- publishers will maintain the function of selecting, shaping and distributing quality works adequate for certain audiences and markets (to put it briefly, books are not blogs);
- booksellers and distributors shall keep an important role in the value chain, by offering a technically and commercially homogeneous catalogue of books by different publishers thus simplifying the relationship between the latter and readers;
- libraries are going to be, also in the digital environment, the usual economic and cultural mediators that allow their patrons accessing freely, but for a limited time and without appropriation, to a selected range of works.

2.4 The digital transition/revolution in book publishing

Despite the early introduction of digital technologies in the value chain, the digital revolution has affected the book sector later and less dramatically than other cultural sectors (such as music and movies). The first attempts to commercialise electronic books on dedicated supports around 2000 generally failed, in particular due to the scarce development of reading devices (usually very expensive and not user-friendly), which made consumers' experience not satisfactory enough. Many companies closed shortly after entering the business, and large online bookstores such as Barnes&Nobles and Amazon, which opened e-book departments in 2000, abandoned or suspended their activities in this area.

Still, in the following years performances of dedicated readers and non-dedicated terminals (mobile phones, laptops, PDAs, game consoles, etc.) improved dramatically, while various softwares were developed to cope with the plurality of devices.

As to the provision of content, the digitisation and making available of public domain books by libraries has relatively quite a long history, but the first experiments usually offered works in image mode, a format that does not allow reading on most portable devices, which work in text mode.

The launch of large digital library projects contributed to raising interest for e-books, starting in 2004 with the controversial "Google Print" initiative (now Google BookSearch), followed by Microsoft's Windows Live Book Search (in partnership with, among others, the British Library), closed in 2008, and Yahoo's Open Content Alliance. In March 2006, the European Commission announced the creation of the European Digital Library, which became operational in November 2008.

In the sectors where the shift has occurred more significantly - STM publishing, dictionaries and encyclopaedias - the transition to the digital environment has been made naturally. The business model has been transferred from the printed context; existing contents have been digitised and made available to readers, first on CD-rom and later online. At a second stage, a model of content based service has emerged; publishers offer, besides access to contents, a series of additional functionalities, and almost all of the catalogues are available in electronic format.

The move to the electronic environment does not occur homogeneously within the publishing sector. The Patino report identifies a series of factors that can favour it as they improve markedly the user's experience with works in digital format: indexation (essential to search functions), aggregated content (made of modules that readers browse mainly non-linearly),

need for regular updates, openness of the system (allowing readers to interact), accessibility (any time, any place).

Such criteria have allowed some publishing sectors to enter the digital world as pioneers: STM works, dictionaries and encyclopaedias, practical books all benefit of the advantages of electronic formats. So far involved to a lesser extent, also school and university books could have potential for development of a digital offer. The same criteria are not as relevant for other categories, such as general literature, youth and children's books, essays, comics, etc.; here the impact of the digital transition has not been particularly noticeable. In areas in which electronic books do not tend to substitute printed ones, the two formats can be complementary, offering different and mutually reinforcing ways to meet the same needs (e.g. travel guides).

2.5 Business models in the digital environment

Digitisation of content multiplies the number of business models with different pricing for cultural products. It allows selling books by the unit, at reduced prices or with a finer granularity (chapters) or proposing subscriptions to bundles sold together with reading devices or to large amounts of texts accessible unlimitedly. It also allows both maintaining the economic mediation of the traditional library and envisaging business models leading to a stronger continuum between library and bookseller.

There are 2 simple business models to present extracts of digital documents for research and consultation (online catalogue):

- free model: users can search the database with all books and display one or more pages of the book found, without remunerating the platform or the right holders, who find advantage in the promotion of their works;
- paying model: users have the same possibilities, plus possibly some extended functionalities (printing of findings, retrieval of metadata in file format), but remunerate the platform and/or right holders for the information provided; payment can be fixed or linked to effective usage.¹

The free model is predominant today, especially for online catalogues, portals and search engines destined to the wide public; the paying model is however put in place by bibliographic databases dedicated to professionals (it is the case of Electre in France) or to researchers in specialised domains.

As to the displaying of digital works in full text version, the possibilities are more complex; 2 main categories can be identified:

- models of digital bookstores, or individual licenses: destined directly to a public paying for the content bought, through the intermediation of a bookseller;
- models of digital libraries, or group licenses: destined to firms or organisations, typically libraries, which propose to a group of individuals a shared access to digital documents distributed by a supplier; in principle, users do not pay for access, except on a fixed basis decoupled from the direct costs of such contents; libraries perform an economic and cultural mediation between suppliers (publishers, aggregators,

¹ This normally relates to the amount of content hosted. Some aggregators use an algorithm which calculates the proportion of the publishers pages held of the total and the number of times each pages has been accessed.

booksellers) and readers, transforming private goods into collective resources; lending is the traditional tool of this mediation.

Those models can be intersected with distinctions on the attribution of rights to final users:

- permanent usage rights (a sale in the traditional sense);
- temporary usage rights (a loan if for free, a rental if paid) with or without transfer of files; the loan can be put in place by transferring an “expiring” file or limiting consultation online in terms of reading sessions or of time of belonging to a group.

Sales can be enacted in 2 forms: by title, as in a traditional bookstore, or in collections or packages. Rights can apply to complete books or to single parts (chapters, articles). This leads to 8 theoretical models for individual licenses (digital bookstore models):

	Permanent rights		Temporary rights	
Model	Title by title	Collections	Title by Title	Collections
Complete books	B1	B2	B3	B4
Chapters, parts	B5	B6	B7	B8

According to the Numilog study, only B1, B3, B4, B5, B7 are actually pertinent and offered in practice: B1 corresponds to the traditional model of sales by copy; in B3 and B7 duration of rights is usually short (“pay per view”), in B4 it is quite long (forfeit access to large collections for a month, or a year). Some digital bookstores propose mixed models B1-B2, offering bundles of e-books for example by the same author.

As to group license models proposed to libraries (digital library models):

- in terms of the duration of loans or group licenses, libraries can permanently buy digital books or can subscribe in order to be able to loan the books for a certain period;
- in terms of control of access to books, it is possible to envisage models of simultaneous limited accesses (the contract fixes a number of simultaneous accesses to books - such as the number of copies in the physical domain) or models of simultaneous unlimited accesses (access is free for a community of users during the validity of the collective license; accesses are unlimited within a population of users and a limited period);
- in terms of content, sales can be realised title by title (libraries build their collections of e-books according to their documental choices) or by collections or packages.¹

This leads to 8 main types of group licenses:

	Permanent purchase		Yearly rental	
Model	Title by title	Collections	Title by Title	Collections
Limited simultaneous accesses	L1	L2	L3	L4
Unlimited simultaneous accesses	L5	L6	L7	L8

As to Numilog’s findings, L1, L3, L4, L8 are the most commonly used. L1 reproduces the traditional model of sale of copies to the library, which can loan them according to the number of copies bought. L3 is the subscription version of the traditional model. L4 allows the library

¹ An annual platform fee is usually charged to libraries also to access the service of purchasing e-books outright.

to offer the equivalent of “loan tokens” interchangeable among the books of a collection. L8 is the model used in particular by scientific journals; it proposes unlimited access to a database of books on a certain topic, freely consultable by a population of defined users (e.g. students of a university) during a certain period.

The distinction between purchase and subscription on behalf of libraries must not be confused with the distinction between permanent and temporary rights purchased by individuals. All digital library models are digital loan models, since rights given to users are by nature temporary and free; they can reproduce the fixed duration of a normal loan or the variable duration of on-premise consultation.

Digitisation allows technically managing large numbers of simultaneous accesses with little additional costs or physical overcharges (less true in the case of videos, anyway), but prices of digital resources do not reflect their physical scarcity, they reflect the balance between demand for reading and offer by right holders. The real question is: which is the best way to define an equilibrium tariff?

Models with limited access should take into account as closely as possible demand, adapting pricing to usage intensity as measured by simultaneous authorized accesses. Unlimited accesses models measure this intensity by proxy through the number of users, which results in a greater uncertainty on the real consumption offered by the supplier and therefore in a business model that leaves more room to the negotiating power of suppliers and demanders. Here is where the “big deals”, sometimes problematic, come from; this does not mean it is impossible to offer deals for unlimited accesses that are balanced, it is just more difficult to define such equilibrium.

New technologies have allowed the creation of hybrid libraries, offering research and consultation of electronic sources; they can also create another kind of hybridising, blurring the border between library and bookstore, with another model of digital library: the sale of consultation rights (L9), measured by a number of downloads (for predefined reading times) or by a number of consulted or printed pages. This model relies on a pricing linked to the direct measurement of consumption. In limited accesses models, consumption parameters of loan duration and number of simultaneous loans actually realised are uncertain, while in consultation right sale models each loan generates a payment. This model has advantages for librarians, who limit the risk of paying for under-used resources (risk maximised in unlimited accesses models), and for publishers, who are guaranteed remuneration proportional to the actual use of their works, limiting the risk of shared access if several libraries join to create a common digital collection. The role of libraries evolves toward the one of bookstores.

Another model of hybridisation, even stronger, combines a library model (usually L8) for reading online and a bookstore model (B3 or B7) for printing or copying/pasting. Readers then have unlimited access to the contents to which the library subscribes but have to pay for every printout or copy/paste of pages on a pay-per-view basis. National libraries might prefer negotiating collective agreements with publishers and rightholders to acquire rights to present for free to the public catalogues of digitised works in the form of unlimited online access (in other words, a business model of digital library of the kind L6 or L8). This model is not incompatible with the one recommended by the study (see below); it has to be highlighted that it deals with books with little commercial exposure and excludes any downloading: it does not

seem to be easily extendible to other forms of electronic reading and other kinds of works in large amounts.

2.6 Recommendations for the working of the European Digital Library

The Numilog study analyses the main theoretical business models for making available copyrighted works and makes a recommendation on the one that best suits Europeana:

- Free access to digital works financed by advertisements and promotion of printed works. Neither realistic nor acceptable; advertising revenues are likely to be small, especially since the digitisation policy would favour cultural, reference works rather than bestsellers, and the ranking of books in researches might be affected by those revenues.
- Digital library. It would be an interesting model, with libraries financing the gradual creation of a database of digital copyrighted works offered for free to Europe's users. Still, the scale of the project poses possibly unsolvable problems. Considering the model of limited simultaneous accesses, it would be difficult to set the limit number in comparison with that of potential users, and in any case it would be too expensive. Considering the model of unlimited accesses, what value should a big deal have for publishers to allow unlimited access to the whole range of works provided to Europeana? It is impossible to answer, or the answer - the value of the entire book market - is absurd. Considering the hybrid model, having Europeana pay according to the actual accesses of users, this would either exhaust its budget very quickly or make it grow out of control.
- Digital bookstore. This remains the only solution, in which users pay for their accesses.

Since it is agreed that Europeana should not have a commercial role, it is suggested that it:

- should be a digital library for non copyrighted content, as potentially regrouping all European libraries;
- could be a research portal for copyrighted content; it is not in contrast with the normal role of libraries, having a role in organising information intelligently and indicating availability of digital resources they cannot buy all.

The commercial role may be played by private partners associated with Europeana, to which Europeana as a search portal could redirect users for paid access to copyrighted content. This way Europeana could offer in its search engine very complete and progressively exhaustive information on European works, in the context of respect for copyright, providing users with a solution to access full texts, without being financed publicly or playing a commercial role.

The final recommendation is for Europeana to adopt, for access to copyrighted content, the digital bookstore model, though somehow indirectly. This implies that Europeana positions itself as a hybrid, both digital library *strictu sensu* for public domain content and search portal for copyrighted content. Search functionalities should remain free, whatever the kind of content searched. The free search offer corresponds to the practice of the main private sites offering full-text search engines, such as Google BookSearch, or partial, such as Amazon Search Inside, and to the one expected from a public library.

The exact working of this business model still has to be specified, in particular through:

- the nature of the private partners envisaged to manage the model of digital bookstore and the choice of such partners, a matter that raises the one of the integration of bookstores or other partners in the distribution scheme considered;
- the way of associating authors and their representatives in the system;
- the concrete navigation path for users implied by the system;
- the technical aspects (infrastructure, standards) and their implications for the digitisation of books.

The access, both controlled (for the free consultation of pages found through full text search) and paid (for access to full text), to digital content under copyright can take different forms, more or less centralised:

- the concession of the exploitation of a single Europeana digital bookstore by a group of national libraries or the European institutions to a unique operator, chosen through a tender;
- the conclusion of direct partnerships with various private distribution operators bringing to Europeana data on the digital catalogues publishers allowed them to exploit, in exchange for the redirection of users to their platforms for controlled access to such catalogues;
- links to the different sites of publishers, aggregators, online bookshops, where e-books are commercialised.

The Numilog study recommends to adopt solution 2, making partnerships with distributors of copyrighted content specialised in securitised electronic distribution. Solution 1 would be too monolithic and no single private operator could convince all publishers to entrust it with the commercial exploitation of their works, especially given the dominant position it would acquire. Solution 3 risks being too complicated for users and leaves open the question of what operator should provide Europeana with the technical elements (files for full text search, metadata) necessary to integrate content in its search engine. Solution 2 conciliates flexibility and possible harmonisation: each publisher could choose their trusted operators to provide their digital works to Europeana search portal and manage the controlled access to the text of works. Users would then be directed first to a single platform for each book in order to browse integral content according to different modalities.

Private operators thus chosen will be responsible of:

- managing controlled access to pages found upon searches on Europeana, through online reading software comprising protection measures adequate for publishers;
- managing paid access to full texts of digitised books according to different business models of digital bookstore; in any case, the operator should take charge of the order management, the payment recollection, the delivery, the securitisation of access or of downloaded files through appropriate DRM technologies, post sales assistance.

Publishers should also be able to agree with Europeana to be their own digital distributors, and distributors should be able to redirect users, become clients, to online e-book stores. Indeed, the Numilog study also recommends including bookshops in the Europeana business model on two levels: for the direct provision of printed books and for the paid access to digital books, through authorised operators, as soon as enough bookstores propose e-book sales sites.

Given the potential for digital technologies to improve access to reading for people with handicaps, the study suggests that Europeana favours their access to digital content by

proposing links to digital libraries that allow a free, distant access to books within the legal and contractual conditions accepted by publishers.¹ On the other hand it is not recommended to extend this variant by linking Europeana to all the digital libraries proposing distant loans of e-books to their registered readers; this would make the project much more complex and much more difficult to accept for publishers.

The study recognises the need to involve authors and right holders in the display of copyrighted texts within Europeana. Europeana should make sure authorised operators deal with the clarifying of the copyright with the publishers they represent, while authorised operators should make sure by contract that publishers deal in the same way with authors or their representatives.

In the end it is up to publishers to take responsibility for the distribution of digital works and their indexation on search engines, through agreements with the authors in due form. The search for an agreement should not constitute a problem for new books, since publishers' contracts usually include explicit clauses to this effect; for previous works, publishers should make the necessary checks and clearings to act in conformity with copyright, while for old works searching right holders and clearing rights might take longer. Many publishers, moreover, can be reluctant to spend the time on clearing rights for older works, unless there is a compelling commercial argument to do so. According to the study, it could be envisaged, in the framework of Europeana, to give support to the creation of some kind of centralised archive of right holders; such an archive could also be a tool for Europeana to verify the condition of "orphan" of some works it could digitally distribute.

In synthesis, the Numilog study identifies the typical user pattern according to the following principles:

- Europeana should work as a digital library for public domain and orphan works and as a search portal for copyrighted books;
- as a search portal, Europeana should offer a free common search of public domain and copyrighted books; the ranking of books upon searches should not take account of such difference; this implies the need for a common metadata structure;
- the way to access copyrighted books, electronic or printed, should be organised in a "distributed architecture" among various specialised operators: Europeana, digital distributors, bookstores, libraries for people with handicaps;
- the business model for access to full text of copyrighted digital books should be that of the digital bookstore, envisaging payment by the final users according to different tariff models.

The referral of digital distributors to bookstores might take place in a second phase, when enough bookstore websites have developed e-book sales offers; in the first stage distributors could take charge of it. The redirection to bookstores for purchase of printed books should be added very rapidly.

Using Europeana's search engine will give the user a list of titles of which (s)he will be able to tag the metadata; viewing pages of the works found will be done on the authorised distributors' sites, through a reader possibly equipped with ad hoc DRM measures for online

¹ It must be noted, anyway, that Large Print rights are not automatically held by the publisher of the 'normal' book.

reading. Even though the search is made on the full text, the text displayable could be limited to excerpts according to the publishers' parameters. Users should identify themselves before accessing the free pages; it is important that the visualisation paths work smoothly and that access on the distributor site be realised in "two clicks". If users want access to full text, the distributor's platform shall redirect them to a client module, where to be recognised as a subscriber or be directed to an order module and presented with various tariff formulas; in a further stage, the distributor's platform shall provide the user a list of digital bookstores.

Referencing of works on Europeana search engine requires authorised distributors to communicate to its server a series of metadata files describing the books, for research and display. According to the study, it is absolutely necessary to define homogeneous standards to be respected by all partners. Account shall be taken of the current most used standards and of their evolution; recommendations are therefore made about format of metadata (ONIX) and their transfer (OAI-PMH, or more generally any relevant web service), while other remarks concern what elementary unit of documentation Europeana should use (ISBN and ISTC), the opportunity of adding DOI and the issue of publications with a digital version and thus two different ISBN.¹

2.7 The digitisation process

Considering the digitisation process, in technical terms the possible methods basically depend on the available sources for books (paper or files) and the goals in terms of quality and format of digitised books. According to those parameters, different production costs ensue, thus in turn different impacts on the digitisation policies.

As to the possible sources of e-books, the most common cases are:

- digitisation *strictu sensu*: for works older than 6-8 years often only a paper version is available; some works are completely unavailable and have to be searched; for massive amounts, the cost can be 0.05-0.06€ per page; it provides with image, text and indexation files;
- digital conversion or adaptation: for more recent works, digital sources are available as part of the production chain, but they need to be converted/adapted for distribution and electronic reading; an optimised e-book can cost 60-80€ on average according to the source, to which sometimes "de-archiving" costs must be added to retrieve files from service providers when publishers do not keep the files themselves.

The cost of digitisation can thus be higher when the work is already available in electronic form, though adaptation costs are likely to decrease in time; on the other hand, results are much better when converting text mode electronic sources. Digitisation costs vary a lot and they can be indeed quite elevated; if in the easiest cases the process can be carried out for as little as 25€ per book, according to the Patino report adapting and checking a complex text can cost up to 2,000€. It becomes thus easy to envisage the necessity of high levels of investment for the retro-conversion of backlists and in general for the mass digitisation of large collections.

¹ Actually, consensus is emerging that ISBNs should be accorded to each e-book format that is published and made separately available – i.e., one for PDF, one for Mobipocket, one for Microsoft Lit, etc; thus, there would not just be a print ISBN and a digital ISBN.

The policy of digitisation of copyrighted works lies usually with publishers; still, the audience and European width of Europeana, its potential visibility and catalogue size could prompt publishers to digitise their catalogues to benefit from such visibility. Europeana could also play a role of technical and indirectly financial help to the digitisation of some catalogues.

Publishers' digitisation choices take into account a series of different parameters:

- readership targets and envisaged uses, in order to make the digitisation profitable; digital formats and business models will depend on such elements;
- economic risks, linked to the possible cannibalisation of sales by electronic versions;¹
- the will to use digital versions to modify the lifecycle of some books;
- technical choices regarding works only available on paper;
- legal choices related to possible difficulties in putting together a clear agreement with the right holders (in particular with works iconographically very rich).

In this framework, a documentary policy by Europeana could be an important guide for publishers in their digitisation choices. Publishers could adopt a digitisation policy that allows them to make a profit through different distribution channels; for novelties, priority could be given to market indications, but for older works, with a longer lifecycle, a rapid digitisation will need a public stimulus in the form of economic aid and the reduction of costs deriving from massive digitisation. It is recommended that Europeana adopts a clear documentary policy as a basis for negotiating technical and financial collaborations in view of the digitisation of works corresponding to that policy.

2.8 Technical measures of protection

Technology has introduced the possibility to reproduce instantaneously the support of a work and to distribute it in millions of copies in almost no time and with very low costs. The will to fight piracy usually leads to trying to propose an attractive legal offer and to protect files and electronic content with DRM systems or proprietary file formats in order to prevent the uncontrolled distribution of illegal copies of works on the internet.

DRM systems can be helpful in managing differentiated offers, but finding an equilibrium between the restrictions they impose and the usages permitted to customers is essential; an excessive burden can in fact become counterproductive and lead users to find ways to circumvent the protections. Proprietary formats, on the other hand, make piracy more difficult but can make publishers dependant on the producers of reading devices or the owners of distribution platforms; users could feel too constrained in a digital environment where migration between different supports is becoming the norm.

According to the Numilog study, no satisfying model of digital works sales has appeared without DRM systems, which are crucial also to protect moral rights.² However, they have of

¹ Or opportunities, since in fact there seems to be little evidence of cannibalisation; the available evidence so far suggests that availability of a digital book increases sales of the same title in print.

² Since the publication of the study, some cases have been established. See, for example, the huge Springer digital initiative, which makes almost all Springer titles available in e-format with no DRM. To give another example, none of the e-books on the IngentaConnect platforms used by many small to medium academic publishers is DRM protected; nor is any of the e-books published by the OECD.

course to permit the legitimate and convenient use of the works purchased; for example, by limiting private copying without preventing it completely.

Reading online is often subject to much weaker measures of protection, if any, either by a deliberate choice or relying on a certain natural protection; in the case of downloading, measures tend to be more robust. The main kinds of measures include: limiting the possibility to read a file when copied on several machines; controlling the rights of copying/pasting and printing, in absolute terms or by periods; controlling the duration of authorised reading, to define loan business models.

For the development of an attractive legal offer and thus of a robust e-book market, the Patino report recommends:

- Privileging interoperability. Proprietary formats should be avoided, since they risk favouring dominant positions by providers of technical services; DRM solutions should be adopted having in mind the maximum possible level of interoperability.
- Structure accessible metadata. Metadata are essential in determining the visibility of electronic works - though they do not make a book automatically ‘visible’ - and can reduce the cost of producing exploitable digital formats. Access to metadata becomes crucial for all actors of the e-book value chain, in order to compete on a level playground. Metadata should be accessible at a low charge to professionals, and a simplified version should be available free of charge to the general public. It is recommended, as far as possible, that the various actors try to harmonise if not unify their metadata bases.

2.9 Economic aspects

For the hundreds of thousands of books that might be digitised, the question arises of their potential profitability face to the digitisation costs. The Numilog study includes an economic simulation based on the recommended business model.

The technical costs envisaged include: digitisation costs, costs of putting online files and metadata, costs of storing files, costs of the bandwidth used for reading online or downloading, costs of using DRM solutions, bank charges on transactions, costs of assistance and post sale service. Except for digitisation, costs are usually met by digital distributors and digital bookstores, according to contracts that provide them a margin on the sales realised. To such direct and purely technical costs one has to add expenses for promotion and building up a clientele.

The model supposes that publishers meet the expenses of digitisation, get some support for some of the works and agree an average rate of margin of 50% with distributors. The solution for commercialisation shall combine 3 price setting systems: sales of entire books by the unit, sales of consultation time in “pay per view”, sales of subscription to thematic works collections; through a combination of these an equilibrium shall be defined in order to avoid imbalances, have competitive prices but not dumping.

The conclusions of the economic simulation are:

- the sales performances needed to make digitisation profitable seem reasonable, especially given the time span available;
- the model does not take into account: adaptation of tariff modes (in particular subscriptions) to collective usages, such as libraries and enterprises; the potential effect of

referencing works on Europeana; the supplementary costs of “de-archiving” or retrieving copies of the works;

- beyond the breakeven points for individual works, it is important to consider the size of the entire investment necessary to digitize a collection; it would also be important to assess the amount of public investment that could help effectively such a process.

3. Business models in the e-book market, digital libraries and digitisation initiatives in Europe: an overview

3.1 The e-book market in Europe

The information collected about e-book markets in Europe and their players’ business models offers a very fragmented and diversified picture, made of very different experiences in terms of conduction and results. The picture is also that of a very dynamic sector, though not in a uniform way; fast expanding markets and initiatives go alongside very underdeveloped markets and businesses striving to find a place in the panorama of digital publishing, which is seen as both offering interesting opportunities and also presenting a series of difficulties and risks.

Given its relatively early stage of development, it is quite difficult to draw a complete and precise picture of the size and trend of the e-book market in Europe. In many countries, in particular those with small markets (especially due to linguistic matters), digital publishing is at its very beginning at best, if not basically non existing (very few publishers involved, if any, with a very limited number of electronic books available). Others are in a slightly more advanced phase, with a number of publishers engaging in the commercialisation of e-books and a rapidly growing market (a relevant number of publishers involved and hundreds or some thousands of e-books available). A quite high degree of development has been reached in Scandinavia, and especially in the UK.

Finally, in a small number of countries e-book markets have reached a step further; all or nearly all of the major publishers and many small ones as well are active in offering digital books to institutions and to the general public, and many thousands of titles are available in digital format. Many publishers are streamlining their workflows in order to focus on the production of e-books, or introducing authoring suites, so that content can be more easily repurposed in different formats (with an important link to digital printing – print-on-demand). Rates of growth in these markets are high as well, but even in the most developed ones the overall size of electronic publishing compared to the printed book market is very small (at most between 1 and 2% of the total, often including offline electronic publications).¹ As will be noted later, the lack of adequate portable reading devices has contributed markedly to the slow development of the European e-book market.

Thus, all in all in Europe today the offer of content to the general public (directly or through the intermediation of libraries) continues, although still quite limited. Free works in the public domain form an important part of this offer, but the commercial side, as just mentioned, keeps developing as well, and that is the way in which essentially all of the copyrighted books in electronic format are made available to the public. As anticipated, given the characteristics of

¹ There are clearly exceptions: Taylor & Francis, for example, now attributes 10% of all sales to e-books.

works in the STM sector this is by large the one that has been involved the most in the digital transition; other categories represent a much smaller share of the market. Many of the experiences in the e-book market covered by this report started with offers of only academic and STM titles, and for most of them those categories usually constitute the large majority of their offerings; for those presenting a business model for libraries, university and research libraries are by far the main customers.

However, more and more publishers start offering their books in electronic format, especially in the fields of professional books, guides and manuals. Some publishers and retailers are moving the first steps in the field of fiction as well; usually they start with bestsellers, but some publishers have also undertaken the digitisation of their back catalogues, in order to enhance the promotion of their books through the online consultation of excerpts; this could in turn supply new sales platforms.

In parallel, new tools for searching books have been developed. The possibilities to browse works online increase, following initiatives by search engines and online bookstores. A few significant experiences are therefore beginning to emerge (for example, Mobipocket, a French company acquired by Amazon in 2005, offers more than 120000 e-books in a standard format for purchase, readable on mobile devices or personal computers).

3.2 Main business models and digital library initiatives

A wide range of different business models for providing access to copyrighted digital book content has arisen after some years of experimenting in the European e-book market. One main distinction can be drawn between models targeting end users (B2C – business to consumer) and models targeting businesses (B2B – business to business).

In the B2C field, the most common model, and the one that is usually first implemented by new actors, is that of pay-per-download: users purchase individual titles at a price and download the corresponding files. This is the method that most closely reproduces the business dynamics of printed books. In many cases, bundles of e-books are available for paid download (on a common subject or by the same author) at a discount; often, single chapters of books are offered as well, in the STM, academic and professional domain. In addition, a quite common model sees the possibility of buying a reading device pre-loaded with an e-book collection (of course where devices are available).

The other, quite different model is based on the granting to the user of a temporary right of consultation of the works, and generally relies on subscription schemes; though more common in dealing with institutional customers, such schemes are also available to individual users, which are allowed to access collections of e-books (usually thematic, or by author) for a fixed time at a fixed fee. In some cases, customers have the possibility to rent single titles, for variable lengths of time, at a fraction of the purchase price. This model (implemented by the aggregator Cyberlibris; details at par. 4.6) can be seen as a form of hybridising, since the distributing platforms becomes for the user a sort of library in which it is possible to access a collection of books for a limited time, paying a subscription fee. Users have the possibility to create their own digital bookshelves, readily accessible from different locations at any time.

Purchase and rental models intersect with the method of delivery - download or reading online - to define some further possibilities: e-books purchased are usually downloaded, but it is as

well possible to acquire (usually at the same price) the right to read the work online for an unlimited time; on the other hand, if reading online is the main way of delivering subscriptions, technology allows to download files that are only accessible for a limited amount of time.

B2B models are basically group licence models offered to libraries, and provide therefore the grounds for the creation of digital libraries; in this case as well the many possible options depend on some variables. On the supply side, libraries, just like individual customers, are usually allowed either to buy titles (individually or in bundles) or to subscribe to collections for a determined time; when titles are purchased, it is more common that the way of accessing them is online on the suppliers' websites, rather than downloading and possession of files by libraries or their users. In the most flexible models, libraries are able to determine with a high level of detail the collections they want to make available to their patrons, according to their documental policies or other criteria.

Libraries therefore either pay individual prices for the books they purchase or a (mostly annual) subscription fee for having access to a collection of titles. Another model, envisaged as well in our theoretical framework, is the hybridising of library and bookstore based on what is in practice the sale of consultation rights ("pay-per-view"). In this case the fee paid by the institution is linked directly to the actual consumption, measured in terms of downloads (if allowed, and in any case limited to a predetermined time), time of reading online, pages consulted or printed. This kind of model usually includes the possibility for libraries to limit their users' access to titles (according to different time frameworks) or to set a cap to their expenses in a determined period; thus libraries can avoid using up their entire budget in too short a time or losing control of their costs; still, some librarians fear pay per view makes their budgets almost impossible to control and prefer not to risk it (for business models dedicated to libraries, see for example ebog.dk, par. 4.4, or eLib.se, par. 4.15).

On the demand side, the traditional relationship between libraries and their patrons is not affected; users are granted free loans (therefore temporary), and access to the service comes for free as well or at a very low price (in the case of public libraries), or is regulated within the broader relationship they have with the institution (for university libraries and the likes).

Users can be granted a number of simultaneous limited accesses, this way reproducing the printed model in which the number of copies of a title is limited; or the model can allow simultaneous unlimited accesses, so that the entire community of authorised users can access all the works included in the contract at any time. The determination of the fees paid by libraries to their suppliers usually takes into account this variable: in the case of limited accesses, prices tend to depend on the actual usage, that is the number of simultaneous accesses permitted; in the case of unlimited accesses, price determination is based in most cases on the number of users (potential or actual) of the institution, which is an approximated measure of the usage intensity.

This raises the question, already addressed in the theoretical framework, of what the fee should be to give users unlimited access to copyrighted works by a digital library with a potential audience of millions like, for example, Europeana. The making available of books on the internet without an adequate compensation of right holders would in fact seriously prejudice the normal exploitation of works, and as noted before the fixing of a fair remuneration for a library with millions of potential users is unrealistic.

The “pay-per-view” model, that brings libraries closer to bookstores, clearly embodies to the utmost the principle of closely relating payments to consumption. A further step in the hybridising of digital libraries and digital bookstores is the possible role of libraries in redirecting their users to the websites of commercial players which allow the purchase of e-books that might have been object of a search on the library’s portal. Libraries could also have the possibility to sell e-books directly to their users (after having acquired them from the right holders, unless they are works in public domain), but this kind of commercial role usually contrasts with their mandate.

It is interesting to remark that all of the “commercial” digital library models examined allow their users access to e-books not only on their premises, but also remotely, including the cases in which a time limited download is envisaged. On the other hand, in any case access to the copyrighted works made available by libraries is and needs to be limited to their users, through the use of institutional intranets/extranets rather than the internet and through identification systems; remote access is indeed very carefully regulated.

In the field of B2B models, another distinction worth considering is that between public libraries and other kinds, such as university or research libraries. The distinction is based on grounds of the budget available for book acquisitions, which influences their choices in terms of their preferred business models, and thus in turn contributes to the shaping of the business model landscape.

In general, libraries other than public ones have much larger budgets, and some of them prefer subscription to bundles or collections of books; they provide their patrons with unlimited simultaneous accesses. Book-by-book e-book purchase is the preferred method of acquisition of many academic librarians, though, as many research projects have come to conclude. Public libraries generally build their digital collections of copyrighted works on a title-by-title basis, and offer limited simultaneous accesses. However, some e-book suppliers are experimenting with the offer of subscriptions to collections also to public libraries, at competitive prices. The hybrid pay-per-view model is more often adopted by public libraries, which, as already said, can limit their expenses in several ways.

It is also worth mentioning that, in a few countries, government agencies finance the provision of electronic textbooks to schools and other educational institutions.

According to the information collected for this report, the library models, though numerically less frequent, are quite important in economic terms; they contribute in some cases to up to half of the revenues of some of the most important aggregators on the market.

No significant business models have been reported that are based on the free distribution of e-books, supported by advertisement revenues or other sources of income unrelated to the end user.

In synthesis, end users have a wide range of options to get access to copyrighted works in digital format: purchase of e-books by the title, either acquiring a file or a perennial right of consultation; purchase of bundles of titles; rental of e-books for a wide array of durations (in some cases as little as one hour), again both in download or online reading modality; subscription to collections of works; free access to digital books through membership of

various kinds of libraries (public, academic, etc.) which in turn participate in the business models available to them.

In many cases, users have the possibility to browse books on the suppliers' websites, see previews (from few pages to entire chapters), perform searches based on keywords or metadata and in a few cases effect full text searches; the most interesting case here is the Libreka! project, whose platform allows users full-text search of a large number of copyrighted books from many publishers (it is actually the largest existing in-print book database after Google; see par. 4.7). Users' patterns are also influenced by the centralised or decentralised architecture of the models they are dealing with: browsing applications, files, metadata and so on can be hosted by one or several actors of the value chain, with some of these acting as mere points of search and redirection (at the maximum level of decentralisation).

A clear pattern of pricing of e-books has not yet emerged; in general it is publishers who establish a recommended retail price and aggregators or distributors take that as a basis. In the model that reproduces traditional sales, some publishers assign to digital versions the same price as the printed ones; a majority of them apply discounts, ranging usually from 10 to 30%, also based on the genres. It is worth recalling here that costs for producing electronic books are usually as high as for paper books, and in addition VAT rates on e-books are higher in most EU countries.¹ Subscriptions can have very different fees, according to the user's profile: while business school libraries with a good number of students can pay thousands of euros per month, individual customers can find offers for just a few euros.

For the time being the offer is relatively limited in terms of total number of titles, especially in comparison with the availability of printed books (the active catalogue of publishers in the EU is estimated at some 5 million titles, without considering out of print works and orphan works, of which a certain proportion is likely to be under copyright anyway). In addition, many works in the public domain are available to the public in digital format thanks to numerous digitisation initiatives by a large number of libraries across Europe.

The digital transition and the possibilities it enhances have in fact prompted the creation of many digital libraries all over Europe, out of public initiatives or public-private partnerships, aimed in particular at preserving the various national cultural heritages and at making them available to the widest public possible.

Virtually all countries report similar initiatives by their National Libraries, as well as by many other ones, which involve almost exclusively works in the public domain and are mainly focused on preserving the national cultural heritage. Such projects, funded by public resources but sometimes also by public-private partnerships, have often a small or medium scale, but in a few countries, where funds are more easily available, some large scale operations have been undertaken as well.

¹ While printed books enjoy a reduced rate of VAT in the large majority of countries in the EU, electronic books are applied the standard rate. A recent Directive (Council Directive 2009/47/EC of 5 May 2009 amending Directive 2006/112/EC as regards reduced rates of value added tax, entered into force in June 2009) allows applying reduced rates of VAT to books on "all physical means of support". In many cases, what publishers try to do is somehow absorb the cost of VAT, so that the e-book does not appear to be more expensive than the print version; this cannot be considered discounting as such.

Compared with the availability of public domain books in digital forms and also to the commercial options offered to users, the presence of copyrighted works in digital libraries is at the moment close to non existing. There are various reasons for this, which can apply to most or few of the European countries, according to the cases: the main interest in preserving cultural heritage and ancient works whose very survival is in danger; the presence of a good library system that allows already a satisfactory access to copyrighted books; legal uncertainty; difficulties in finding agreements with right holders; cost of finding information on right holders (in particular when dealing with out of print or orphan works) and/or of clearing rights on books to be digitised.

In the very few cases in which copyrighted books are digitised and made available by libraries outside of the commercial models illustrated above, usually there are ad hoc individual agreements with right holders (mostly publishers or collecting societies) that may or may not envisage a remuneration; sometimes there are legal dispositions to this end, if for example publishing is supported by public funds. Access to digitised works is allowed only on the premises of the libraries involved, or on institutional intranets/extranets, and the books involved are for the majority out of print.

On the other hand, it is not uncommon for libraries to exploit commercially their digital collections, basically of public domain works; they often offer rare books, quite ancient, of a certain interest for the scholar community. This way sometimes libraries try to recover the costs of digitisation.

Some pilot projects are being set up in this field, with the aim of giving digitisation initiatives of copyrighted books a more precise and stable framework and thus enhance the addition of more recent works to the cultural patrimony available to users in digital form. Such initiatives generally involve libraries and broad joint right holders' representations and are the outcome of negotiations among the parties on the detailed features of the deals, especially in terms of the limitations they are subject to. The most interesting cases, regarding the Netherlands and Norway, are illustrated more extensively in the next section (for details on the Dutch Voice-Fobid agreement, see par. 4.10; for the Bookshelf project in Norway, see par. 4.11). The Norwegian pilot project, in particular, in a more advanced stage, is set to make a remarkable amount of books available through the National Library's website for free access by users under a compensation scheme for right holders managed collectively and dependent on the number of pages available rather than on the number of users. Such access will be subject to a series of conditions, such as the limitation to Norwegian IP addresses and the impossibility to print, download, etc.

The most noteworthy case of a digital library that provides some kind of access to copyrighted works is currently that of Gallica, the project run by the French National Library which includes a number of books under copyright in the collection its users can search and browse. In this case, for viewing excerpts of the copyrighted e-books and eventually purchasing them, users are redirected to the suppliers' websites (aggregators); the system is very decentralised. This model as well is further specified in the next section. Gallica also hosts a few copyrighted works itself, under conditions negotiated separately with the right holders.

A similar project is being studied in Spain, where the Spanish Digital Library plans to make a number of copyrighted books searchable and displayable up to 20% of their content as the result of a joint venture between the Spanish National Library and the Spanish Publishers

Association. Access to and possibly purchase of copyrighted works will occur upon redirection to aggregators'/distributors' websites.

In addition, the French project is one of the main contributors to the European Digital Library, Europeana. Europeana aims at providing access to Europe's cultural and scientific heritage through a cross-domain portal, supporting the heritage's digitisation and stimulating initiatives to bring together existing digital content. It works as a single access point to databases of a series of institutions all over Europe. It is therefore a decentralised model: it does not host files of works but redirects to the relevant institutions after displaying search results. The Spanish project also aims at contributing to Europeana the same way that Gallica does.

Europeana is a very ambitious project, and has a pan-European scope; its focus is not at all limited to books, though, on the contrary, and at the moment books do not represent the majority of works available; in particular, there is hardly any trace of books under copyright. In this respect, the recommendations made in the Numilog study have not been followed so far (most of them have, as we will see, in the shaping of Gallica instead). Indeed, a European Commission official working on the initiative has admitted that for the time being the project is not fit for hosting copyrighted books, since contributions to it should consist of content, not just catalogues, indexations or metadata. On the other hand, a report on the European Digital Library adopted by the European Parliament¹ in 2007 proposed a model for accessing digital copyrighted content quite close to the Gallica one.

Nevertheless, it has to be borne in mind that even though digitisation initiatives aimed at making copyrighted works available through libraries are not very well developed, the business models built on public-private partnerships, though very interesting best practices, are not the only ones allowing the development of "digital libraries" in the broad sense. The commercial models established by many actors of the market are already allowing libraries to make a shift to the digital world, and in a broader sense even individuals can build up their digital libraries.

3.3 Players of the digital book world

As already stated in the previous section, the digital book market comprises a number of actors, some of which are the same as in the traditional printed book value chain and some have appeared due to the new roles and opportunities enhanced by the transition to the digital environment.

The survey on the European e-book market shows publishers producing digital versions of their titles, both through an adaptation of the production processes and by way of digitising their back lists; some of them engage directly in commercialising their electronic catalogues. Established booksellers as well have made their move into the digital world and now sell e-book along with printed books; other retailers specialise in the sale of electronic works. Distributors too can enter the electronic market from the printed one, or start as new undertakings. Traditional libraries provide their patrons with access to electronic books, and, as seen, brand new fully digital libraries are being created (Europeana is one of the most outstanding examples).

¹ Report on "2010: Digital libraries", by MEP Marie-Hélène Descamps (EPP-ED, France), adopted on 27 September 2007.

Some actors just specialise in providing technical solutions to others in the value chain: digitisation, storage of files, provision of DRM solutions, delivery of files, setting up distribution platforms, etc.

Many different actors enter into partnerships; in some cases they are fully private ones (publishers and booksellers, distributors, aggregators, technology providers, etc.), in other cases they involve private and public players (libraries in particular). The latter tend to be much less common, although they comprise some of the more remarkable experiences (such as Gallica in France and Ebog in Denmark); in some cases they basically aim at facilitating book searches.

All in all, a good number of new players seem to have entered the book market due to the digital shift, mainly due to the requirements dictated by the technological needs; in particular, aggregators appear to be the ones that command the largest amount of sales.

3.4 The digitisation process: characteristics and costs

Information collected on the procedures and costs of digitisation generally confirm the findings of previous studies. Recent publications come already in a digital format, simultaneously with the printed one, as this kind of technology is normally embedded in the first phases of the book value chain. Publishers have therefore at their disposal electronic version of their titles (mainly in PDF format); these still need to be adapted for the creation of e-books, to produce files that are compatible with the different reading softwares and devices, to add possible extra features, to incorporate technical measures of protection and so on.

Some publishers take care themselves of the conversion process, in particular those who commercialise their e-books directly; others deliver the original PDF files to distributors or aggregators who in turn carry out the conversion or assist publishers in the process. In most cases, these activities are outsourced to specialised technological companies. The most common electronic formats are the e-book PDF and the ePub and the PRC (Mobipocket), which are open standards, in the sense that they are compatible with reading on most devices and by many applications (PDF mainly on PCs, the others on mobile devices)¹.

Still, though some formats are more common and seem to be taking the lead, no single model has emerged yet; a large number of formats exists and circulates, some of which are already out of production. Many argue, especially among publishers, that open standards are the most advantageous, since they offer a higher degree of interoperability and compatibility of reading and delivering solutions. The ePub format is considered as particularly flexible. Open standards, in addition, should prevent single technology providers from locking up the market.

For older titles, e-books are produced from existing hard-copy books, generally by document scanning, sometimes with the use of robotic book scanners, which have the technology to quickly scan books without damaging the original print edition. Scanning a book produces a set of image files, which may additionally be converted into a machine-editable text format by

¹ The PRC format is instead not open with regard to creating, hosting and delivering files independently of the “owner” of the format, since for example it is not possible to distribute PRC files with DRM from outside of the Mobipocket distribution platform.

an optical character recognition (OCR) program. This allows e-books to be indexed and made full-text searchable.

Given the greater complexity of the procedure, as well as the relatively smaller commercial appeal of older titles, most publishers prefer not to digitise their back lists, at least at the beginning of their experiences in the e-book market.

The cost of producing an electronic book in a format adequate for commercial exploitation (i.e. readable by the end user on whatever kind of device) can vary quite widely. The main variables to take into account are: the source of the digitisation process (paper or file); the characteristics of the book (size and font of text, presence of illustrations; graphics and the likes, ease of scanning printed copies); the format of the files of origin and of destination (the cheapest being usually the conversion to e-book PDF); the negotiation of rights for digital publishing (not included in the older contracts and in part of the recent ones; more and more, new contracts incorporate the management of digital rights) with a series of right holders (not only authors, but also illustrators, photographers, translators, etc.); the complexity of the required information technology equipment; the choices in terms of adoption of DRM systems, the need for checking scanned books, especially complex ones (currently OCR technologies are not yet advanced enough to guarantee fully adequate results, in particular when e-books are destined to sales, rather than to be part of a freely accessible digital library); the location of the files produced by publishers for the printing of their titles (often such files are stored by printers, who sometimes charge relatively high fees for destocking them, in an attempt to compensate what is seen as a threat of disintermediation).¹

According to the combination of the aforementioned variables, the cost of producing an e-book can be as little as 20-35€ per title, for average works without extra features converted into the simplest files, to as much as 1,000€, for special works that need scanning and a difficult optimisation process. In many cases, conversion fares around 60-80€ for simple formats and it can reach 150-300€ for producing complex e-books in multiple, sophisticated formats. When conversion operations are outsourced, for example to India or China (as many UK publishers are increasingly doing), ‘simple’ e-books can cost as little as 5€ to produce. The cost of destocking the files held by printers can be of up to 80€.

Such variability does not allow saying the ultimate word on whether it is more expensive to produce e-books from files or from printed copies; both cases occur, with scanning from hard-copies presenting the largest variations. Nonetheless, conversion from other file formats is usually an easier process, it produces better results and is being made simpler and cheaper by technological progress.

Therefore, as some players report, the creation of different files for printing and digital publishing does not require a very high extra investment, and if digitising backlist titles can sometimes be much more expensive, this is not always the case. Still, in order to create a significant catalogue of e-books, the overall investment could be particularly relevant, especially until a few years ago; the total amount envisaged to start moving in the e-book market is difficult to assess, since it depends on many technical, legal and business

¹ More in detail, generally printers’ PDFs are owned by the publisher but in some cases a fee is paid to retrieve them. POD files (which can be converted to e-book format relatively easily) are hosted by the POD company for an annual fee (usually about €5). Some aggregators have digitised files free of charge for publishers; if the publisher then wants to use the same files for another purpose, it has to ‘buy them back’.

parameters; in some cases it was estimated at some 100-200,000€. This is why many initiatives have been delayed, in the attempt to reduce the production costs per unit.

More recently, light versions of digital asset management systems have been developed that will provide a basic service as well as converting a specified number of titles for around €5,000. If the publisher cannot afford this, it can use a wholesaler model at a very monthly fee. If a more sophisticated solution than either of these is required, some platform providers will allow part or all of the costs to be recouped through a revenue share model. Such solutions are easing the financial burden on the technical side, an important aspect but not the only one to be considered in assessing the cost of entering the e-book market, as seen before.

As for the e-book formats, also for e-book readers the scene in Europe is still very dynamic and fluid, as well as at its very first stages of development. So far various e-book readers have in fact appeared but none of them has been able to impose itself as a market dominant; an alternative scenario is developing in the meantime, which sees a multiplicity of reading devices, related to communication (mobile phones), professional usage (micro computers), culture and entertainment (iPhone, game consoles, etc.). There is not a single standard for reading e-books, especially due to the use of DRM systems, which require devices capable of handling them.

Dedicated e-readers are not widely available in Europe for the time being; in many countries they are not commercialised yet and in those where they are they have been introduced often only recently. According to various actors, improvements in the products and their more widespread commercialisation are likely to give impulse to the e-book market and to digitisation initiatives in general.

The large majority of the actors of the e-book market who provided information are using or plan to use DRM systems in order to protect their works. Such anti-circumvention techniques may be used to restrict what the user may do with an e-book. For instance, it may not be possible to transfer ownership of an e-book to another person; some devices can “phone home” to track readers and reading habits, restrict printing, or arbitrarily modify reading material. This includes restricting the copying and distribution of works in the public domain through the use of “click-wrap” licensing, effectively limiting the rights of the public to distribute, sell or use texts in the public domain freely.

DRM systems indeed allow the definition of different business models: they can allow charging different fees for printing or copy/paste permissions, predetermine the number of simultaneous accesses to a work, enable rental by setting an “expiring time” to files and so on. Still, in general actors recognise that often DRM technologies are not particularly user-friendly; this is why some of them prefer to adopt watermarking solution, a lighter form of protection consisting in embedding, possibly irreversibly, some additional information into files that makes them recognisable and traceable also after copying.

Also in the field of DRM it is widely acknowledged that a higher degree of standardisation and interoperability of solutions would help remove some barriers to the expansion of the market.

Face to the relevant costs of digitisation, especially if it is envisaged to make available very large numbers of books in digital format (mass digitisation), the availability of resources is

quite limited, in particular as far as public support for digitisation by publishers is concerned. In some cases, public authorities expect the market to drive such initiatives by private actors. More in general, plans for mass digitisation are not common, again due to financial constraints.

Indeed, of all the countries analysed, only France seems to have adopted a consistent policy of support to publishers who wish to digitise their collections; the programme, aimed at favouring the contribution of works to Gallica, is also destined to e-distributors. It is run by the CNL (National Book Centre), which requests beneficiaries to participate in the digital library project for at least one year.

The subventions cover a share of the total expenses and can be used to cover costs of search for right holders, renegotiation of contracts for digital exploitation and digitisation processes, among others. So far, 15334 titles have benefited from a subvention, of which some 20% are available on Gallica (at 1 March, 2009), for a total pledged of some 1,350,000€. CNL funds have been crucial in particular in supporting digitisation initiatives by small and medium publishers.

In Spain, the project for creating a digital library including copyrighted books has been beneficiary of public financing in the framework of a government initiative to foster the development of the information society; part of the funds allocated to it will be destined to publishers for covering digitisation expenses. The fact that in Norway the National Library covers the costs of digitisation and right holders can have copies of the electronic files resulting can be considered as a sort of indirect support.

In other countries there are examples of supports to book publishing in general, which includes production of electronic books, or policies encouraging the adoption of information technologies by businesses.

3.5 Economic results

It is not easy to obtain detailed information on the economic results of private undertakings or on the content of private agreements; however, it is possible to make some remarks on the economic aspects of initiatives in digitisation and the e-book market.

As already mentioned, investment for setting up a business model in this field can be very high (a few hundred thousand euros), due to many factors; in particular, it is a business sector characterised by high fixed costs and usually low market volumes, which makes profitability difficult to achieve.

Rather than in the digitisation process itself, which as seen has a cost but might be kept under control, an even higher share of the necessary investment often resides in the information technology system requirements for managing large databases and connecting a number of players with different file formats and business models. However, technology is catching up in this field as well; digital asset management systems are designed to perform this kind of tasks instantaneously.

Given the aforementioned difficulties, especially up to a few years ago, many initiatives have been born as joint efforts, fully private and in a few cases public-private partnerships, which

pool together actors that could not have undertaken such projects individually. In general it takes some years before businesses start recording profits, and some more before the initial investment is recovered; a good number of the existing projects have not yet or only recently become profitable, though in some cases, where initial investments were kept fairly limited, profitability was achieved more rapidly. All in all, this means that the number of players in the market might take a while to grow appreciably in the near future in countries where the sector is still underdeveloped, while in the more developed ones, where actors are taking advantage of good levels of sales and the latest technological progresses, a rapid expansion is already taking place (for example, there are currently some 20 credible companies in the UK market now, up from maybe 10 one year ago).

3.6 Licensing models for making available copyrighted works and for dealing with out-of-print and orphan works

When coming to licensing models for digitising and making available copyrighted works by libraries or clearing mechanisms for dealing with out-of-print and orphan works, most sources of information report an almost complete lack of such devices, especially on any large scale.

For digitising and making available copyrighted works by libraries, as seen when talking about digital libraries, there are not any generalised models, and actually in most countries there are no models at all. Initiatives in this field are built on voluntary agreements set up on ad hoc bases between libraries and right holders. As already mentioned, the most interesting experiments will be illustrated in detail in the next section. Otherwise, there are the various business models by suppliers of electronic books (publishers, distributors, aggregators) which provide libraries with access to collections of works under copyright at some fee, in a regular contractual form.

The same can be said about mechanisms for clearing rights on out-of-print and orphan works; so far only a few experimentations have been undertaken, and it is still early to draw any conclusions. It is worth remarking that experiments of licences for making available copyrighted works actually concern mainly out-of-print and orphan books.

Some actors report the lack of such established clearing mechanisms and of a more general legal framework dealing with the issue as one of the main obstacles to the inclusion of certain titles in the digitisation initiatives by libraries; this problem is coupled with the objective difficulties often encountered when trying to trace the right holders for some titles (made worse by the non inclusion of digital rights in the large majority of contracts).

Some countries envisage the possibility of addressing the issue of orphan and also out-of-print works through collective management of rights; this is for instance an option enabled in the Nordic countries by the so called “Extended Collective Licence” (ECL), as explained below (par. 3.7)¹.

The rights information infrastructure the Arrow project plans to build would provide a great help in clarifying the status of many works that are potentially orphan and therefore lie in a

¹ The issue is also further explained in the “Report on the legal framework” prepared for the ARROW project by the Federation of European Publishers.

sort of juridical “limbo” given the absence of established legal mechanisms for dealing with them.

For most actors in the e-book market, orphan works are not an issue of particular relevance, since they only deal with books whose right holders are known. As to out-of-print books, they have more of a role in business models: as a minimum, some of the titles in some e-book suppliers’ catalogues were in fact out-of-print before being commercialised again (without this making any difference in the managing of copyright deals, most of the times); for other players of the market, currently out-of-print works are an important part of the business, and their importance is likely to grow, since print-on-demand techniques and electronic versions, being technically always available, can provide works with a new or an extended commercial life.

In this field, it is also worth mentioning the work of reproduction rights organisations (RROs). In relation to digitisation and making available works by libraries, several RROs assist right holders (authors and publishers) in carrying out diligent search services and as rights clearance centres to orphan and out-of-print works. On the general level, RROs typically sustain authors and publishers activities in authorising digitisation activities such as scanning of analogue material for the printing out of a hard copy or for the posting to secure networks (mainly of fragments of publications for internal use only).

Several also license copying from digital originals for internal use; downloads from internet and similar sources including for the making of further hard copies or for posting to internal networks; downloads and re-use of paid-for digital content; downloads and re-use of free-to-view web pages; projection of material to whiteboards, the inclusion of copyright material in power point presentations, etc. Again, in these cases authorisations are normally for the reproduction of portions of works for internal use only. Some RROs, in addition to licensing the use of orphan and out-of-print works, also authorise the transformation of material to alternate formats readable by people with print disabilities.

3.7 Conclusions

So, the landscape of digital publishing, accessibility of books in electronic format, digital libraries and e-book markets in Europe is both significant but still quite limited; moving fast but basically at its beginning, and with big differences between countries, although some similarities can be drawn as well among the various trends going on.

The main differences are dictated, as we have seen before, by the size and growth rate of the markets, which in turn is closely related to linguistic issues. Still, a particular case is worth mentioning, since it tends to draw a different border across Europe: the case of Nordic countries.

The legal technique called Extended Collective Licence (ECL) used in the Nordic countries can be useful to deal with the issue of unknown or non-locatable right holders. The ECL is a support mechanism for freely negotiated non-exclusive licensing agreements between an organisation representing right holders and users in certain sectors for specific uses. Once the voluntary agreement is achieved and comes into force, it is extended to other right holders that are not members of the organisation. These may have the option to opt out of the agreement or extend the mandate to the rights administrator on a non exclusive basis.

The elements of an extended license system are the following:

- the organization and the user conclude an agreement on the basis of free negotiations;
- the organization has to be representative in its field;
- the agreement is by law made binding on non-represented right owners;
- the user may legally use all materials without needing to meet individual claims;
- non-represented right owners have a right to individual remuneration;
- non-represented right owners have in most cases a right to prohibit the use of their works.

The ECL system could be well suited to facilitate digitisation initiatives by libraries in countries such as Denmark and Norway by solving the issue of orphan works and possibly also of out-of-print works; however it is important to recall that the starting point is a voluntarily negotiated license with the rights holder where the necessary conditions are agreed. The system can be applied to other copyrighted material as well.

Nordic countries also appear to have a particularly solid system of public libraries, which are considered very important and are therefore endowed with relevant budgets and offer high quality services to their patrons; public libraries in those countries are much more likely to make copyrighted e-books available to their users by subscribing to any of the business models targeted at libraries set up by commercial suppliers of electronic books.

Many difficulties hinder developments in this field, from economic obstacles to legal, to technological ones. Often actors that could potentially be involved have an attitude of mistrust toward entering the field of digital books, be it authors, publishers or librarians.

Authors sometimes are reticent in trading their digital rights, mainly for fear of illegal copying; rights negotiations can be thus very complicated. This in turn affects publishers, who often see in the management of the underlying rights one of the main obstacles to digitisation; as already said, for all old contracts and many new ones digital rights have to be negotiated separately, and often with a plurality of subjects. Publishers until recently have usually been concerned as well by the large amount of investments needed to enter the e-book market, and by the uncertainty which still characterises a market in its youth where it is still difficult to foresee the consolidation of any particular business models and therefore the possibility to secure returns for the investments. Difficulties also arise in making decisions about pricing, formats, DRM and so on. Small publishers in particular often lack the financial and also human resources to organise a digital book production and distribution chain, though, as noticed before, technological progress is rapidly changing this scenario, to the point that some small publishers currently find themselves making healthy revenues from e-books.

The absence of reader devices that matched the expectations of users and offered a really satisfactory user's experience has been for long a serious hindrance to the development of the e-book market: had anything like what the iPod was for the music market appeared earlier, the sector would have probably experienced a totally different dynamic. Also the lack of standardisation in e-book format and reading software has been an impediment somehow, and even more that of interoperability. If standardisation in fact is not always possible, or even advisable (as for instance with the PDF and ePub formats: the coexistence of two derives from the need to pursue different goals, reflowing on various screens against preservation of complex layouts), interoperability appears highly desirable.

The current rapid diffusion of the ePub format is likely as well to favour the growth of the sector: ePub is the file extension of an XML format for reflowable digital books and publications; it allows publishers to produce and send a single digital publication file through distribution and offers consumers interoperability between software and hardware for unencrypted reflowable digital books and other publications.

Partnerships are often a good solution, they pool together resources and expertise from different actors and can be useful to overcome differences in attitudes and positions that can be as much of an obstacle as objective elements like costs. Collective undertakings can take the form of common platforms for commercialising e-books, set up by publishers and booksellers, for example, but also of agreements between right holders and libraries to make works available online to the public.

So far, the latter case has not seen many remarkable examples, and the most interesting experiments are still at their very beginnings. Nonetheless, an initiative like Gallica (which will be examined more in detail in the next section, par. 4.6) has so far helped raising awareness among the book chain professionals of the risks and opportunities of the business, assessing the technical and organisational aspects of digital publishing and proving the feasibility of a project providing users with joint access to public domain and copyrighted works fully respecting the rights of right holders, though not its potential role of enhancing sales of e-books (which in any case is not intended as a major goal for a National Library or a public-private partnership; the project is indeed mainly aimed at public goals - referencing of titles, searches, etc.).

Meanwhile, as more and more publishers enter the e-book market, they contribute to a wider understanding of the importance of including digital versions of books in the normal editorial flow, in order to have files that can be easily retrieved and converted; it becomes also clear that this itself is not the most complicated requirement.

Actually, the problems with the profitability of business models in the e-book market, deriving from the high levels of investments needed to build a robust catalogue of works and the limited volumes of sales (as witnessed also by the Gallica case) point at the need, in order to seriously enhance the availability of books in electronic version, to adopt wider practices of financial support to digitisation, especially as back lists are concerned. As it has been shown, so far such initiatives are extremely limited; a broad diffusion of such projects, through public-private partnership, allocation of public funds or other methods, could give a strong impulse to the making available of copyrighted works in digital format to the general public.

In addition, whatever initiative aimed at creating the conditions for the development of a thriving e-book market would certainly constitute a powerful stimulus to the digitisation and making available of copyrighted works.

The inclusion of copyrighted books in digital library initiatives (such as Gallica) is seen positively by users, also in cases when this is limited to signalling works among search results for redirection to commercial players, but users' paths can be improved.

Borrowing or on site consultation of copyrighted books by libraries' users is still limited, in particular given the small size of the e-book market, but it is taking on, especially in some countries; for some players of the e-book sector, the library market is quite relevant, and

accessing electronic publications through libraries is a well developed practice in sectors such as the academic one. These are the main difficulties reported: on one hand, many libraries, in particular public ones, have very limited budgets, which do not allow them to subscribe to commercial services. On the other, digitisation of copyrighted works by libraries is limited by the need to compensate adequately the right holders, which is an essential precondition to ensure the fair remuneration of all actors in the book chain value; here, apart from the shortage of funds, there is a lack of consolidated models, and negotiations can be quite difficult. Another serious obstacle often reported is the difficulty in retrieving rights information about books, in particular those which are presumably out-of-print or orphan.

Still, the amount of works available to the public in digital format is steadily increasing, and while some public-private partnerships represent quite interesting experiments, business-driven solutions are so far the main contributors to the creation of digital libraries in a broad sense.

As to the technological aspects, besides the advantages of having e-books in open, compatible standards, many players agree even more on the necessity of some form of harmonisation of metadata on electronic publications (keeping however in mind that having an elaborate system of recording metadata is not necessarily synonymous with improving visibility), on making access to the databases containing such information easier and on trying to facilitate data exchanges. Be the goal the creation of a platform for selling e-books from different publishers, the linking of a digital library to the websites of various aggregators, the setting of a system for searching information on books or performing full-text searches in a large number of collections or the retrieval of rights information from a series of databases, at the core it is all about communication and exchange of information between informatics systems; the advantages of standardisation, harmonisation and interoperability are therefore evident.

Instead, at present, as stated in the introduction, different models exist but there is still a large degree of fragmentation. Some experiments are being conducted, of course; Europeana is an interesting model of interoperability, connecting dozens of contributors, some of which are in turn aggregators of content from other sources; other examples come from the various aggregators and joint platforms operating in the e-book market and from digital libraries such as Gallica. All of these show the advantages of building systems that are able to operate on common technological grounds, for the exchange of information as well as files.

Furthermore, in some countries dialogues are going on between the holders of bibliographic databases in order to achieve some level of harmonisation if not an outright merger. Against this background, the interoperable search infrastructure that is expected to be the outcome of the Arrow project, based on a network of national databases, could represent a huge step forward in the direction of facilitating further joint initiatives of all kinds.

4. Country files

4.1 Austria

Currently, there are about 1,000 publishers in Austria. These are mostly very small publishers, more than 50% only having 10 or less titles in print. Only about 100 publishers have more than 100 titles in print. Very few publishers can be considered big publishers.

In Austria, the e-book market is still very small. There are only very few publishers who actively engage in selling digitised books or born digital material, namely Überreuter, Manz (Rechtsdatenbank) and Verlag Österreich - and the number of available works in digital format is quite low. Taking the case of one of the biggest publishers, Überreuter, there is presently just one new programme, where 9 titles are being digitised and are offered in digital format via the platform Libri.de.

Some of the bigger Austrian bookshops also have internet bookshops, e.g. Thalia (being publisher at the same time) or Tyrolia. Recently, Thalia has started to sell also e-books in the ePub format for the Sony eBook reader only. In addition, recently a pure e-book retailer has opened in Austria, Hixbooks, which cooperates with publishers and bookshops to sell e-books for its own e-readers (Hixreader).

From a library perspective, there is no other existing or planned initiative to make book content searchable via internet apart from the already established digital library initiatives and the planned Austrian Digital library. These main digital library initiatives are two projects by the Austrian National Library (ANNO - Austrian Newspapers Online, ALEX - concentrated on historic and contemporary parliamentary materials and legal texts of Austria and of the Habsburg Monarchy) and a joint effort by some university libraries hosted by the University of Innsbruck (ALO - Austrian Literature Online, with contributions mainly by University and Regional library of Tyrol, University library of Graz). ALO has a digital collection of mainly public domain books (and only a very few out of print) that users can access in full and for free on its website.

As for the publishers, none of the ones interviewed could mention any existing or planned initiative apart from facilitating access via libri.de or the “search inside the book” function in Amazon. However, most of the publishers showed big interest in similar opportunities and would welcome platforms and initiatives, but at the same time they expressed strong concerns about the investments needed and the risks to be taken. Also, they see no clear business models and how to get return for the investments they would need to make.

There are currently no existing or planned public-private partnerships in this field. There is only one project which was mentioned twice as a very interesting opportunity for publishers (Verlag Österreich, Verlag Turia&Kant) and which could turn out to be some sort of public-private partnership. It is the planned open access initiative by FWF (Austrian Science Foundation): It is foreseen that all publications produced with the help of funding from FWF will need to be made available for free on the internet after one year of the publication. The involved publisher then gets a refund for that. However, according to the interviewed publishers, there are yet not clear directives or guidelines and therefore they are still waiting and do not engage themselves.

None of the interviewed publishers could mention any collective private initiatives for making digital works available. There are no public policies to support digitisation of books by publishers.

In addition, the University of Innsbruck (UIBK) coordinates a network of European libraries called EOD (E-books on Demand). Users can order e-books via the common library catalogues; the libraries then digitise the requested item and send it to the user via the EOD service network, at a fee. The books digitised in this way will simultaneously be incorporated into the digital libraries of the participating libraries and thus be accessible on the internet. Works involved are mainly books published from 1500 to 1900; some libraries nevertheless also offer the digitisation of books beyond that timeframe, namely for special user groups, e.g. researchers or people who are visually impaired or blind. For some out of print books EOD asks for a declaration of consent from the author or publisher. Due to the costs of digitisation, the income of EOD libraries covers only part of the direct expenses.

Anyway, there are only a very few cases in which copyrighted works are digitised and made available by libraries. At UIBK the situation concerning out of print books is the following: if a copyrighted out of print book is ordered via EOD at UIBK, then UIBK tries to get in contact with the publisher in the case of published copyrighted books and with the author in the case of unpublished manifestations, in particular theses. The library then tries to get the written permission for the described usage cases. Most of the times, once identified and contacted the right holder, permission is granted without problems and without any remuneration involved. However, the biggest effort and most time consuming process is to find the right holder. There can be many obstacles: the publishing house doesn't exist anymore and there is no successor; the author has died and it is unclear who inherited the rights; the publisher can be contacted but can not clear rights for digital usage as this was not part of the contract with the author; and so on.

In the case of orphan works, at first, UIBK tries to identify the right holder as above. Whenever the right holder can't be identified, the problem is unsolvable, as there has been no implementation of the recommendation about orphan works in Austrian law. This means that although a diligent search is executed and a work can be declared as "orphan work", it is impossible to make use of it, because in Austria there is still no legal basis for digitising and making available orphan works.

4.2 Belgium

The Belgian Royal Library (KBR), in the framework of its mission to preserve and make available to the public its collections, has developed a series of digitisation projects. In particular, in February 2009 the KBR launched its prototype of digital library, Belgica; it also provides digital content to Europeana. The great majority of the works digitised for Belgica belong to the public domain and are available for free on its website; the few exceptions comprise mainly journals up to 1950, which are available for consultation online only in the premises of the Library.

Most books are displayed as PDF files, with a quality that allows reading on screen but not printing. In general, they are treated with OCR and enriched with metadata for indexation and search.

On the private side, the Belgian e-book market is not very developed yet.

4.3 Bulgaria

No e-book projects exist at the moment in Bulgaria; it is a small market, there is fear of illegal copying and authors are very reticent in giving the digital rights on their works. This is also due the law allowing copying of books and the absence of any levies or collecting society system. Digitisation is at its very beginning, through initiatives of the National Library involving newspapers, parliament proceedings from the early XX century and ancient manuscripts (all in the public domain). The main obstacle is the lack of funds, which also hampers the possible contribution to Europeana.

4.4 Denmark

The Danish Publishers Association recently conducted a research on digital publishing in Denmark; one of the conclusions was that the e-book market is presently still quite small, despite a quite high growth rate.

The Ministry of Culture has set up a working group to prepare a report on the digitisation of the Danish cultural heritage. The Publishers Association participated in the subgroup on copyright issues, in particular to search for a solution to the problem of orphan works. Another subgroup stated it would be better to focus on the parts of the cultural heritage which are more difficult to access (because they are rare, fragile, etc.) rather than targeting more recent, copyrighted works. In general, the Danish library system offers easy access to books, therefore there is no need to concentrate efforts on digitising the copyrighted content of libraries, especially given the costs it would entail; it is rather expected publishers will do it at some point for commercial purposes.

Due to the previous considerations, the government project on the digitisation of the cultural heritage will not allocate funds for digitising copyrighted works. In particular, no public funds are available for digitisation of books by publishers.

The Danish Agency for Libraries and Media invited the Publishers Association to a meeting on digitisation project for libraries' content in order to make texts searchable. A first pilot project will be launched involving one university publishing house; any further dialogue has been postponed until the results of this experiment will be known.

As for the orphan works issue, the expectation in Denmark is to tackle the problem through the system of extended collective licences (ECL) foreseen in the Danish copyright law. An ECL is an extension of an agreement to non-represented parties; Copydan, as a collective management society, can establish such a mechanism if it represents a substantial number of right holders of certain types of works which are used in Denmark. The licence must be approved by the Ministry of Culture, after which the collective management society makes agreements with users on the collection of payments. This way, the ECL gives users the right to exploit the works of both represented and non-represented right holders.

This provision of the Danish Copyright Act allowing to deal with orphan works through ECL systems has been in force since July 2008; amendments then introduced established a new ECL meant as a supplement to the one already existing and also as a solution to the problems

concerning orphan works, whose management is consequently only a part of the new regulation. However, so far no library has made any step in that direction.

Projects involving article 50 subsection 2 is likely to involve mass exploitation of works i.e. libraries mass digitization, where part of the works involved will be orphan works.

Copydan is expected to apply for a mandate from the Ministry of Culture to manage the issue; nothing specific has been decided yet, and the possibility to have individual agreements with publishers once an orphan work is found not to be such is not ruled out. In the meantime, the National Library has undertaken digitisation of the Danish cultural heritage, starting with the works in the public domain; when it comes to copyrighted material, again the expectation is that the matter will be dealt by collective management societies.

Copydan is already active in a project aimed at digitising and making available sheet music, for which the whole rights clearance issue is expected to be solved through ECL.

In relation to libraries, Copydan has entered an ECL agreement with research libraries covering the digitisation of periodicals and articles for research purposes; users can request a scanned version of an article that does not exist already in digital form and have it delivered to them by email. Research libraries pay 6,34 DKK per transaction/requested article (0,84 Euros).

Finally, when it comes to libraries, Copydan also licenses the scanning and making available in digital form (websites) of book covers. Institutions licensed are primary school libraries, public libraries (municipalities) and research libraries. Public libraries and research libraries are licensed for textual rights on the basis of individual mandates negotiated with publishers whereas school libraries are licensed via ECL. Pictorial rights are in all areas licensed via ECL with Copydan Pictorial Arts as the mandating RRO. Primary school libraries pay 2,55 Danish Crowns (DKK) per student per year (0,34 Euros). Public libraries pay 0,0785 DKK per citizen in the municipality per year (0,010 Euros), which means that according to their size public libraries pay between 500 and 15000 DKK per year (67-2000 Euros).

Research libraries pay 560,08 DKK (74,6 Euros) per year the small ones, 1120,17 DKK (149,35 Euros) per year the medium sized ones and 0,84 DKK (0,112 Euros) per student per year the large ones. The size of the library is determined according to standards given by the Danish Agency for Libraries and Media. There are no limitations in the agreements as to how many book covers that may be scanned/digitised.

On the market side, the most interesting experience in Denmark is that of ebog.dk. Ebog.dk is an aggregator/distributor owned by the Dansk BiblioteksCenter (Danish Library Centre) and some of the biggest book publishing houses in Denmark; it is therefore a public-private partnership. Ebog.dk has established itself as a content aggregator building strong relationships with many publishers, private and professional customers as well as university libraries and public libraries.

Ebog.dk was established after winning a tender issued by the Danish Publishers Association for a digital store and library that enabled e-books from many different publishers to be bought, rented or borrowed.

Ebog.dk engaged an Australian company in early 2007 to develop three e-platforms to allow users to buy, rent and borrow e-books. The company designed and developed an infrastructure to host e-books in Adobe PDF format and iSilo as well as enabling users to buy and rent e-books and a library lending solution based on individual customer subscriptions. They also designed and developed an inclusive e-book store that would include titles from many different publishers with very different technical and editorial backgrounds. This enabled any customer to search for a title, read a few pages, buy or rent and download an e-book in any digitised format.

Ebog.dk hosts, distributes and sells e-books adopting different technical solutions according to the access models of its customers, online reading or download. Currently, some 100 Danish publishers, large and small, provide their titles to the platform. Some 1,500 Danish titles are available; at first they were only academic titles, mainly for middle and high grade education, but now also the trade sector is growing. Non-fiction titles are prevalent, but fiction offer will be increased soon since an e-reader is going to be launched on the Danish market and ebog.dk needs to prepare for the competition. Recently, some 20,000 titles from international publishers have been added to the catalogue, from some of the main academic and STM publishers (Wiley, Reed Elsevier, Taylor&Francis, etc.); these are titles that have been deemed as very relevant for students and libraries.

Upon search on the ebog.dk website, users are presented with books titles, covers, metadata and a brief extract; according to the publishers' wishes; in some cases it is also possible to view the index and a sample, but not parts of the actual book. Full-text search can be performed, as well as relying on metadata and keywords (including those issued by the National Library when e-books are registered as part of the legal deposit obligations; books available at ebog.dk also appear in the National Library system).

The model destined to individual customers allows both buying (download) and renting single titles. The selling price is determined by the publishers, who generally set the recommended retail price around 75-80% of the price of the corresponding printed version. The buyer is allowed to print one copy of the book purchased. In case of rental, the user purchases access to online reading for a limited amount of time: 1 day, 1 week, 1 month, 3 months or 6 months, at a price ranging from 15% to 65% of the retail price. Book rented cannot be printed; copy/paste is not allowed on any model. Both options can be bought separately.

An e-book loaning platform for users of public libraries is also available. Customers can borrow e-books for a week with access to the file lapsing after that period; access is granted both in the libraries premises and remotely. Libraries that subscribe to the service pay a one time access fee based on the number of potential users and then make payments for each book visualised by their users (pay-per-view); the conditions offered to libraries allow an 8 day loan at 10% of the book's selling price, which constitutes a 65% discount on the conditions normally applied to printed books (7 day loan and 20% of the retail price). Loans can be renewed, prompting another payment by the library. The system keeps track of every individual title and libraries can access loaning statistics; they can select the titles they want to make available and they have various options to limit access and loaning by their users (weekly, monthly, yearly). They can also set a limit to their total expenditure with ebog.dk (again by different time frameworks) in order not to deplete their acquisition budget too quickly. Such budget, for a mid-sized library, can be around 500€ per month; typical limitations allow users to borrow 10 to 15 books per month. 65% of the revenue from loans

goes to publishers and the rest is kept by ebog.dk; around half of the total revenues of ebog.dk come from the library model. Whenever a book is borrowed from a library, a link to a bookstore appears as well that allows buying the book.

In general, publishers supply their books already in the format adequate for the platform; if needed, ebog.dk facilitates the digitisation process by submitting the material to the same company which created its platform and then adds some final technical details. Books are indexed and full text searchable. The standard cost for digitising an average book (250 pages) without special extra features is around 35€.

The main obstacles to the digitisation process were identified as:

- the management of the underlying rights; of authors (since in most contracts, and in all of the somewhat older ones, digital rights were not included), illustrators, etc.
- making publishers understand the importance of including digital versions of books in the normal editorial flow, in order to have electronic files that can be converted easily and retrieved rapidly; and also clarifying how this does not constitute a complicated requirement.

Due to the small size of the market and the large investments required, the ebog.dk experience so far has not been profitable; it is still in the phase of recovering the initial investment.

4.5 Finland

At present, in Finland, the e-book business is basically non-existing. There are no public policies to support digitisation by publishers. According to one publisher interviewed, the Google Booksearch project could be a positive initiative if it encompassed a stronger respect for intellectual property rights; clearing rights issues is in fact conditional to publishers participating in such projects.

The Finnish national Library has undertaken a digitisation process, focused on public domain works; commercial exploitation by publishers is at the very beginning.

Gummerus Digital plans to develop e-solutions based on the printed books (i.e. transform traditional books into e-books) as well as create new e-solutions that fit into their business model. These solutions will be delivered through all kinds of electronic delivery chains, even those outside the traditional book chains.

At this point only a couple of books are involved, but within one year the target is to increase the number of e-book titles up to 100. The company will rely on its resellers' platforms. Content shall be protected (DRM) and the prices shall be 20-40% lower than for the hard cover printed book. So far customers are able to buy only individual e-books; other options are under consideration as well, like subscriptions.

The operation is initially financed through organic growth and financing from Gummerus Publishers, the publishing house that owns Gummerus Digital. In the medium term, the aim is to be the leading e-book provider in Finland.

The company has not been involved in any initiative with libraries in terms of digitisation and making available; although the possibility is not ruled out, it is not a priority at the moment. They have not taken part in any public-private or collective private initiatives either.

WSOY publishing house plans to enter the e-book market in the next months. For the sales and technological aspects, it might consider collaboration with other publishers. A series of business models for making content available to customers are being evaluated:

- purchase and download of single e-books in some format (ePub, Amazon, etc.);
- licensing for a subscription allowing access to documents online for a limited time;
- downloading part of books for free and then paying in order to get the whole work;
- chunking, i.e. the purchase of parts of e-books (chapters, etc.).

For the time being, efforts are being concentrated on how to reduce the costs of production per unit. Some tests of digitisation processes have been undertaken; digitising can be quite costly, due to, among the others, information technology costs and the need for checking books after digitisation (in particular since OCR technology is still not very advanced).

In terms of file protection, watermarking will be probably preferred to DRM systems, which are often not very user friendly.

The works involved in the project will be mostly non fiction; this will bring about a number of side aspects to take into account: managing colours, dealing with rights for pictures and graphs, etc.

4.6 France

The electronic book market in France is not particularly significant yet, especially compared to the total size of the book publishing industry (an estimated 30 to 40 million €, some 1% of the total turnover of book publishing, mainly on physical supports like CDs and DVDs; purely electronic e-books may account for 0.1% of the market, but precise statistics at present are not available). Still, it is growing quite fast, and many experiments have been made; all of the major publishers now offer part of their catalogues in electronic format and the market is expected to grow even more with the introduction of a new generation of reader devices: the recent launch of Sony eReaders on the market is in fact likely to further accelerate its growth, as well as to increase the importance of publishing titles in the ePub format. To give an idea, FNAC opened its e-bookstore 6 months ago, and has sold so far some 7000 eReaders; the figure, though somehow remarkable, is also still fairly small.

The most important experience in the field of making available copyrighted works in electronic format from a library website is the Gallica project, the result of a public-private partnership between the French National Library (BnF) and the French Publishers Association (SNE), an interesting model for the coexistence of public and private offers.

After the Paris Book Fair of March 2008, Gallica 2, the new version of the digital library of the BnF, started displaying contemporary works under copyright alongside its digital public domain collections. The online access from a single entry point to public domain works, consultable entirely, and to contemporary works, which can be browsed for extracts in full respect of copyright, constituted a world premiere.

The BnF started digitising its collections in the early 1990s; the first Gallica site opened in 1998, focusing on rare, fragile, ancient editions in the public domain. Subsequently, the digitising industry grew, technology improved dramatically and publishers started preparing to make their content available in digital format; this prompted a shift of perspective in the turn of the decade.

In January 2006, the steering committee of the European Digital Library project submitted a white paper to the French Ministry of Culture addressing the question of how to make copyrighted works available and recommending the creation of a public-private partnership involving publishers. In May 2006, the BnF was chosen as French operator for the EDL project, later named Europeana. A working group BnF-SNE was set up to define the legal, economic and technical conditions to make copyrighted works available through a public digital library. In March 2007, the BnF presented a Europeana prototype with some 12000 public domain works digitised; soon thereafter, the Ministry of Culture created a new committee in the National Book Centre (CNL) in charge of digitisation policies in order to determine the modalities of financial aid to digital publishing projects.

The CNL is the public body in charge of financing policies in support of the book industry; financing from CNL prompted the BnF to start mass digitisation of its public domain collections. In October 2007, the beta version of Gallica 2 was launched, and in December publishers were illustrated the conditions for participating in it. In January 2008 the Europeana project was back under the lead of the EDL, with Gallica 2 being the French contribution to it. In March 2008, the experiment started with over 3000 copyrighted works. In November 2008, the EDL launched the first operational version of Europeana. By March 2009, the integration of the first version of Gallica into Gallica 2 was completed and the project got its original name, Gallica.

Respect for copyright and fair remuneration of right holders are a founding principle of the Gallica 2 experiment. Other key points are:

- all publishers can make their works available as long as authors have ceded them the rights for digital exploitation;
- e-distributors (included the publishers themselves) will act as intermediaries between publishers (who choose them) and the BnF (who approves them); the BnF is authorised to harvest the distributors' metadata and text files for indexation;
- research of books on Gallica 2 is made on the collections of public domain and copyrighted works, relying on metadata and full text search;
- browsing of extracts of copyrighted books is done on the e-distributors' sites, according to the publishers' indications;
- it is possible to purchase the displayed works, starting from an e-distributor site, by downloading them directly from there or after redirection to an associated bookseller's site; the BnF and its public partners do not play any commercial role and do not perceive any remuneration from the sales.

The business model applied to Gallica is therefore that of the digital library for the public domain works, and of the digital bookstore for copyrighted works (for which case the digital library model was deemed technically and economically unrealistic); the latter relies on individual paid for access to works according to the terms defined by publishers, thus reproducing the model of selling printed books.

Publishers and e-distributors are eligible as beneficiaries of the funds for digitisation and diffusion of copyrighted works of the CNL. They need to match two general criteria: respecting the indications of the documental charter of copyrighted works established by BnF and SNE, and holding explicitly the rights for digital exploitation. In exchange, they commit themselves to participate in the experimentation for at least one year; the commitment is not exclusive. For e-distributors, subventions can cover up to 50% of the expenses related to some kinds of investments.

For publishers, eligible expenses are:

- right holders search and renegotiation of contracts for digital exploitation (up to 25% of costs incurred);
- cost of processing the titles to be digitised or of converting existing files into ad hoc formats; the aid applies to 50% of costs for books commercialised in non XML format (capped at 0,50€ per page) and to 66% for those in XML format (capped at 0,66€), and it can reach 2,66€ per page in case of printed books that present particular technical constraints.

Subventions are paid by CNL to publishers in two stages: one third after the agreement on the proposal and the rest once the works are actually made available on Gallica 2.

In 2008, for the first time some private actors benefited from funding by the CNL for their digitisation policies, in the framework of a redeployment of the budget for the European Digital Library, until then exclusively destined to the BnF. 51 publishers received a subvention for the digitisation of 15,334 titles, of which some 20% are available on Gallica 2 (at 1 March, 2009). Works approved for financing take usually 4 to 12 months to become available, due to the times for searching right holders, renegotiating contracts, destocking, digitisation, putting online, harvesting and so on.

Funds pledged so far amount to 1,350,998€, an average of 88€ per title; the amount per title depends on the number of pages, the dimension of the font, the source format, the number of typefaces and text levels treated, the destination format. The experiment will be evaluated after two years. In addition, 5 e-distributors (Numilog, Cyberlibris, Editis, E-pagine and Cairn) shared 116,500 €.

The organisational and technical chain of Gallica 2 works this way:

- publishers provide e-book files to one (and only one, for simplicity) of the e-distributors approved by the BnF of their choice;
- the files are stored on the distributor's server;
- once per month, BnF's server harvests metadata and content of new titles of all distributors, through the standard protocol OAI-PMH, and Gallica's engine indexes metadata and text; this allows searching copyrighted documents the same way as public domain ones, displaying document descriptions as search results, showing the document description and redirecting the user to the distributor's platform for browsing excerpts of the book and buying it.

Users perform their searches on Gallica 2's site; subsequently they can visualise the entire work, if it belongs to the public domain collection of the BnF or of one of the partner libraries, or, if the work is copyrighted, they are showed a presentation of the work on Gallica, from

where they are redirected to a distributor's site for browsing or purchasing the book, following a procedure that depends on each distributor's business models.

Given the limited number of copyrighted works available and the will to start the experimentation with a critical mass of titles, the initial intention to strictly follow the documentary choices of Gallica had to be relaxed in favour of a more realistic approach limited to a series of recommendations.

In March 2009, a total of 102 publishers were participating in Gallica 2, and 6 e-distributors. Some 6,100 copyrighted works were available on its platform, 3,000 of which having benefited of CNL's financial support out of 15,334 digitised so far overall. This gap is due to technical and legal difficulties and to many publishers taking the initiative as a first experiment. Therefore, as the beginning of March 2009 copyrighted works represented little more than 6% of the total works available on Gallica 2. They are distributed according to two very different business models: Cyberlibris' forfeit subscription scheme and the digital bookstore download based one adopted by all the others.

Attendance on Gallica 2's site, started on 2,500 users per day, is now on some 4,000. Copyrighted works received a good amount of visits (12% of the total throughout the period under consideration, 1,2 million visits for 25 million pages), but they generated a low number of accesses to e-distributors' sites (3 to 6% of the total files viewed, 100,000 to 200,000) and even less purchases (an estimated 2,5% of the visits, 2,500 to 5,000).

Users generally appreciate the inclusion of copyrighted books in the search results, but users' paths have often been found unsatisfactory. For the participants in the experiment, Gallica 2 delivered three main positive results:

- raising awareness among the book chain value professionals of the risks and opportunities of digital publishing;
- offering a chance to assess the technical and organisational aspects of a digital book production and distribution chain, including the difficulties encountered by publishers, especially the small ones, in terms of financial and human resources;
- proving the feasibility of a project providing users with joint access to public domain and copyrighted works fully respecting the rights of right holders.

The main criticism on behalf of librarians is that nothing has been done to allow loans or on site consultation of copyrighted works.

The main recommendations following the assessment of the first year of experimentation of Gallica 2 include:

- stimulating some kind of selection of the copyrighted titles to be included in the project, possibly a self-regulation on behalf of publishers according to some guidelines;
- encouraging the making available of out of print works, the ones users are more interested in;
- proposing a single browsing system integrated in the Gallica environment;
- enhancing the signalling of ways to consult, borrow or buy a work.

As seen, many publishers actually participated in the Gallica 2 experiment in 2008-2009, in this case mostly digitising works from their backlists. Through this initiative publishers were

able to discover an opportunity, though problematic, due to the considerable costs and various complications; however, now the most important publishers are producing e-books on their own. Their priority for the moment is to publish the new titles in digital format, since out-of-print and backlist in general are more expensive to digitise and have a smaller market; the preferred strategy is to create a market through new titles and then invest in the backlist as well. Despite this, a few publishers are already investing remarkably in digitising their backlist; one of these is Gallimard, which is due to contribute some 5,000 titles to Gallica. It has been suggested that the CNL creates a special subsidy for digitising out of print works.

Among Gallica's authorised distributors there is one of the most interesting business models available. Cyberlibris is a distributor/ aggregator that works on a subscription based model that makes it basically a digital library for paid content. It was created in 2001 with a pragmatic approach in mind, aiming at crafting a business model attractive for its simplicity to all the players in the book value chain, from the authors to the readers. The underlying idea is to reinterpret the concept of library online in order to monetise content not by selling books one by one but by selling access to a service. What is monetised through the Cyberlibris concept is reading time, which is something usually very constrained.

One of the motives underlying the creation of the service was to regain the market for academic and STM publications that was being lost due to illegal photocopying. All offers are based on reading online; download is never an option. The choice was made due to the many unresolved questions raised when considering a download model, especially on behalf of publishers: the pricing, format, DRM systems, managing updates, etc.

Through a subscription fee, the simplest solution for the user, access is granted to an online library, full time, with no limitations (printing is permitted as well) and a range of tools (search, tagging, creating personal bookshelves, etc.). Some 10 to 12,000 titles are available at the moment, and the number keeps growing, from around 300 publishers at the international level (US, Canada, UK, France, etc.).

The model relies on a fixed sum subscription fee, whose amount depends on the kind of customer and the package purchased. The service was initially aimed at business schools; they would pay an institutional subscription based on the size of their potential audience (students, researchers, etc.). The fee for institutional subscription averages around 30,000€ per year, for a mid-sized institution with some 1,000 users; the fee does not depend on the number of books available. The mechanism has been extended to individual subscribers, who can get access to thematic collections of books (most of them between 100-odd and 200-odd titles) for as little as 1 to 2.5€ per month, due to the reduced marginal costs brought about by digitisation. Users can therefore create their own digital bookshelf, always available online.

There is also a model recently experimented in some regions of France for local public libraries; the mechanism is the same as the academic one, with the library paying a fixed fee based on the number of its users and its users getting access to collections of books. Due to the different kind of books made available to libraries, cheaper than the ones involved in the academic model, fees in this case are quite lower.

Another service is being experimented: it is a web based digital library for iPhones. Again, there is no downloading, subscribers pay a fixed fee and get unlimited access online to a catalogue of works; users are allowed to preload a small number of pages on their device in

order to cope with temporary disconnections of the machine, and in that case publishers are paid twice for those pages. With this new feature Cyberlibris has started offering also fiction books, at the moment some 600-700 titles are available. Subscribers of this service also get access to a free collection of public domain works. Full text search is possible, and a series of additional features (users' comments, posts, videos of authors speaking, etc.) enrich the offer and aim at creating a users' community.

50% of the subscription turnover is destined by Cyberlibris to paying copyright royalties. They compute the number of consultations made for each publisher's works down at the single page level per month (if pages are also printed they are counted twice) and calculate each publisher's market share; this is applied to the total amount of royalties to obtain each publisher's reward. Publishers in turn share their returns with authors according to individual contracts.

Many contracts with authors were reviewed at the inception of Cyberlibris in order to ensure a smooth working of the service. Digitisation has not presented particular problems; publishers usually already have electronic versions of their books (PDF files), especially the most recent ones. The problem is that sometimes such files are stored by printers, who sometimes charge up to 80€ for destocking them. Cyberlibris has a partnership with a Swiss company for the digitisation of the most difficult cases, printed books. Costs for digitisation depend on the scenarios: from printed books, they can go from 12 cents to 32 cents per page, according to the difficulty in handling the book itself; for migration of format, from a kind of file to another, the cost is normally around 30-35€ per book (calculated on the amount of time spent on the job by those in charge of it in the company). Fully searchable PDF files and image files are created.

Also in the light of the incentives offered by the French authorities for digitising in the framework of the Gallica project, Cyberlibris encouraged its publisher partners to submit their backlists. The company itself is one of the authorised distributors of the French digital library.

Cyberlibris has a market on an international scale; it is active in France, Belgium, the UK and it is planning to offer targeted services in Sweden and Spain soon. Its subscribers through the academic model are around 100,000 (students, researchers and professors of the schools involved), plus thousands of individual customers.

Cyberlibris tried to keep the initial investment as low as possible; the company has become soon profitable.

Numilog is another of the largest authorised distributors involved in the Gallica project and an important player in the French e-book market. Numilog is an e-book aggregator; its role is that of a commercial distributor of copyrighted books in electronic format on behalf of their right owners. The main services it offers are the storage, protection and delivery of e-books on behalf of publishers and the connection of publishers with the retail channels.

Numilog provides publishers with a digital warehouse for their electronic books, where files are stored and equipped with technological protection systems and from where they can be delivered to other players in the value chain, intermediaries or final users. It provides also an access and delivery channel for e-bookstores and libraries to the digital collections of

publishers. It acts as a commercial intermediary between publishers and all sorts of retail channels (e-bookstores, e-stores, portals, mobile carriers, etc.).

Numilog acts also as a retail channel itself, selling e-books to final users, both private and institutional. Its main strategy, nonetheless, is to develop and supply a network of other retail channels (for example, it provides e-books to FNAC, which has become the largest e-book retailer in France).

The company was created in 1999, and has become now the largest e-book aggregator in France. It was born as an individual private undertaking, and it has remained such until its recent acquisition by Hachette publishing house.

The initial level of investment was very high, especially due to the cost of information technologies; the company only turned profitable last year, after 9 years of existence. The business is in fact characterised by high fixed costs (the initial investment), which coupled with a small market volume make profitability very difficult to achieve. This will probably mean that the number of players in the market will not increase appreciably in the near future.

The business models enacted by Numilog include offers to private final users and to libraries. Individual users can: purchase single e-books by the title (download), thus reproducing the printed model, at a price that is usually between 15 and 30% lower than that of the printed version for STM works, and 10-15% lower for literature (the decision on pricing lies with publishers anyway; some choose not to practice any price differentiation with respect to the printed versions); purchase single chapters of a book (some promotional offers associate the free access to a chapter of a book and the subsequent purchase of the entire work at a discount); purchase packages of e-books (by the same author, or on a common topic), possibly at a discount; read the book they are interested into online, according to a rental model that can be permanent (at the same price as the purchase, but without download) or limited in time (starting from one hour as a minimum, at the price of 0,50 or 1€; other options are available, with different prices depending on their duration, but not linked to the selling price of the book). Another model is being planned, the offer of subscriptions to collections of work for a limited time at a yearly fee. One more possibility being considered is a link between printed and electronic versions: for example, the offer of a discount on the e-book for purchasers of a printed copy.

One option for libraries is to buy single titles and provide access to them to their users; this is a reproduction of the loan model normally applied to printed books: each title can be lent to one user at a time, for a period established by the library. DRM systems ensure compliance with the model, and the e-book files usually remain in the Numilog platform (no downloads); this is the method preferred by publishers. Libraries can also adopt a subscription model; in this case, e-books are made available on an annual basis at a fee corresponding to the selling price of the book, but they can be lent up to 3 simultaneous accesses. Independently from the access model chosen by libraries, they can in turn provide their users with two different ways of accessing e-books: reading online or downloading the files, in which case DRM systems ensure files are only usable for a limited amount of time. The library model accounts for nearly half of Numilog's revenues.

Another model will be implemented in the near future: libraries - in particular academic/university libraries with larger budgets than public ones - will be able to subscribe

to thematic e-book collections and offer unlimited access to their student; a periodical fee will be charged for the entire package.

Numilog offers the possibility to browse online some of the titles in its catalogue; this is in particular an obligation for the over 2,800 titles it provides to Gallica (and consequently of Europeana). As to the other works, the choice of whether and what to display is up to publishers. The software used for displaying snippets of e-books is the same that allows reading online works accessed through the rental model.

Some 50,000 titles are available on Numilog's platform, from about 150 publishers; most of the publishers involved are French, and so are most of the titles, but some large STM international publishers provide e-books in English as well. French works cover STM, academic, practical and literature categories, while the English ones are all SRM, although fiction titles will be added soon. A good proportion of the French titles belongs to the fiction category, possibly close to 40%.

E-books are available in different formats, some of which are now out of production; of the active ones, PDF and ePub, open standards, are the most common (especially PDF, the most flexible of all) and should be in the future, but LIT and PRC files are present as well. Some hundred audio e-books are available as well, mainly in mp3 or wma formats.

Numilog also offers digitisation services to publishers that do not provide their titles in a format directly deliverable to customers. The most common operation is the conversion/optimisation to e-book PDF files, but adaptation to ePub files is performed as well, and so is digitisation from printed books. Costs for digitisation can go from 20-30€ per book for the most simple files to some 200-300€ for creation of ePub formats from complex works; the average cost of conversion to PDF is around 60-80€. Numilog provides digitisation services to publishers who want to have their titles listed on Gallica. Numilog has benefited from funding by the CNL for the development of its text browsing system; CNL funds have been crucial in supporting digitisation initiatives by small and medium publishers.

The main complexity in setting up a service like the one Numilog provides, rather than in the digitisation process itself, resides in the information technology system requirements for managing large databases and connecting a number of players with different file formats and business models. Hence the high level of investment needed to enter the e-book market.

Plans for the future include investments by Hachette to retain the leadership among e-book aggregators; the expansion of Numilog's offer to comics, works in Spanish and e-book formats for iPhones.

By virtue of its business models, Numilog does not deal with orphan works; out of print books, on the other hand, are an important domain for its business, and their importance is likely to grow. While most titles sooner or later end up not being printed anymore, electronic versions remain always available, and can therefore have an extended commercial life. Some publishers, like La Découverte, have indeed concentrated their digitisation efforts on their out of print titles. This raises the question of whether out of print books for which a digital version is available are to be considered as out-of-print; discussions on this issue are going on, mainly between publishers and authors.

La Découverte is a publishing house belonging to the Editis Group. The Editis Group has launched a platform for selling e-books since September 2008; the platform was already active before in the field of school books. The Hachette Group is experimenting with FNAC to distribute electronic books for e-readers. Also Gallimard-La Martinière and Flammarion are planning to develop e-book platforms soon.

Some publishers are planning to develop thematic libraries in the academic field in 2010 with some thousands of books available. In 2005, a group of publishers (Belin, De Boeck, La Découverte and Erès) of humanities and social sciences journals decided to join their efforts to improve their presence on the internet and to offer also to actors willing to develop electronic versions of their publications the necessary technical and commercial tools; they thus created the Cairn portal. In February 2006, the French National Library joined the project in order to facilitate the development of a francophone publishing offer in digital format. The initiative benefits from support by the CNL.

Cairn's services aims at assisting publishing houses and other actors in managing the double publication of their francophone humanities journals; it thus covers the production and distribution of printed and electronic versions of works and their distribution and promotion. Cairn has several IT firms as partners, in particular one who takes charge of the retro-conversion of journal articles. Some 200 journals are now available on the portal, which serves most university libraries in France through a subscription system whose fee depends on the potential number of users; distance access is envisaged.

The platforms *Kiosque numérique de l'éducation* (Kné), a department of Hachette Livre, and *Canal numérique des saviors* (CNS), managed by Editis, offer some 200 textbooks in digital format from a large number of publishers. The initiative is related to a plan by the Government to reduce the weight carried by pupils, which includes endowing schools with the technological means to project the texts in the classrooms. For the first year, a lack of coordination and thus of standardisation of the offer by different publishers had created problems in installing contents in schools' equipment, but now format and reading software have been standardised. Schools may acquire the digital content, either at a very low or nil price, if a printed version is bought as well, or at the price of the printed version if it is the only one purchased (this option is still by far less common). However, the market is developing very slowly as it is dependent on the level of equipment of schools, which local authorities are in charge of funding, but also on the training of teachers and their integration of such technologies in their methods.

Electre, the French commercial bibliographic database, developed a platform one year ago that should provide bookshops with full text search of its catalogue plus the possibility to display widgets (to browse excerpts of books). The tool should be used as an interface between publishers' platforms and booksellers' sites in order to allow booksellers to have a single access point to all e-book publishers' offers and provide such service to their customers. The platform has been realised but it is not operational due to a lack of agreement on its intended use.

A dialogue is going on between the BnF, Electre and Dilicom, the holders of French bibliographic databases, in order to harmonise somehow their metadata.

4.7 Germany

The German e-book market, though relatively small, is continuously expanding; some important selling platforms have emerged, such as Ciando.de, which offers some 35,000 titles, mainly in PDF and ePub formats, or Libri.de, which has in store over 2,200 titles as ePub and some 130,000 as Mobipocket.

In addition, Germany is host to one of the largest and most interesting collective private experiments of making works available in digital format, Libreka!. Libreka! is a large aggregator/distributor of electronic books. The project is the result of a collective initiative of all the German publishers and booksellers members of the German Publishers and Booksellers Association (Börsenverein des Deutschen Buchhandels). It is run by MVB (Marketing- und Verlagsservice des Buchhandels), the commercial subsidiary of the Börsenverein, which handles all of the commercial activities of the association; around half of its business deal with electronic publications, including the German books-in-print database (VLB).

Libreka! was ideated in 2005 and became operational in 2007; at the beginning it was a full-text search platform to which publishers uploaded PDF files of their works with all the words indexed as metadata. The service, open freely to the general public, did not allow copying, downloading or printing, but permitted searching the digital books in their entirety according to metadata and keywords.

Participation in the platform was initially slow, with some 4,000 titles uploaded at the start; now, however, some 104,000 titles are available for searching on Libreka!, from around 1,200 different publishers.

Publishers in general provide the platform with files adapt to be directly uploaded (in PDF format, and in the future it will be possible also in XML). However, in the early years of the introduction of digital technologies in the book chain value, the production process was not yet fit to this purpose, since the files used for printing could not be used for full-text search, for various reasons (for example, sometimes printers make final corrections and the definitive file does not go back to the publisher, or publishers do not know which one the final version of a work is, etc.).

For this reason, in the first years some publishers preferred to give Libreka! printed copies of their works; the platform received this way some 50,000 books for free and digitised them in order to include them in the project. Libreka! took charge of the cost of digitisation, which was on average around 10-20 € per book; the relatively low costs depended on the fact that the files obtained did not need to be reformatted for readers, nor was there a need for checking for the imperfections due to the error margin of OCR technologies, which would have been necessary instead if the files were to be published or sold.

However, given the amount of books digitised, the investment was remarkable; all in all, the initial investment to set up the platform was between 2 and 3 million €, provided by the financial flows of MVB. Libreka! has now become profitable on a yearly basis, but the investment has not been fully recovered yet.

In terms of sources of income, at the basis it has to be recalled that publishers in Germany pay a fee to have their titles listed in the VLB (2 € per book). Since bibliographic searches only are

not deemed as to give enough information, there is a plan to integrate full-text search among the options available for all the books in the in-print database. The MVB has therefore started merging all of the functionalities of the VLB – which will likely cease its separate existence in about 5 years – into Libreka!.

This is the main source of income for the platform: publishers now pay a 3 € fee for listing their works in the new platform, and there are some 1.5 million titles on VLB, which are migrating at a 1 € fee.

In addition, in March 2009 Libreka! also started allowing selling e-books through its platform; it charges the seller (retailer or publisher) 5% of the net price of each e-book sold. Publishers usually sell their titles at a 10 to 20% discount from the printed version price. Some 12,000 titles are on offer at the moment, and they are expected to increase remarkably.

The main model so far enacted is that of individual e-book sales to private customers. An experiment of a subscription model for libraries has been undertaken by one university publisher, which offers full access to its catalogue to some university libraries at a fixed fee for the first year; from the second year on, remuneration will be based on usage measurement (at book or page level), but the details have not been agreed yet. Libraries get access to the platform, they do not host the files themselves; no downloading, copying or printing is allowed to users (as a choice of the publisher rather than a technical issue), who can access works remotely through IP identification (extranets).

Libreka! can take care of the whole e-book selling process on behalf of retailers, who just link their websites to the platform and redirect their customers to it for the entire transaction. Another option sees Libreka! as a mere repository of e-books: the sellers manage the metadata, the payment process and everything else and Libreka! simply delivers the e-book file to the customer.

Orphan works have not been covered by the project yet; if libraries provided such titles to Libreka!, they would be included (the same applies for public domain works). There is also a discussion going on with the German National Library on the inclusion of out-of-print books in the platform. If it were publishers who wanted to upload their out-of-print titles, the same procedure would apply as with books in print; if it were libraries to undertake large scale digitisation of such works, there could be a deal with them. Different situations are possible, but the clearing of rights is a prerequisite. However, Libreka! is not actively pursuing any objectives in these areas.

The German National Library (DNB) hosts almost exclusively copyrighted material, as it was created in relatively recent times mainly as the reference for the legal deposit of German works. As a consequence, no digitisation initiatives have been undertaken, since there has not been so far the will to sustain the cost this would involve. Only small projects regarding newspapers have been set up.

No such initiatives are reported on behalf of other libraries either, except for digitisation of public domain books, in some cases on quite a large scale. Financing for those activities comes mainly from public resources, although a funding organisation set up by scientists provides support for digitisation of scientific material. The Bavarian Library is scanning public domain books in collaboration with Google.

Since 2006, the DNB also receives all e-books published, under the legal deposit scheme. It is entitled to make them available to its users, only in its premises and according to the number of copies received (limited simultaneous accesses). Reportedly, the library is still in a phase of development of the technology necessary to manage digital publications.

At the moment, a dialogue is going on between the DNB, the Börsenverein and Verwertungsgesellschaft Wort (VG Wort, an RRO/collecting society representing authors and publishers) in order to reach a trilateral agreement on a clearing mechanism for dealing with orphan works and out-of-print works. Under the planned licensing scheme, VG Wort should take over the legal responsibility for the digital use of orphan and out-of-print books (with the consent of the publishers). Regarding out-of-print books, this refers especially to cases where the publisher is known, but is not in a position to licence the digital use her- or himself.

In cases where the publisher (or any other right holder) cannot be found by the library, the book will be indemnified by VG Wort. The library will have to pay a fee to VG Wort as escrow holder; the collecting society will in turn compensate right holders in case they turn up at a later stage. The exact amount of the fee is still being negotiated; most probably it will be calculated according to the books' publication dates and be based on a certain percentage of the former retail price. Additionally, an opt-out option for the right holder is provided, again should he/she show up later. A statistics report on the use per title will be supplied by the library to the publishers on a yearly basis.

In connection to this, the DNB, VG Wort and the Börsenverein are collaborating to establish an internet based portal that will allow libraries to clear copyrights before digitising out-of-print books from their holdings. The initial idea of the portal is that the rights clearance process has to be carried out in an automated and standardised way, in order to cope with future plans of mass digitisation. In this context, the portal is expected to considerably reduce the administrative burden for both libraries and publishers. Libraries' requests for digitisation licences are fed into the system by batch processing, based on bibliographic metadata from the German National Library's online catalogue. They are matched against the German "Register of Books in Sale" and the relevant authority files to make sure that the titles are a) not on the regular market anymore, and b) indeed still copyright protected. The requests are then sorted automatically and assigned to a competent person in the respective publishing house (based on the information from Börsenverein's publishers database). Standardised agreements for digitisation licences are provided. Titles for which the rights cannot be allocated by the publisher and the right owners cannot be found are forwarded to VG Wort as orphans and are indemnified by VG Wort. The project is planned to be realized in 2010 and 2011.

4.8 Ireland

There is no one as yet publishing e-books on a commercial basis in Ireland. A number of companies have carried out pilot projects, such as one Gill & Macmillan did with Caritas College in Ballyfermot providing textbooks on Iliad e-readers to students. These projects are all still experimental and haven't yet reached the stage of selling e-books. Many Irish publishers are planning digital delivery and getting arrangements in place in relation to contracts and rights but actual publishing of e-books still seems to be a few years away. E-book readers have been introduced to the market since less than a year, and e-books by UK publishers are available.

4.9 Italy

The Italian electronic book market has not reached significant levels of development yet; it is very small compared to the printed book market. At the moment it is still in its “infancy” phase, a phase that has been going on already for many years, also due to the limited availability of reader devices. However, there are differences between various markets sectors - university and professional, trade and educational - both because of the players involved, their different experiences and skills, and because of the inputs given by lawmakers and public institutions.

Overall, only few private publishers have already started to offer their books in electronic format. Though some pilot projects were set up in the early 2000s, today in Italy it still does not seem appropriate to talk about a real e-book market; narrow experiences are in place, offering a very limited number of e-books available mainly in PDF format; dedicated reading devices have not been introduced yet.

The academic and professional sector appears more dynamic than others. Thanks to the widespread use of the internet within its target - i.e. students and professionals - it is the segment with the highest level of digital development. Some of the main publishers are involved in experimental projects of digitisation and online delivery of content, in particular in the area of journals. Some of the new projects foresee the production of e-book titles in PDF version.

Academic and professional publisher Franco Angeli first introduced e-books in 2007; now the electronic catalogue available on its website includes 376 titles in PDF format, and it plans to reach 1,000 by the end of 2009, in the belief that the e-book will stimulate a different kind of reading, particularly suited to the university and professional environment. The largest part of electronic titles proposed consists of studies or research (70 - 80%), followed by professional manuals (20-30%). The majority of titles are new editions that are released simultaneously both in printed and electronic version; both are displayed in the catalogue and can be purchased online and each one is assigned a different ISBN number. Nevertheless, the catalogue includes also some new titles available only in e-book version, together with few out of print titles newly released in digital version; the latter could be a way to keep available titles that can still have an audience but that it would not be cost-effective to reprint.

For e-book management, Franco Angeli adopted the user-friendly CS4 platform by Adobe. Before purchase, users are allowed to see the index and the first 20 pages of each e-book. The purchase is in fact a "use licence" that allows to download the file and to receive an access key that will permit the buyer to store and view the e-book, but only on one PC. In particular cases (PC crash or change, corruption of file, etc.) it is possible to obtain a new file upon request to the publishing house. As a guarantee and protection of copyright, DRM is embedded so that it is not possible to print the e-book, copy parts of it, forward it or make it visible to others. The e-book price is only slightly lower than that of the printed book. E-books are in fact penalised by an unfavourable tax regime: they are applied a VAT rate of 20%, while on printed editions the rate applicable is 4%.

Publisher Liguori, active in the fields of human, social and technical sciences, has been in recent years actively engaged in research in innovative areas of publishing and communication. Liguori entered the e-book field in 2003; it also offers multimedia content for

eLearning, software, supplementary materials in support of books, and manuals for teachers. 406 titles are currently available on its website; the catalogue will constantly increase since most of the production in its disciplinary field is in double format, digital and paper, with some books being released only in electronic version. Printed and digital versions are assigned different ISBNs.

Liguori's e-books offer functionalities typical of digital documents (highlight, bookmark, search in the text, hyperlinks, etc.) as well as additional multimedia resources (high resolution pictures, audio and videos). Accessibility issues are also taken into account: when print is allowed this is compatible with Braille printers. Latest versions of PDF files are readable through vocal synthesisers in addition to allowing functions useful for the visually impaired. Functionalities such as browsing sample pages and text search are available online.

E-books are generally supplied in Adobe PDF format and therefore can be read with the free software Adobe. In some cases, they are available in Mobipocket format, readable on computers, laptops and PDAs. Files are protected through DRM preventing copying or transferring; printing is licensed only in certain cases (e.g. purchase of chapters). Electronic books are priced at about 50% of the printed version; upon purchasing an e-book, it is possible to buy a hard copy with a discount equal to the amount paid for the e-book version. In some cases, users can also purchase individual chapters of the book (Pay per chapter service), at prices proportional to the number of pages. Files are downloaded directly on users' computers or PDAs; when content updates are foreseen, they can be downloaded from the website as well.

Since 2002 Bruno Editore has run a training portal and operated in digital publishing. Its e-book production is focused mainly on personal, professional and financial growth. In 2008, it created two virtual communities, to connect authors in the training field and to promote and sell its products online. Bruno Editore also offers B2B services to publishers; during 2009, it reached experimental agreements with other publishers interested in testing the electronic format and new business models.

The Bruno Editore catalogue, frequently updated, currently offers 143 e-books. Titles are released in electronic version only and one title has been released specifically for iPhone. Bookshops can distribute Bruno Editore's products as USB-books: the e-book is uploaded on a USB stick customised with the logo of the publisher.

For e-book managing, Bruno Editore adopted the platform Adobe; they offer the possibility to display the e-books index, presentation and introduction in PDF format. It is not possible to print the e-book, copy parts of it, forward it or make it visible to others. In addition to the purchase of single titles, users can also use a subscription model that allows access to a fixed number of titles on a monthly or yearly basis (respectively up to 13 titles a month for 200 € and 137 titles a year for 2,000 €, plus VAT). The average price is 29 € per book; as a marketing strategy, after registering on the website users can download some titles for free.

Created by the University of Florence in 2003, the Firenze University Press (FUP) is active in production and distribution but also in preservation and archiving of publishing products in electronic format. FUP makes extensive use of digital technologies at the forefront of the creation and dissemination of its publications; all publications are released both in digital and paper version, and digital content is produced through XML formats.

A non modifiable electronic copy of each title is sent to the National Library of Florence for the purposes of legal deposit, thus guaranteeing the quality of the publication as a truly academic and scientific one. Access conditions to digital versions (PDF format) are established for each publication, together with authors, seeking a balance between the principles of Open Access and the protection of their rights and their work. In general the possibilities for access include: free preview online (read only option) of all sections of the book and printing of specific sections like presentation, introduction/preface; free or paid for download of the complete work or single parts. Within the copyright management agreements, FUP allows the authors to distribute an electronic version of their works in open archives and institutional repositories without commercial purposes. Temporary access keys can be assigned to each digital publication thus allowing a wide range of uses in compliance with copyright protection.

Paper copies are released through digital technologies that allow balancing the number of copies printed with the actual market or didactic needs with a consistent saving in the production costs (print on demand). Books can be purchased through the FUP website either in paper or digital version; while the purchase of paper version is managed directly within the FUP website, for digital versions buyers are redirected to the website of the aggregator Casalini. Costs are differentiated between paper and digital version but vary from book to book.

Professional and university publishers Egea and Il Mulino also offer digital materials to students, teachers, professionals and researchers, both for free and at a fee, according to specific conditions.

In the trade sector, the early 2000s saw some players move the first steps in the field of digital books by creating dedicated e-book sections in their websites; such initiatives stopped due to the lack of development of the market. Nowadays, as seen before, the market is still very small and none of the big publishers has undertaken a specific and structured project. The little availability of reading devices (neither Amazon nor Sony have entered the Italian market) and lack of a standard are probably the main reasons for this attitude. Nevertheless, at the same time the publishing community shows an increasing interest in the subject.

The Mondadori Group, the largest Italian trade publisher (28.8% of the market in 2008), launched electronic books in Italy in 2001 in collaboration with Microsoft Corp. A dedicated website introduces users to this first e-book shop, where books in electronic format can be bought, downloaded and read. With an initial selection of hundred classic and contemporary titles from the Mondadori catalogue, the site currently offers more than 500 titles and is regularly updated.

E-books in the catalogue are in Microsoft Reader (.lit) format and can be read by downloading the free Microsoft Reader software and activating a personal account that validates the software installed and allows the view of purchased e-books. With the same account it is possible to validate and therefore use Microsoft Reader up to four times; this allows reading e-books on several devices (PC, laptop or Pocket PC). No printing is allowed and books cannot be read through vocal synthesisers. The price of electronic books is significantly lower than that of printed books; a few titles can be downloaded for free.

Apogeo, a publishing house specialised in computer graphics and computing, presented in 2000 its e-book project and made available the first e-books on its website. Its e-book catalogue offers around 100 titles; some are available free of charge. E-books included in the catalogue are native digital, i.e. are not available as a printed version.

For e-book management Apogeo adopted Adobe Platform; previously they distributed e-books in various formats (PDF, lit, html), but now they settled on the PDF format from Adobe, perceived as a standard *de facto*. To access e-books customers must buy a use licence that provides access to download and provides a password to open the files. Users can copy parts of the text with a simple 'Copy/Paste', print an e-book or parts of it for personal use, and are also allowed to make digital copies on various devices, again for personal use. E-books can be transported on a USB stick or a standard CD-ROM. The content is the same as that published on paper. With certain exceptions (such as texts distributed under Creative Commons), e-books are copyrighted; use is limited to the holder of the licence.

In the field of textbooks, after years of discussions on the costs for families, the Italian Government tried to find a solution and in August 2008 released a new law according to which, by the school year 2011/2012, all textbooks adopted in the Italian schools must have, besides the paper version, an online and downloadable digital version. From now on publishers must provide, beside the paper version, a mixed version (paper + digital) or a digital one. The provision is based on the unproven and disputable assumption that digital books can be less expensive than printed ones, which does not take into account all the costs related to the technological infrastructure needed to deliver digital content and those related to the creation of new kinds of interactive content, if needed.

All publishers must follow the new rules, otherwise their books cannot be adopted by teachers. This law will therefore change the strategy of publishers of educational content; all of them are now studying new kinds of textbooks and focusing in providing mixed or digital content along with the paper versions.

Garamond is a publishing house focused on use of multimedia technologies in teaching and learning, including the production of content (books, e-books, learning objects) and instruments (author programs, platforms, network systems hardware and software) and the training and updating of teachers, carried out mainly through e-learning. Garamond currently proposes a catalogue of electronic textbooks of 40 titles for primary and secondary school.

Also Garamond adopted the platform Adobe for managing e-books. Electronic books are quite similar to traditional volumes, but offer the advantages of saving and updating. Students are allowed to download a sample chapter for free, while teachers, following the same principle of the paper version, can download the full text for evaluation. E-books can be downloaded on personal computers in PDF format and carried on a USB stick. At the request of the teacher, students can print out the pages they need. It is possible to update the content without additional costs, with the possibility to integrate the book with supplementary materials, exercises and other multimedia and interactive items. The e-book price is fixed at 9,90 €.

Nowadays in Italy there is only one main aggregator of digital content, Casalini Digital Division (part of distributor Casalini Libri), which is mainly focused on the international librarian market. In the domestic market no aggregator is operating yet. While being primarily a library service, Casalini also acts as a distributor for a select group of Italian publishers.

Casalini manages Editoria Italiana Online (EIO), the largest database of e-content in full-text format by Italian academic publishers in the humanities and social sciences. The complete EIO collection now comprises some 3,000 monographs and proceedings and 200 periodicals from around 50 publishers, accessible via a DRM platform with sophisticated search facilities.

EIO presents flexible subscription options to libraries and institutions, and also allows individual users to buy single titles and chapters. Casalini offers a one-month free trial period to libraries, universities and consortia. Access to EIO is granted to all members and walk-in users of subscribing institutions via IP address recognition and allows for connection via proxy server; there are no limits on the number of simultaneous users. Subscribers to Casalini's bibliographical databases www.ilibri.it and www.leriviste.it can access the full text of titles via links in the corresponding bibliographic records.

The implementation of Adobe LiveCycle Policy Server as the Digital Rights Platform facilitates access and consultation of the electronic texts in the collection, allowing users to view texts, print documents and conduct sophisticated searches via a single system with free Adobe Reader software. While navigating in EIO, users can access full text PDF files to view, print, copy/paste and, in the case of periodical articles, save the electronic documents.

Online bookstores at the moment only sell printed books, but some are planning to enter the e-book market as well, such as Internet Book Shop (IBS), the Italian leader of online book sales. Also Hoepli.it, the internet channel of Hoepli publishing house, is considering the possibility to introduce an e-book section, if other publishers enter the market and provide a large amount of titles. Feltrinelli, another large publisher with an own distribution network, sells 3 kinds of e-readers, but no e-books.

Talking about reading devices, the main producers - Amazon and Sony - have not entered the Italian market yet. Some e-readers are already available in some bookstore chains, but their sales are still very limited, possibly due the scarcity of e-book titles in Italian. Simplicissimus Book Farm entered the e-book field in 2004; it distributes iLiad and the other e-readers available, Cybook and Bebook, on the European market. It also offers services to publishers: conversion, production and distribution of e-book, besides the development of professional applications based on eInk. It also has a small catalogue of electronic books, most of which free of charge and the others downloadable at a fee. The arrival of the Sony Reader in Italy is expected at some time in 2010.

Besides these initial steps by some publishers in the e-book market, basically no other initiatives for facilitating search of book content online are in place in Italy; in particular, no public-private partnership exist, neither private collective initiatives. No public policies support digitisation of books by publishers.

As to digital library initiatives, the main project is the Internet Culturale portal. It is the portal of the catalogues and digital collections of Italian libraries; it allows to search digital contents or collections offered by public or private libraries and institutions. It proposes an integrated access system to the digital and traditional resources of libraries, archives, and other Italian cultural institutions, in order to promote and enhance the knowledge and availability of the cultural heritage to a national and international level with particular focus on textual material.

Internet Culturale presents both the general and the professional user with the opportunity to search bibliographical information and digital contents coming from different information sources. It gathers and integrates previous projects of digital libraries, single collections of contents digitised by different entities. At the same time it is meant to be integrated within CulturaItalia, the portal that will provide Europeana with works of the Italian Cultural Heritage

The current portal is the result of a project started in 2003 aimed at creating an Italian Digital Library Portal and Cultural-Tourist Network by transforming the National Library System (SBN) from a service for catalographic information to a service for the creation and online availability of knowledge, and by gathering in a single distributed architecture the results of other public funded programmes dedicated to exploiting the digital environment to make available information and material on the Italian culture. The SBN is a national services network which connects over 3,500 libraries engaged in creating a collective national catalogue.

Through the SBN OPAC it is possible, by way of simple or advanced queries, to search records kept by 3,500 Italian libraries belonging to universities, local organizations, public and private institutions, all working in different disciplinary areas, concerning works published since the history of the press began until today. These include historical manuscript catalogues bound in volumes or in card format, and special catalogues, such as the BibMan and Manus data files (regarding manuscripts) and Edit 16 (regarding 16th century editions). The latter gives access to archives of authors, titles, publishers, printer devices and relevant digitised images (frontispieces, colophon, brands).

The portal's repertory of digital collections describes the collections which have been digitised or are going to be digitised, belonging to libraries, museums, archives and other cultural institutions in Italy. At the moment 27 are the digital collections available. The idea is to provide internet users with the opportunity to identify and localise the available digital collections and, if possible, to consult them directly online; as a matter of fact, institutions owning their own repositories are able to make their digital objects visible on the Internet Culturale website through OAI-PMH. Institutions that are willing to make their digitised content available through the portal but do not own a repository can do it, depositing their files on the portal's repositories, integrated with the appropriate metadata. The search of digital images and material is made possible by the use of tools such as SDX, the international standard system for access to digital collection records.

Among the collections searchable through Internet Culturale, it is interesting to mention Biblioteca Italiana (BibIt,) a digital library that gathers texts from the Medieval Age to the 20th century. Peculiar of this collection is not only the inclusion of some copyrighted works, but also the digitisation technique adopted. While most of digital collections are images, and therefore do not allow text search and other advanced functionalities, textual works digitised in this collection are encoded in XML format according the TEI scheme. The BibIt architecture is based on the OAI model using international standards and open source technologies. Users are provided with a search interface for the catalogue where each document can be consulted according to key descriptive and technical metadata; the different modalities of access to the work currently include: download the XML file (the possibility to download the document in other formats such as PDF, TXT, Microsoft LIT is under development); visualize an HTML version; perform full-text search.

At the moment BibIt digitised about 1700 books, each of them freely accessible and downloadable. With regard to copyrighted works, a special collection within BibIt comes from the cooperation with publishing house Laterza, which allowed the digitisation of one series, "Scrittori d'Italia", closed in 1987, and its making available online for free, though only for consultation with no possibility of download. All the texts are images (JPG and TIFF format) with descriptive metadata and identifiers linked to SBN records or BibIt records in case the text is available in other formats (XML/TEI and HTML). In total, 125,171 pages were digitised.

The BibIt is a project supported by the programme Italian Digital Library, promoted by the Italian Ministry for Cultural Heritage and Activities as a platform of initiatives connected to the digitisation of Italian bibliographic resources.

Focusing more on the digitisation and making available of copyrighted works by libraries, there are no validated models of licensing between right holders and libraries in Italy, neither are there clearing mechanisms for dealing with out-of-print and orphan works. A recent initiative aimed at promoting fruition of digital content through libraries is still in a very early phase of implementation.

The project, called MedialibraryOnLine, is sponsored by a number of Italian public libraries with the technological support and consultancy of the new media agency Horizons Unlimited. Its goal is the creation of a national network of libraries and library systems interested in experiencing an operational model for acquisition and management of digital resources in order to promote fruition of digital content within their subscribers. It should set up a system that will provide a technological platform for distribution of any type of digital content (audio, video, database, audio-books, e-books, e-learning, etc.) and a portal for Digital Asset Management to deal with copyright and licensing issues.

Medialibrary is not only a service (provided by Horizons to libraries); it is also a network of public libraries linked to local governments that will act as a consortium in sharing costs and resources of the system. Since its launch in March 2009, almost 400 public libraries have become part of the consortium.

The platform will provide to member libraries a single access point to open access resources (gathered in a repository) and to commercial content selected by libraries and purchased either by individual libraries or as a consortium. Each participant entity will have a customised portal to access the platform and appropriate training and assistance for their personnel. Digital resources will be accessible by subscribers of any individual library either remotely (streaming mode mainly, possible testing with devices such as e-readers/iPhones may be planned in 2010) or within library premises via registered id and password.

Libraries will subscribe a multi-annual licence that gives access to the platform on the library's computers and their users', the availability of a shared digital repository and a guaranteed bandwidth for the audio/video streaming service. The signing of this license will grant access to all open access content accumulated by the network and include a share of commercial content over time acquired by the consortium.

The project is actually in its testing phase and therefore is seeking agreements with publishers willing to supply the system with their works. This will be the occasion to test contractual and licensing models for the distribution of e-books within libraries that will be discussed individually with each publishing house. Publishers will be provided a customised portal to give visibility to their books among member libraries within the network, thus facilitating acquisition of the licence by libraries, and will get statistics on use of their content.

Planning foresees by 2009 a test phase with publishers and libraries for acquisition of content, creation of catalogues of digital collections and testing of pricing models. In 2010 the test phase should concern libraries and final users (i.e. registered subscribers) and therefore include actual purchase and use by general public. The project is meant to be a trial for new business/technological models; libraries as a consortium will have the possibility to experiment the e-book market. On the other hand, for publisher this could be a test-bed to monitor and at the same time encourage circulation of e-books among the general public.

In terms of challenges, libraries will need to invest in training for staff in the use of the platform and to have the appropriate equipment at their premises. With regard to remote access by library subscribers, the actual availability of devices /broadband for streaming by users can limit the number of potential users of the service. Publishers, especially of trade books (the most suitable products for the target of public libraries), do not have a consolidated offer of digital books, so joining this project would involve a certain investment in terms of detailing licensing models and in terms of rights management, as well as of meeting digitisation costs.

Another initiative worth mentioning, though still in the planning phase, is Digital Italian Books (LID), another project aimed at facilitating access to Italian culture and literary heritage through technology.

The idea is to provide users with a single access point for performing full-text searches of books from Italian publishers and libraries. Once found a title, users will be able to display samples - if the work is commercially available - and will be redirected to commercial sites to purchase a hard copy or will be able to access a digital copy, be it in a library or in a commercial website.

LID will be integrated with the legal deposit system for digital files developed by the National Library of Florence. Works will be made available not only through the LID portal, but also through normal search engines, other aggregators or digital libraries and in particular Europeana.

The project relies on a public-private partnership: the National Libraries of Rome and Florence and the Central Institute for the Single Catalogue (ICCU) on the public side; the Italian publishers association (AIE) and AIDRO, a reproduction rights organisation, on the private. It is the first such initiative in Italy.

4.10 Netherlands

The size of the e-book market in the Netherlands is relatively small, especially as far as the trade market is concerned; in this sector, only 600 titles are offered in Dutch. Still, several download outlets have opened, usually feeding on the same database, ebook.nl, which hosts

some 85,000 titles, mainly in English (800 in Dutch). Most books are sold on e-readers; so far around 3,000 e-book readers have been sold in the country (mainly iLiad, Cybook, Hanlin and Jetbook), but Sony and Amazon have not entered the market yet; Sony will do soon, thus further accelerating the growth of the market.

On the other hand, in sectors like STM the development of an electronic offer has been faster and wider. For example, in the academic market Springer Science offers worldwide all its titles as e-books; in the Netherlands Kluwer is offering its titles on law and case law in e-book format; medical information by Springer Business NL and law books by Sdu publishers are offered on PDAs. Nevertheless, there are no precise data on the overall size of the market because e-books are delivered directly to the end users through download platforms.

In terms of initiatives for facilitating search and display of book content in digital format, the Royal Library and Dutch Digital Library have set up a depot of electronic books (mainly focused on the digitisation of the cultural heritage, therefore public domain works, plus a few copyrighted works, upon consent by the right holders). There has not been yet a massive digitisation process, however.

Starting from summer 2009, Centraal Boekhuis - the major distributor of books and books information in the Netherlands and the Flemish speaking area - will start distributing e-books as part of the services offered to its customers. This will be an evolution of the traditional supply chain, exploiting the strengths and value added of CB's physical services: a central platform that allows publishers to rely on a single player to manage all phases of books supply to booksellers (promotion, information management, distribution, shipping, accounting and administrative procedures) and allows bookseller to have one single point of contact acting on behalf of all Dutch publishers (orders and availability management, complete assortment by all publishers).

Through eBoekhuis - the name of the new service - CB will take care of the whole process of e-book supply: receive from publishers either already converted e-books or pre-print PDFs (which are then converted into the e-book format publishers choose - from Mobipocket to ePub), provide central DRM protection via Adobe DRM, aggregate the available e-books on a single delivery platform that can be connected to online bookshops web interfaces.

The e Boekhuis project began in October 2008, when Dutch publishers, booksellers and authors attended a series of meetings organized by CB to talk about the evolution of the book market and the opportunities it might offer in the future to increase the revenues of all stakeholders. CB was thus entitled to work out a sustainable solution allowing publishers and booksellers to minimise investments on a segment anyway considered a niche, whose market share was increasing by high rates but was foreseen not to be reaching more than 5% of the book market total turnover in the next 5 years.

CB counts to start with around 2,500 general market titles in e-book format and a thousand academic titles, out of a stock of 80,000 physical books.

Besides that, no public-private partnerships or collective private initiatives have been established so far. Some libraries in the Netherlands are allowed to give access to books in e-depots, but only on their premises; these activities are regulated by private licence agreements between individual publishers and libraries, and do not envisage making works available on

the internet. Academic libraries can purchase bulk licences for controlled access by their students, on and off line.

No governmental support is available for digitisation on behalf of book publishers, only for some projects regarding newspapers and the cultural heritage. In the field of cultural heritage, an experiment is being conducted to facilitate the digitisation of out-of-print works through a licensing mechanism.

In January 2009, Dutch libraries, archives, and museums reached an agreement with right holders on the digitisation and accessibility of their heritage collections. The organisations representing the libraries (FOBID) and the right holders (VOI©E) came to an understanding within the Digiti©E Committee (Digitisation of Cultural Heritage) that was set up to implement the Declaration of Intent on Mass Digitisation signed in April 2008. The agreement is theoretically a major advance in the discussion regarding the copyright aspects of digitising collections held by libraries and archives and the first deal of this type anywhere in the world between libraries and right holders.

The Digiti©E Committee is a parity-based forum for consultation between organisations representing libraries and right holders: VOI©E (Netherlands Association of Organisations for the Collective Management of Intellectual Property Rights), the sector organisation that deals with copyright and neighbouring rights, and FOBID (Netherlands Library Forum), is the national alliance of Dutch library organisations (Netherlands Public Library Association; NVB - Netherlands Association of Professionals in the Library, Information, and Knowledge Sector; UKB - consortium of the thirteen Dutch university libraries; National Library of the Netherlands).

The system proposed by the Committee is intended to clarify matters for institutions regarding the digitisation of their (heritage) collections and the provision of access to those collections on their own premises. The arrangement should prevent the institutions needing to devote an unnecessarily large amount of time and money to searching for right holders and making arrangements regarding rights, and thus target in particular the issues of out of print and orphan works; it will also provide a basis for further distribution of the digitised material. For such further distribution – and for digitisation and accessibility of works and collections that do not meet the specified criteria – it was agreed that the consent of the right holder remains necessary and reasonable payment must be made.

The essence of the agreement is that the libraries that are represented receive permission, on certain conditions, from virtually all right holders to digitise their collections and make them publically available on their own premises for teaching or research purposes. The works concerned must be part of the Dutch cultural heritage and no longer commercially available. The libraries do not need to pay the right holders as long as the works are only made available on their own premises.

Separate consent is required, however, if the digitised works are made more widely available, for example by means of remote access or via the Internet. In that case, an agreed payment must be made; agreements in principle can be made regarding payment by the Digiti©E committee. Even then, the library will not need to go in search of the right holders because this will be done by collecting societies, who are supposed to receive some form of compensation for this.

A Registration Centre for digitisation has been set up by the organisations representing right holders, acting together within VOI©E and the Foundation of Copyright Interests; libraries and archives can register proposed projects and get in touch with right holders regarding how they should be implemented. In addition, prior to any other type of reproduction or provision of access to works than those specified in the agreement, organisations must contact the Registration Centre, which will act together with the right holders' organisations to bring about agreement between the institution concerned and the right holder.

The Digi©E Committee applies jointly agreed conditions for arrangements regarding the digitisation of copyright-protected works and the provision of access to those works. When necessary, the Committee amends these conditions on the basis of practical experience and acts as an intermediary when the parties concerned find it difficult to reach agreement.

Individual right holders can object to their work being digitised and made accessible. In that case, the libraries and archives concerned are required to cease making the works accessible.

If a project complies with the Registration Centre's conditions, the institution concerned can make use of the consent that is given for approved projects on behalf of the right holders. The main points to note are:

- after consent has been given, the works may be digitised without further specific consent being required for each particular one of them;
- the works may be made available on the premises of the institution concerned for the purposes of teaching, research, and private study;
- the “reasonable payment” that is required will in general amount to 0 if the restrictions and conditions below are complied with.

In general, digitisation projects must comply with the following requirements:

- the institution concerned must be a publicly accessible library, museum, or archive which does not have as its object the achievement of any direct or indirect economic or commercial advantage;
- only works forming part of the institution's collection will be digitised;
- the works to be digitised form part of the Dutch cultural heritage;
- the works to be digitised have been lawfully acquired by the institution;
- to the best knowledge of the institution, the works to be digitised are no longer commercially available;
- it is difficult for the institution to contact individual right holders;
- to the best knowledge of the institution, the rights regarding the works to be digitised are vested in Dutch right holders or in right holders who can be represented – or most of whom can be represented – by a Dutch collecting society;
- to the best knowledge of the institution, digitisation of the works will not have a negative effect on the normal exploitation interests of the right holders;
- the digitised works may only be made available on the institution's premises (i.e. no remote access may be provided);
- the institution must make arrangements whereby individual right holders can object to publication of their work or works; should such objection be received, the institution must immediately cease publication and cancel any duplication;
- the institution endorses the principles specified by the Digi©E Committee as set forth in the above-mentioned Declaration.

Libraries have been so far hesitant to propose projects to the Registry. There is only one at the moment, presented by the Royal Library, which regards the digitisation of newspapers published before 1995; the Government has made available 15 million € for the initiative. An agreement with the Library will provide authors and photographers with some remuneration (some 150,000 € will be devoted to this), while publishers have made a separate deal according to which they will get content, i.e. free access to the complete digital archive that should be the outcome of the project.

Right holders and institutions interested in digitisation are basically waiting to see the results of this first experiment before making any further moves.

4.11 Norway

In Norway the National Library has negotiated collective agreements with publishers and other right holders to acquire rights to present for free to the public catalogues of digitised works in the form of unlimited online access; the agreements envisage compensation to right holders and the full responsibility of the Library for the digitisation process, and exclude downloading or printing.

Two experiments in this framework have been conducted so far, thus creating digital libraries offering both public domain and copyrighted works; it has to be highlighted that they deal, especially in the first case, with books with relatively little commercial exposure, and are limited to the Norwegian territory.

In March 2007, the National Library of Norway and representatives for Norwegian copyright holders signed an agreement to collaborate on a pilot project in which Norwegian works were made available in a digital format via the internet and only in Norway within a closely defined subject area – the northern areas. Through this project, called High North, the parties aimed to gain experience as a basis for future agreements on the digital dissemination of copyright protected Norwegian works. It was launched in April 2007 and its duration has been extended until the end of 2009.

The agreement was entered into by the National Library of Norway, the Norwegian Publishers' Association, the Norwegian Authors' Union, the Norwegian Non-Fiction Writers and Translators Association, the Norwegian Critics' Association and the Licensing and Collecting Society LINO, on behalf of their respective members, in connection with a pilot project for the digital availability of copyright protected literary works. In a separate agreement with the Norwegian Visual Artists Copyright Society, the Norwegian Organisation for Visual Communication, the Society of Fine Art Photographers in Norway and the Norwegian Photographers' Union, LINO has the authority to enter into an agreement on behalf of the members of these organisations in the pilot project.

As part of its core activity – securing and preserving publicly available material – the National Library has initiated an extensive digitisation programme with the aim of transferring all of the library collections from an analogue to a digital platform (including copyright protected literary works), and storing them in the Library's digital secured storage. The National Library's digitisation programme is founded on the Copyright Act of 1961, with amendments.

The Library also makes the digitised public domain works in its collection available to the public through its web-based service, the digital library NBdigital. Books in NBdigital are scanned using optical character recognition (OCR) and structurally analysed. Supplementary metadata is also added. Any text retrieved using OCR is indexed in the National Library's search engine together with the metadata. The High North material treated the same way.

The pilot project extended the digitisation programme to make the digitised material available to the general public. For the licensing organisations it is a chance to test a way of increasing the dissemination and commercial exploitation of their members' works, both in analogue and electronic format.

The material made available through the pilot project was included in the National Library's distribution solutions via their website, and is presented in the digital room environment, which covers metadata, bibliographic data, differentiated access with regard to media and age, as well as material with different copyright statuses.

The National Library is responsible for the execution of the pilot project on the basis of its own resources. The licensing organisations are responsible for clearing the rights to the works covered by the agreement and granting the National Library the right to make such works available to the public.

The mechanism for making available is rendering (on a data terminal) works in a low resolution digital image format (e.g. JPEG) whereby users can search for cover pages, title pages and contents lists, as well as navigate between individual pages, read on the terminal and search text. Users can not, however, be given the capability to download or copy copyright protected material to their own computer equipment or to take printouts.

To the extent the National Library did not have warrant in legislation or regulations to digitise works covered the agreement, the licensing organisations gave consent to it on behalf of their members. The rights granted are non-exclusive.

On the National Library's website, users can, via links, be given access to players in the book industry (booksellers, publishers, etc.) in an open, non-discriminatory way, in order to purchase works. In the same way, links have been also created on the National Library's website to the Norwegian library network, whereby users can loan relevant literature from local libraries.

The National Library can provide digital samples of the works involved, upon request by the licensing organisations on behalf of their members for their own use, as long as such members have rights to the works. Licensing organisations have the possibility to withdraw individual works from the collaboration during the agreement period.

The National Library covered the costs of digitising the works involved. In addition, the National Library paid a one-off fee to the licensing organisations to enjoy the rights envisaged in the agreement. The agreed fee was NOK 200 000. LINO collected the sum and distributed it among the right holders.

The project has quite a small scale, with 395 books involved so far; nonetheless, it has been deemed successful so far (an evaluation report was issued in October 2008) and it created the

bases for further experimentation. Books have been consulted more than 4000 times per month, from more than 2500 unique IP addresses. 87% of the titles have been accessed, with an increasing trend in time; making metadata available to the search engines has contributed significantly to the increase in user frequency.

The pilot project's existence has probably contributed to an increase in lending of the literature covered, but there is not necessarily any clear, direct correlation between actual visits to the website and the subsequent lending of the same titles in the libraries. On the other hand, the existence of the web-based service apparently has had no significant effect on sales figures. However, the sales function incorporated in the service has only been in operation for the last few months of the project period.

It was therefore decided to undertake a larger experiment, in order to see whether it could be interesting also from a market perspective. This is how the project "The Bookshelf" was conceived, building on the previous experience and adopting the same technological solutions.

The agreement for the new pilot project was signed in April 2009 between the National Library on the one hand and Kopinor, a collective management society acting on behalf of a series of right holders' representatives, on the other. It will last until the end of 2011.

The project relates to printed books published in Norway during the years 1790-1799, 1890-1899 and 1990-1999, including translated literature. The agreement regulates the part of the copyright-protected material covered by the project, up to 50 000 books with an estimated average of 185 pages. The works digitised are all in the Library's collection, mainly under legal deposit provisions.

Currently, some 10-12 000 books under copyright have been digitised by the National Library and are ready for display; these are part of the around 73 000 the Library had already digitised for its preservation programme. Some 40 000 more copyrighted books are planned to be added by the end of the project.

As in the previous project, the National Library bears the cost of digitisation; funds come from a special line of the State budget. It also takes care of the process, which, considering the age of the works involved, consists entirely of scanning. The activity requires lots of resources, and the Library has increased its staff and acquired special machines. The process is elaborated and it varies according to the kind of books (more complex with very old ones) and to the number of copies available (if there are more than 3, which is usually the case, one copy can be scrapped for digitisation, making it easier and faster). The cost is around 0,30 NOK per page.

A very high resolution digital copy is first made and stored, but the works are displayed, as in the previous project, as low resolution image files; underlying metadata on every single word are added to each page through OCR. Proofreading is required to check the accuracy of the OCR systems.

The National Library of Norway is given the right to make available the digitised copyright-protected material to the general public. This right includes the necessary reproduction of viewing copies based on the digital storage copies that the National Library makes according to the Norwegian Copyright Act. The contract applies to Norwegian and foreign publications

whose right holders are represented by Kopinor. Since the Copyright Act provides for a system of extended collective licences, published materials created by right holders that Kopinor does not represent are also covered by the agreement. This reportedly offers a solution to the orphan works problem.

The material will be made available on the National Library's webpages for users with Norwegian IP addresses; works will be therefore accessible remotely but only in Norway and only via the internet (i.e. only if an IP address is assigned; for example, it is not possible to use the service if accessing the web via GSM or GPRS). Books will be made available as individual pages in a digital format to be viewed on a computer screen. The users will be able to search in the text and search for covers, title pages and tables of contents, as well as to browse sequentially through individual pages. No possibilities of downloading or printing are foreseen. The material will be made searchable via search engines, and solutions to provide information on where the material can be borrowed or bought will be implemented.

Kopinor may ask the National Library on behalf of right holders to withdraw individual works from the scope of the agreement during the contract period. So far one individual right holder has made a withdrawal request.

As remuneration for the right holders, an annual amount of NOK 0.56 (in 2009) per page made available (not actually displayed) will be paid. Kopinor will collect the payments and distribute them among the right holders; it will also adjust them annually according to the consumer price index. For 2009, a payment is to be made for 8/12 of the year.

Kopinor is obliged to pay any claims for payment or damages that the National Library of Norway receives from Norwegian or foreign right holders in so far as the claims relate to a copying or making available of materials that has been paid for and carried out in accordance the agreement's provisions.

Pursuant to further agreement, the National Library of Norway will, if requested by Kopinor (on behalf of a specific right holder or a representative of this right holder), make available high-resolution digital copies of the material covered by the contract.

The parties agree to appoint a common committee that is to evaluate the Bokhylla project during the contract period and upon the expiry of the contract; adjustments will be possible in due course. The costs of any external evaluation will be divided 50/50 between the parties.

The webpage hosting the project is not active yet, but it will be soon.

4.12 Poland

In Poland at present no significant efforts are being done leading to creating an e-book market. Some private publishers digitised part of their catalogues and sell them electronically. In the Polish market an attitude of distrust prevails, as concerns e-books. Only one publisher (PWN) established an online bookshop, where it sells not only its own titles but also those of other publishers.

As to digitisation initiatives by Polish libraries, the e process is at the very beginning, and for the time being it only involves works in the public domain.

4.13 Slovenia

The e-book market size in Slovenia is very small and is still in the beginning phase of development. Apart from some articles and newspaper advertisement there has been almost no comprehensive advertising of this publishing branch yet. In 2008 and the first three months of 2009, 211 e-books and 15 e-journals were handed over to the Slovenian National Library (NUK) as legal issue. As publishers in Slovenia are obliged to produce a legal issue of every publication, this is most likely also the exact number of e-materials produced in this period. For a comparison, 7703 monographs and 1600 serials were handed over to NUK as legal issue in 2008.

There is currently only one publisher (Ruslica) who publishes only e-books. Another publisher (Cangura) is expected to go in this direction soon. The biggest Slovenian internet bookshop (Emka) intends to aggregate e-books from various (also foreign) publishers and will introduce its e-book section in autumn 2009.

As to the facilitating of search of book content online, as far as the Digital Library of Slovenia (dLib.si, managed by NUK) materials are concerned, all textual works that were born digital and the ones that were optically recognised in the process of digital copy preparation may be text-searched. dLib.si is currently the only portal in Slovenia allowing this option. Only some publishers in Slovenia allow free preview browsing of the low resolution books versions on their e-bookshop sites; none of them seems to offer full text search. Due to the small size of the market, there seems to be no incentive for publishers.

dLib.si is the central national aggregator of e-content. Approximately 200,000 textual digital resources (articles, journals, a few hundred printed books, manuscripts) are available on the portal. These works are also available on Europeana. dLib.si also participates in many other national and European digitization projects (EEA grants, Europeana Travel, TEL, Europeana Local). Some 1.5 million € have been allocated to digitisation in 2009 by the National Library, while there are no policies supporting digitisation of books by publishers.

No private collective initiatives of any kind have been set up yet to provide access to books in electronic format, neither are there any public-private partnerships to this end. It is important to note, nonetheless, that due to the small size of the book market in Slovenia almost all Slovenian editions (books and scientific journals) are co-financed through public tenders (for publishers) and, in case of successful applications, co-funded through public resources. Because of this, the National Legal Issue act also enlists the allowed terms of use of these state co-founded issues guarded in depositary institutions, particularly the national depositary organization - NUK. The terms of use are:

- Publishers must produce the legal issue of electronic material copies without any “protective elements”;
- The legal public use of these materials must at least allow the use on NUK premises for educational or research purposes.

Any other use permits (public availability on the Digital Library portal or elsewhere) are further negotiated in separate agreements between the legal issue claimant and the publishers. This means that, for every electronic publication, NUK is entitled to and gets a legal issue, but in order to be able to publish it on the dLib.si site, a special agreement between NUK and the publisher has to be reached. This way, NUK has so far acquired and made publicly available

some 66 scientific journals and a couple of books. The rest of the works freely accessible on the Slovenian Digital Library are in the public domain.

The exceptions to this system (making copyrighted works publicly available) are some individual permits to include various types of works to the dLib.si collections, acquired directly from authors, or the CC marked works and some PhD and MA thesis as well.

Thus, no established licensing models for the digitisation and making available of copyrighted works by libraries have been set up. No general clearing mechanisms for out-of-print and orphan works have been established either. The copyrights status for materials to be published on dLib.si is examined and cleared case by case. The use of the digital born materials on dLib.si depends on individual agreements between NUK and the right holders. A proposal however is being considered to organise a special collective remuneration system for out-of-print and orphan works similar to the one recently conceived in the Netherlands.

4.14 Spain

In Spain, there is basically no e-books market as such at the moment. It is being created but there are yet no models for supply and demand trends, except for a few particular market niches like legal and reference works. However, even in these niche markets, e-books as such represent a rather negligible proportion: it is better to speak of non-paper products. In 2007 around 10.5% of total gross income of the publishing sector in Spain came from non-paper products. Out of this, 70% corresponds to DVDs plus CD-ROMs, and only 10% to online products: this is about 1% of total gross income.

That being said, there are some specific business models run by entities like the collecting societies. CEDRO, as a copy right collective management organisation, deals with the collective licensing of certain digital uses of text works, be they printed or digital born. It is for example a common practice in many kinds of institutions, such as educational organisations, private companies, public offices, etc. to make available to members or users, via e-mail or through intranets/extranets, excerpts of text works (parts of printed works which are digitised with this purpose or digital born works).

CEDRO's licenses authorise these uses, in the framework of the Spanish legislation on copyright. Such licenses are granted based on specific mandates to CEDRO by authors and publishers who are members of the organisation, as well as through the mandate of right holders represented by foreign RROs CEDRO has bilateral relations with. There are no figures available about the size of this market in Spain, but so far the granting by CEDRO of such licenses covering digital uses (27, including different Universities, pharmaceutical companies, law firms, etc) can only be considered at a very early stage.

On the other hand, given the experience of some companies as BUBOK (a digital bookstore at the moment focused mainly on self-publishing), downloads of digital books are rapidly increasing. Since portable e-readers have now arrived to the market this trend will probably reach out to ordinary readers and not only to intranet users. Some publishers and e-distributors are starting selling single e-books; STM and religious publishers are the pioneers.

There are two main initiatives in Spain dealing with facilitating book content search on the internet. DILVE is a repository of books-in-print information, managed by the Spanish

Publishers Association (FGEE). It contains rich metadata (ONIX-based) about books in-print and its main objective is to provide useful market-ready information to the book supply chain, rather than being a platform for searching book content.

Much more relevant is the public-private partnership between the Spanish National Library (BNE) and the FGEE called ODIBNE-Pro. The project ODIBNE-Pro (Protected Digital Offer in the Spanish National Library) is a joint initiative of the BNE and the FGEE whose objective is to set up a Centre for the analysis, definition, development and dissemination of models of integration and exploitation of copyrighted digital contents in digital library environments.

The idea stems from the lack of a model to establish the terms under which such a service could be provided, which prevents libraries from offering some form of access to copyrighted works. In its first phase, the project's pilot objective will be to integrate copyrighted digital works in the Spanish Digital Library (BDH) inaugurated in January 2008 by the BNE. This will be a guide for the future actions of the Centre and a test bed for progresses in every stage of the project.

According to the model chosen, the BDH will have at disposal the necessary information to allow its users performing full text search of copyrighted books and to provide complete bibliographic data and additional features such as cover images, summaries, indexes and samples of the works' content. From search results in the BDH, users will have the opportunity to be redirected to an e-distribution platform (an aggregator's/distributor's site), in order to further browse the book, have access to full text, download the book, etc., according to the specific business models and commercial conditions established by publishers. Works in the public domain will be accessible for free directly on the BDH website.

The BNE has fixed some criteria for the selection of copyrighted works to be included in the project: priority of text over images, preference for original works on critical ones and priority to works more strictly related to culture (being thus initially excluded school books, comics, practical books, etc.). Publishers providing e-books will have to prove their ownership of the corresponding digital rights. Only digital versions of existing printed works will be considered; full text display or download shall be provided, under the technical and commercial conditions established by publishers. Publishers will keep e-distribution platforms operative all along the duration of the project and will provide the necessary information and files to the relevant actors of the project.

The BNE having already the bibliographic data on the printed works corresponding to the electronic versions included in the project, publishers will have to provide: a file with the full text of the work, for its indexation, which will not be available to users (in PDF format); the additional information that will be presented about the work (cover, summary, etc.); a sample of the work for displaying (again in PDF; it is recommended it contains the index and a significant excerpt of the book, possibly around 20%). They will also make each e-book file available in the e-distribution platform of their choice at the commercial conditions by them established.

Publishers will select the books they intend to integrate in the project and will sign the subsequent agreements with the BNE and FGEE. Publishers will then produce the necessary files, metadata and rich catalogue data. DILVE, the Spanish internet platform that manages

bibliographic and commercial information for book sector professionals, will take charge of the metadata handling.

The aim of ODIBNE-Pro for this phase is to digitise and incorporate in the BDH some 2,000 copyrighted books; these will complement the BNE's digital collection of some 10,000 public domain works offered to users since the beginning of 2008. At the end of 2008, the BNE undertook a massive digitisation programme, sponsored by the telecom company Telefónica, which should lead to adding some 200,000 more works in the next 5 years. The BNE/BDH is also a contributor to Europeana and the ODIBNE-Pro shall explore ways to include copyrighted works in the services offered by the European Digital Library.

The project has received subventions from the Spanish Ministry of Industry, Tourism and Trade in the framework of the Avanza Content Sub-programme, part of a broader government initiative aimed at fostering innovation and the adoption of information technologies by enterprises. Part of these subventions will be given to publisher to cover the costs of digitisation. This is the only kind of public support so far available in Spain for digitisation of books by publishers; there are no specific policies about it.

ODIBNE-Pro started at the end of 2008 and it is currently in a preparatory and study stage (technical needs, selection of publishers, etc.); it should become operational after summer 2009 with a pilot project involving 45 works.

Besides the ODIBNE-Pro there are a few other small initiatives, some trade projects at their very beginning between publishers and booksellers, but no generalised plan for book content searches online.

In terms of digital libraries, besides the BDH, other institutions have digitised many works in the public domain. The private University of Alicante, sponsored by Santander Bank, is running the Biblioteca Virtual Cervantes, allowing access to works under public domain and envisaging too the inclusion works under copyright while ensuring fair remuneration to right holders through specific separate agreements. BUBOK, as a digital bookstore, is dealing with some public libraries at the national level, aiming at the digitisation and the dissemination of their collections.

In Spain, there are no licensing models for the digitisation and making available of copyrights works by libraries. There are no established or planned clearing mechanisms for dealing with out-of-print or orphan works either. Legal amendments would be required in order to establish such mechanisms.

4.15 Sweden

The e-book market in Sweden is still quite small, and digitisation initiatives in general are still limited in scale; nonetheless, a few important players have entered or are planning to enter the field. The scarce development of the market is attributed at least partly to the absence of a portable reading device.

eLib is the largest Swedish e-book distributor. The company was set up as a joint initiative by two publishers and an internet book retailer; it is an independent entity created by a private collective initiative. eLib does not own any content, they just distribute it on behalf of

publishers. Content is distributed to libraries and retailers; there is no direct contact with end customers, though sometimes the latter address questions to eLib.

eLib assists publishers with the digitisation process; conversion is made from PDF files for printing to other formats, appropriate for reading on different devices, and from audio CDs to mp3 files for audio books. The cost of the conversion is around 140 € to all formats, 50 € just to PDF for reading; publishers pay for the conversion.

Once converted, works are uploaded on eLib's platform for distribution; the distribution format is PDF, but ePub will be adopted soon as well. Books are then made available to libraries and online retailers, which pay an annual fee to access the collection (the fee is around 500 € for retailers).

If a book is available for sale, eLib takes as a basis the net book price indicated by the publisher; an extra fixed fee of around 1 € is then charged to the retailer for every sale made. The fee will be adapted in the future if the model changes, for example to sell individual chapters of books.

In the libraries model, libraries pay the annual fee and have access to the entire collection of eLib. Subsequently, they pay around 2 € for each loan they make to their users; of those, eLib forwards 1 € to the publisher of the book, which in turn pays royalties to the author.

This model was created after consultation with libraries on feasible prices and other details; it applies mainly to public libraries, since university libraries prefer to operate on a subscription basis to bundles of journals and monographs or entire collections. Libraries can limit access of their users to only part of the eLib catalogue, according to their policies; they can also limit the total number of loans, especially for budget reasons. Swedish libraries have a special budget for this kind of initiatives and they tend to stick to it. The level of usage of this model is not very high yet; if it were to increase remarkably, prices could be reduced, but it is not the case at the moment. eLib also serves libraries in other Scandinavian countries.

Library users can access e-books and audio books from any remote location, not only from the premises of the library, upon identification. E-books and audio books are loaned on an individual basis, with a time limit like printed books. Audio books are made available in streaming, and are accessed through a login that expires after 28 days. E-books are made available via download; files have a "timer" that only allows opening the book for 28 days after the loan. Titles can be borrowed again after the expiring, and the library pays another fee.

DRM systems are used, in different solutions (Adobe, Microsoft, Mobipocket), especially for e-books; audio books are in general digitally watermarked, i.e. some additional information is added to the mp3 files to make them recognisable and traceable. The intention for the future is to try and adopt watermark solutions for PDF books as well, since DRM systems are not extremely user-friendly.

E-books are currently read mainly on personal computers and mobile phones; there is not a single standard for reading e-books, especially due to the use of DRM systems, which require devices capable of handling them.

Books available through the initiative are around 5,500, some 2,900 e-books and some 2,600 audio books in digital format. Some 160 publishers, mainly from Sweden, but also Norway, Denmark, and Finland, are involved. A few books in the catalogue are out-of-print, but this does not make a difference in the managing of copyright deals with publishers. No print-on-demand options are envisaged at this stage.

Usually it is possible for end users to see parts of e-books (mainly up to one chapter) or listen to parts of audio books (up to one minute) on the retailers' websites.

The initial investment for this business model was quite high: around 200,000 €, mainly to adopt the necessary software solutions and provide servers and equipment. This is why eLib was set up as a joint effort and as a service to publishers, who could not possibly have undertaken such a project individually. The project has been working for 7 years now; for the first 3, losses were recorded, while from the fourth year returns on the investment started, allowing to recover some more than 100,000 € of the initial disbursement. Some 80,000 € have still to be repaid now.

In 2008, some 300,000 digital books were distributed by eLib (over 50% more than in 2007), the majority of which were audio books; more than 200,000 were sold within the library model.

In the field of digital libraries, the National Library has undertaken digitisation of a number of works in the public domain, operation in which publishers are not involved. A few publishers have made agreements with Google on the Booksearch project. The government does not provide support for digitisation initiatives, and so far there are no plans for mass digitisation of books, especially copyrighted.

Publishing house Bonnier, one of the largest in Sweden, is planning to enter the e-book market in the coming months. It will do so by digitising and commercialising all of its new titles from autumn 2009 on, plus part of its back catalogue. The initiative is an individual one.

Bonnier plans to cover the whole value chain, from publishing to selling e-books to end customers; it will most likely use an own platform for the sales, thus becoming also an internet retailer of e-books.

Starting next autumn, all of the company's titles will be published both in print and digital format; all works will have two file versions, one for printing (PDF) and one for e-book publishing (probably in the ePub format). Some 300 titles per year will be thus involved; it is also planned to digitise some 500 backlist titles from the past 50 years.

Only Swedish titles will be included; this is mainly because of the high cost of translation deals, since a separate fee must be paid to use the translation for digital publishing.

The creation of different files for printing and digital publishing does not require a very high extra investment: the cost is around 50 € per title. Digitising backlist titles is much more expensive: the process to obtain a file with a good quality for an e-book can cost around 1000 €. The total investment envisaged to start moving in the e-book market is estimated at some 100-200,000 €. DRM systems will most likely be put in place.

There are no estimates of the total market available, but it is planned to cover initially 1% of the printed market, growing to 3% in 2 years. The business model has not been defined yet in detail; Bonnier is also considering the launch of its own reading device. Possibly the mechanisms available to end users to retrieve the books will include pay-per-download of single books, purchase of bundles (maybe sold together with the reading device), subscriptions to collections.

E-books' selling price will probably be around 80% of that of the printed version; authors will receive a royalty on net sales. Also print-on-demand will be available; this will allow keeping all good titles alive, while otherwise they would have been considered out-of-print, and will be beneficial to authors as well. Separate agreements are required with authors to acquire rights for electronic publishing and print-on-demand.

There are not yet precise plans on the possibility to browse books content before the purchase, but the option is being considered. Bonnier is not involved in any projects with libraries.

No public incentives to support digitisation of books by publishers are available in Sweden.

4.16 United Kingdom

In 2008, the Publishers Association collected data on UK publishers' digital sales, and companies whose physical book sales represent about 60% of the total of all UK publishers provided data on sales of digital products.

The total net value of digital sales from the companies providing relevant information stood at £45.1 million in 2008, up 27% from 2007. Given that the companies providing digital sales data accounted for some 60% of the physical book sales of all UK publishers it might be roughly calculated that total UK publisher sales of digital products in 2008 would be around £75-80 million.

There is considerable variation in different publishing sectors. Of the estimated total of £75-80 million in digital sales, £1-2 million is in general consumer publishing, £7-8 million is in consumer reference, £12-14 million is in school and English language teaching publishing, and £53-57 million is in academic and professional publishing.

It is somewhat more difficult to comment on future trends, but again these are different in the various publishing sectors. Anecdotal evidence suggests an increase in the uptake of consumer e-books around Christmas 2008 and that much effort is underway by many publishers to streamline production workflows to focus on the production of e-products.

Meanwhile, the academic sector continues its shift from print to electronic. Textbook publishers are working to develop realistic and sustainable pricing and licensing models. The challenge here is that, unlike monographs and journals, a "student pay" model is the established model for textbook sales in print form. The consensus amongst the publishers interviewed is that between 70 and 90% of overall revenue comes from students.

There is indeed a wide array of thriving commercial offerings including non-exclusive e-book platforms. No national collaborative initiatives or public-private partnerships for giving access to copyrighted works are active in this field.

E-book collections are now available from all major academic publishers including Cambridge University Press, Elsevier, Oxford University Press, Palgrave, SAGE, Taylor & Francis, Springer, and Wiley-Blackwell, as well as from some of the other sectors.

There has also been a growth in aggregator services that provide a single interface and point of access to e-books from a wide range of different publishers. E-book aggregators currently supplying the UK academic market include Dawson, EBL (eBookLibrary), ebrary, MyiLibrary, and NetLibrary.

Ebrary, for example, offers libraries access to e-books on a commercial basis according to the two most common models: ownership and subscription. The company offers flexible options for purchasing individual e-books in perpetuity: libraries may hand pick individual e-books and choose an access model for each title. While libraries own and control their purchased titles, they are hosted and maintained by ebrary.

Libraries can purchase access for any number of users: single-user access titles that are sold based on the list price of the e-book; or simultaneous, multi-user access titles that are sold at 150% of the list price of the e-book. There is no check-out period: if an e-book is available, a patron can instantly access it. If it is in use, a patron is notified with an instant message and placed into a queue, where they are alerted immediately when it becomes available. There are no document downloads: e-books are delivered to a patron online, page-by-page with the ebrary Reader.

Ebrary offers more than 100,400 titles for purchase from over 350 leading publishers, including Oxford University Press, Cambridge University Press, Taylor & Francis, Harvard University Press, Yale University Press, Palgrave, and many others. Documents submitted into the ebrary platform can be cross-referenced and are full-text searchable. Purchased e-books are delivered via the ebrary platform.

Ebrary offers a number of pre-selected subscription databases of thousands of titles for academic and public libraries and corporations. All of the subscription databases are available under a simultaneous, multi-user access model and continue to grow at no additional cost.

In addition, ebrary has been appointed by JISC Collections to supply the e-book content and delivery platform for a multimillion pound E-books for Further Education Project.

JISC (Joint Information Systems Committee) is funded by the UK Higher Education and Further Education funding bodies to provide leadership in the innovative use of ICT to support education and research. It invests in digitising content from some of the UK's greatest collections.

Under the terms of the contract the JISC will fund a collection of over 3,000 multidisciplinary e-books from ebrary and use ebrary's technology to deliver the content to over 440 Further Education colleges in the UK. Participating colleges may also supplement this collection by purchasing additional titles through a framework agreement.

Talking more in general of initiatives for facilitating search of book content on the internet, there is no national position in this area. A wide range of services is present, as seen, included

Amazon's and the Google Booksearch initiative; basically it is up to commercial decisions that are for individual publishers to make.

In the field of digitisation by libraries, the British Library has embarked upon a few large scale digitisation projects of public domain works – these include areas such as newspapers, sound recordings, theses as well as monographs. The pre 1900 monograph project was embarked upon with Microsoft and due to the withdrawal of Microsoft from book scanning projects with libraries the British Library has primarily been focussing on preservation/access to this material in the reading rooms. More recently the British Library has been exploring internet access for this material on a non-exclusive basis with a number of potential partners.

However, there is no national, centralised digitisation procedure within the UK. The British Library has digitised over the last ten years parts of its collection through a mixture of public-private partnerships as well as government funding. The governmental funding has come through routes such as lottery funding as well as project specific funding from JISC/Funding councils for areas such as newspapers, e-theses and sound recordings.

In Wales the National Assembly has funded the National Library of Wales (£20 million) to digitise Welsh art, books, newspapers, artefacts and so on up until 2012. There has been an e-book trial taking place at Essex Library which now has over 3 years of data and has been a useful pilot in this area.

The British Library as well as the Scottish National Library have embarked upon a number of public private partnerships with secondary publishers whereby items in their collections are digitised by publishers and then made available for sale in electronic form by the secondary publisher on an e subscription model.

There are no public policies to support digitisation of books by publishers.

There is no “off the shelf” licence for libraries to digitise material and make it available on the internet. All discussions would have to take place on an ad hoc basis either with the individual rights holder or with the relevant collecting society dependent on whether the collecting society had the mandate or not. No established clearing mechanisms for dealing with out-of-print and orphan works have been set up or planned either.